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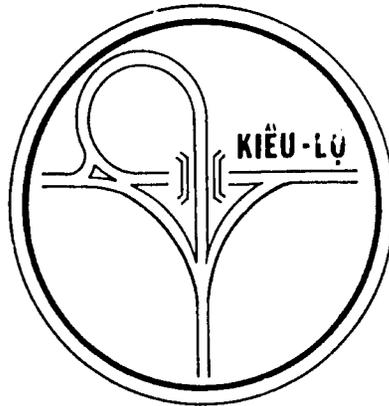
PN/AH 972

1973 REPORT

# MANAGEMENT ADVISORY SERVICES

To

**VIETNAM HIGHWAY ADMINISTRATION**



( formerly Directorate General of Highways )

By

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CONTRACT NO. AID 730-3560

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January 2, 1974

Mr. Phan Dinh Tang  
Director General  
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Dear Mr. Tang:

We take pleasure in submitting this document, our year-end report of accomplishments on our project to provide technical and management advisory services to the VHA (DGOH) under Contract AID 730-3560.

Although it was necessary to revise some of our original developmental work and although original schedules were disrupted because of the mid-year establishment of the VHA, I feel we have made substantial and significant progress in all work areas.

The work of reorganization is well under way. Initial accounting systems have been established to meet the requirements of Presidential Decree No. 635/TT/SL, dated July 11, 1973. A personnel classification and salary plan has been approved by the Administrative Council. A training program has been established and the development of training courses is under way in some areas. These are only a few high-lights of accomplishments during 1973.

We would like to acknowledge the assistance of our associated consultant CONSAC who provided continuity with the Booz, Allen study; specific assistance in some work activities; and contributed to this report.

Our entire project staff has greatly appreciated and enjoyed the privilege of working with you, your fine staff, and members of the USAID mission. We are looking forward with expectation to another year of significant accomplishment in reaching the goals of the new VHA.

Yours very truly,

  
Lewis M. Chittim  
Chief of Party

## INTRODUCTION

This document presents a comprehensive report of the progress in 1973 in the provision of management advisory services to the Vietnam Highway Administration (formerly Directorate General of Highways) by Roy Jorgensen Associates, Inc. (RJA) under contract AID 730-3560. RJA was significantly assisted in many phases of the work by personnel of Associated Consultants International Corporation (CONSAC) who, under agreement with RJA, provided continuity with the Booz, Allen management study conducted from March 1971 to August 1972 which established the basis for the current implementation project. The CONSAC personnel, including Mr. J. W. Pocock, President, formerly were associated with Booz, Allen and were principally responsible for the management study phase.

The progress report is arranged in six chapters. The first is an overall summary of accomplishment. The following five present the work conducted in each of the primary management areas.

- . Organization and Administration
- . Personnel Administration and Manpower Management
- . Training
- . Planning
- . Financial Management and Accounting

Each of these five chapters stands in its own right as a description of the activities undertaken and the accomplishments in the respective functional area. Each indicates the appropriate tie-ins with the Booz, Allen work and presents appropriate recommendations and proposed schedules for future activities.

Additional documentation of accomplishments is provided in a separate "Compilation of Supporting Documents to Contract AID 730-3560." These supporting documents are copies of materials submitted to VHA during the year with copies to USAID in most cases. They are basically working documents, such as descriptions of recommended or adopted procedures, illustrative material and forms. Because they are working documents and have been submitted previously, and because of the expense of duplication, only a limited number of the "Compilation of Supporting Documents" has been produced.

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- A Classification Plan
- B Personnel Procedures
- C Section Responsibilities
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- G Glossary of Terms
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## I. SUMMARY OF ACCOMPLISHMENTS

During 1971 and 1972, Booz, Allen Applied Research, Inc. (Booz, Allen) a management consulting firm, conducted a comprehensive study of organization and management practices and needs of the Directorate General of Highways (DGOH) of the Republic of Vietnam. This study, under contract to USAID, had as its purpose the development of an overall program to improve the capability and capacity of DGOH to administer and execute the highway programs of the nation. Such a program was necessary since major elements of the highway effort during the peak war years had been under control of the military and were now to be returned to civilian administration.

As a result of the extensive review of DGOH objectives, organization, operating practices and administration procedures, Booz, Allen identified a number of fundamental weaknesses. The following are representative of the principal conclusions and recommendations.

- . DGOH should have overall responsibility for the entire classified highway system, thus significantly increasing the administrative, equipment and personnel requirements

- . The need for additional, trained personnel existed in almost every function, with capability particularly required in the business and administrative management areas
- . A critical need existed to develop functions in procurement and supply management, contract administration, personnel and training and completely revised budgetary and accounting function
- . Highway District organizations should be increased from five to six to balance loads and improve field supervision, and should become the major operational units
- . Equipment problems were compounded by an unacceptable variety of makes and models, including over-age equipment, by inadequate maintenance, by lack of replacement parts and assemblies and by a poor distribution system
- . The entire planning and control function was weak, fragmentary and unresponsive
- . There was no performance based accounting system to guide management decisions and measure operational accountability.

Based upon these and other findings, Booz, Allen developed and recommended a four year action program to improve DGOH management and operating practices and also recommended a new plan of organization.

1. OBJECTIVES OF ENSUING ADVISORY PROGRAM

The Booz, Allen recommendations were accepted by DGOH, the Ministry of Public Works and USAID as the basis of a detailed development and implementation effort. Engineers and consulting organizations having special capabilities in the various areas were engaged to undertake the detailed development and implementation in the areas of their specialties.

Roy Jorgensen Associates, Inc. (RJA) was selected to perform the work in the general management area under a host-country contract with DGOH, sponsored by USAID. The objectives of this contract as established by DGOH and USAID were

- . Establish a DGOH organizational structure responsive to agency needs
- . Establish and implement improved management systems, procedures and methods throughout DGOH in all functional areas
- . Develop a basis for reduction or diminution of GVN legislative and/or administrative constraints on the operational effectiveness of DGOH

- . Provide in-service training and support of top echelon DGOH officials by providing experienced advisors to whom DGOH officials could act as counterparts.

The work statement required that the selected consultant "provide advisory support and assistance to key DGOH top management staff relative to the evaluation, redesign or refinement, testing, establishment and implementation of systems of management in specified functional areas."

The functional areas for which services were to be provided were

- . Organizing
- . Staffing (Personnel Administration)
- . Training
- . Planning
- . Budgeting and Financial Control
- . Controlling
- . Coordinating

The last two functional areas (controlling and coordinating) are so much an integral part of the first five and of the management relationships between the first five that it has been considered impractical to treat them independently. Instead, although no less attention will be given to coordinating and controlling, these functions are being developed and implemented

in the mainstream areas of Organization and Administration, Personnel Administration, Training, Planning, and Financial and Accounting Management.

The one exception to this is the treatment of the management information system. This system, as part of the controlling and coordinating process, will set guidelines for activities in all functional areas and is recognizable as a distinct system of specific component parts and relationships. Therefore, it is being dealt with as a separate functional process both in connection with the specific work activities associated with it and in the project reports.

In this report the management information (MI) system is discussed only in this chapter because progress in this area necessarily has been limited by the organization changes of VIIA. An MI system must be tailored specifically to management needs of the approved organization.

## 2. GENERAL APPROACH TO WORK PLANNING

The initial approach of the RJA team has been to visualize the project as being conducted in several concurrent phases - each for one of the specified functional areas. Full recognition is given to the interdependence of work activities between the phases and within each of the phases. As an example, the organization plan (Organization Phase) must be prepared before position descriptions (Personnel Phase) could be prepared

to guide training programs (Training Phase) for planning personnel (Planning Phase) and accounting personnel (Financial Management and Accounting Phase).

Upon arrival of the RJA team in Vietnam, the work plan and schedule was further refined and approved by DGOH and USAID. Generally speaking, the work under each phase has been in the sequence originally contemplated. However, there has been some slippage of achievement of goals in most phases because of the change-over of DGOH to the VHA organization.

The original schedule contemplated an approved organization by the end of the fourth month (30 May 1973). The top organization plan for the new VHA was not approved until November. Thus work dependent upon an approved detailed plan could not proceed on schedule except to the degree the new organization could be anticipated. Fortunately, there was general concurrence on the organization in several functional areas. Thus, anticipatory work has been performed in these areas to the extent practicable.

The RJA overall approach to the organization and the conduct of all organizational activities is objective and systems oriented. Thus, before organizational plans can be completed, it is necessary to know exactly what the organization expects its component units to accomplish. In other words, the specific responsibilities of units (such as the field Districts) must be

identifiable. Responsibilities of the Districts with respect to the Provinces and provincial roads should influence organization at the District level. The same principles apply to Central Headquarters units.

All activities performed by the VHA organization should meld into an accomplishment pattern which results in the eventual attainment of the organization's objectives. So far it has not been possible to precisely identify all of the detail objectives of VHA and its operating units in detail so that final organizational plans in the lower echelons can be completed.

Nevertheless, significant total accomplishment has been realized. This is described in this chapter following a discussion of the establishment of the Vietnam Highway Administration, which has considerably influenced the direction of work and progress to date.

### 3. ESTABLISHMENT OF THE VIETNAM HIGHWAY ADMINISTRATION

In mid-year 1973 the Directorate General of Highways (DGOH) was converted to the Vietnam Highway Administration (VHA), an autonomous agency of the Ministry of Public Works and Communications. While the essential mission of VHA remained unchanged from that of DGOH, two basic administrative requirements were imposed.

- . Financial management and accounting control responsibilities were totally assigned to VHA subject only to the general requirements of GVN budget and fiscal policy and to overall GVN audit procedure. The proprietary nature of the financial management responsibility was emphasized by the directive that a "commercial type" fiscal and accounting system be employed
- . Personnel administration was freed from detailed civil service regulation to provide opportunities to restructure personnel activities along modern lines and to permit development of policies and programs to improve VHA competitiveness in the labor market.

While other changes occurred, these two were by far the most significant and affected all elements of the VHA organization and operations. The work plans and schedules of the advisory team were similarly affected. This impact was reflected in advisory team activities in two ways.

- . Early work in the development and plans and design of systems had to be re-examined and modified as necessary to meet the requirements of the autonomous agency VHA as specified or implied in the enabling Decrees. Since much of the advisors' early work

anticipated some shift in status toward greater autonomy, the necessity for re-work was greatly minimized

- . A speed up in certain phases of the advisory program was necessary to meet the requirements of the interim period of organizational conversion commencing with the publication of the Presidential Decree on 11 July and to prepare for the first year of full autonomous operation commencing 1 January 1974.

The result of these pressures was the re-scheduling of advisory activities to give first priority to completion of work items essential to the VHA conversion schedule, leaving completion of lower priority items and the niceties of final documentation until the initial, essential implementation had been carried out. This recasting of schedules and short-term work priorities is reflected in the reports of work accomplishment in the individual advisory areas.

#### 4. SUMMARY OF ACCOMPLISHMENTS IN 1973

The specific accomplishments in each of the five major phases (functional areas) are detailed in subsequent chapters. Brief summaries are given in the following sections.

(1) Organization and Administration

The conceptual organization for DGOH presented in the Booz, Allen study report was approved by the Director General and the Minister of Public Works as a basis for detail organization development. RJA concurred in this basic organization pattern recommended by Booz, Allen.

1. Development of Organization Plan

A detailed top organization plan following the approved Booz, Allen concept was prepared and presented to the Director General for approval. Following the establishment of VHA, this plan was reviewed, modified as necessary and resubmitted, accompanied by draft statements of functions down through Division level and draft organization plans for organization units below Division level.

Following discussions with the Director General and other VHA managers, the top organization plan was further modified, but retained the essential features of the original plan, and was submitted to the Administrative Council for approval and implementation authorization on 30 November.

2. Assistance with Official Documentation

Assistance was given in drafting the required Prime Minister's Decree specifying the top organization and functions of VHA and the succeeding Minister's Arreté which provides further organizational and functional detail. The Prime Minister's Decree has been approved by the Administrative Council and recommended to the Prime Minister. The Minister's Arreté has been drafted in final form and awaits promulgation of the Prime Minister's Decree.

3. Preparation of Position Descriptions

Position descriptions have been prepared in draft form for all positions at Division level and above. Issuance awaits promulgation of the Arreté.

(2) Personnel Administration

For all practical purposes the function of personnel administration and manpower management, in the modern sense, has been almost completely lacking in VHA. Clearly, an entirely new approach and personnel program development was required. Such a program should be developed along proven, modern patterns and be adopted to the unique requirements of the Vietnam cultural and regulatory environment.

Freedom to develop and install such modern personnel practices was a major factor in the justification of converting DGOH to the autonomous agency, VHA. Thus, the establishment of VHA had a significant influence upon the goals and content of the personnel program developed by RJA.

The overall accomplishments are briefly presented in the following sections.

1. Development of Personnel Classification and Salary Plan

A major accomplishment has been the development and approval of a complete personnel classification and salary plan - the first of its kind in the GVN.

The plan classifies all positions in VHA according to the work performed and establishes competitive compensation ranges for the positions as determined through market and salary survey. VHA personnel were closely involved in all aspects of the development and so have appreciation of the goals, methods of analysis and operating requirements of the plan.

The plan and the implementing procedures were approved by the Administrative Council on 30 November.

## 2. Personnel Requirements, Selection and Recruitment

A major effort has been directed at determining the personnel needs of VHA and establishing a program for recruitment and placement of key personnel. This has included

- . A complete inventory of VHA personnel
- . Determining manpower needs
- . Development of employment policies
- . Development of personnel procedures
- . Obtaining data on manpower sources
- . Initiating a recruitment program.

All of these tasks have been accomplished to the extent possible while awaiting approval of the organization plan and the personnel classification and salary plan.

## 3. Personnel Organization

Early in the project an interim personnel program was designed and staffing recommendations made to DGOH. The interim program was approved and staffed, thus establishing the nucleus of a revised personnel organization. This group has worked with the advisor on subsequent personnel program development.

A plan for the permanent organization of the Personnel and Training Division consisting of six Sections has been prepared and submitted for approval. A Personnel Policies and Procedures Manual is being developed and initial draft forms have been prepared for most regular processes.

Taken as a whole, the personnel administration program has moved exceptionally well. A sound base has been established for continued development and implementation in 1974.

### (3) Training

The training program accomplishments were both guided and constrained by three requirements.

- . The need to develop a training cadre and the basic structure of the training program at the earliest possible date
- . The need for early establishment of the production procedures for course development and presentation, including preparation of training materials and procurement of equipment
- . The need to schedule and pace training activities to the schedule of installation of the new VHA organization and administrative and operating procedures.

Thus, training activities were controlled by the needs and the pace of development in other functional areas. Driven by these requirements, a considerable amount of work has been accomplished.

#### 1. Training Needs Analysis

An analysis of training needs of the overall VHA was completed. A determination of the five highest priority needs was made with participation by the District Engineers and other VHA managers.

## 2. Review of Local Training Resources

A detail review of all major training activities outside of VHA was accomplished through visits and extended discussions. Identification was made of those courses and seminars which could contribute to the VHA training program and entrance requirements and schedules determined.

## 3. Training Cadre Development

Four VHA employees were tested and selected and assigned for training as training specialists. Both on-the-job training and attendance at established courses outside VHA is included in their training program. Each specialist is now developing specific training courses under the supervision of the training advisor.

## 4. Specific Training Requirements

A systematic determination of specific training needs in each of several selected areas is being conducted by the training specialists. The approach is based upon the premise that the specific job to be done determines the knowledge and skill required of the incumbent and that training should be directed to developing only the knowledge and skill identified as needed. Implicit in this approach is the requirement that the existing capabilities of the trainees be known so that the dimension of the training need to upgrade their capabilities to job requirements is known.

## 5. Development of Training Material

The process for course development has been established, including work analysis, data collection, preparation of training drafts, field testing and final production and presentation. Development of five courses is under way with one essentially completed.

## 6. Upgrading Training Capability at the Highway Training School and Districts

All Districts were visited. No active training programs, training equipment or training facilities were found except at Dalat, where a room has been set aside for seminars. The Highway Training School (HTS)

is a well equipped facility with well developed techniques of instruction, but no programmed instruction is presently under way.

As a result of this inspection, a consolidated list of training equipment requirements was prepared, approved by VHA and USAID and procurement undertaken by RJA.

A study of HTS past programs and present capabilities was completed and recommendations were made concerning the future program of the facility.

The details of this extensive program in training undertaken in 1973 are presented in Chapter IV.

#### (4) Planning,

Top officials in the Ministry of Public Works and in DGOH have had a considerable appreciation of the need for adequate planning of DGOH activities. A small planning group has functioned in DGOH for a number of years. But appreciation of need has not been enough. As the Booz, Allen recommendation pointed out, planning was completely inadequate for two basic reasons.

- . No coherent structure and method for preparation of supportable short- and long-range plans existed
- . Data required for the development of sound plans was outdated, fragmentary or nonexistent.

However, largely because of the strong support of top MPWC and VHA management who understand the urgency of the planning requirement, very significant, tangible progress has been made in the planning area.

1. Development of Policies, Procedures and Objectives

One of the first activities undertaken in the planning phase was the preparation of a basic planning policy that would be the basis of subsequent operating policies and procedures. Objectives were also developed that would act as guidelines for developing the various activities of the planning phase.

2. Implementation of Traffic Counting

A nationwide traffic count had not been undertaken since 1958. Obviously, traffic volume data were outdated or largely conjectural. The most urgent needs were to provide a basis for ongoing programs of highway improvement and highway design.

Personnel were trained, funds provided, the program detailed and counting initiated. Actual counts produced during the year were adequate for immediate purposes and gave promise of increasing efficiency in execution of the program. The traffic counting program has been established as a regular planning activity.

Security conditions preclude counts in some areas. However, two 4-day counts have been completed in all Districts at 145 locations and a third count in three Districts.

3. Road and Bridge Inventory

The original priority on this task was slipped in view of other more urgent priority demands upon limited DGOM resources. The program was developed in detail, forms and procedures prepared and the project initiated 13 September.

A training program including slide presentation was prepared and training of District teams commenced

12 November. A Saigon District team initiated the program and conducted early tests to check procedure feasibility and time requirements. This inventory in the Saigon District is continuing, with scheduled completion of the 1973 inventory by the end of the year. The experience gained in this District will be applied to other District inventories scheduled for 1974.

#### 4. Functional Classification of Highways

Booz, Allen recommended that the functional classification of the highway system be reviewed and appropriately restructured. This was particularly important in establishing the systems responsibilities of the new autonomous agency. In anticipation of the Decree establishing the VHA, the Director General requested that the reclassification be undertaken earlier than originally scheduled.

As a result, a procedure for reclassification was submitted on 31 March. Reclassification proceeded on schedule. Modifications were made on 5 May to accommodate some shifts in anticipated VHA responsibilities. During the week of 8 October the newly developed National and Inter-Provincial Systems were approved by the Director General.

#### 5. Interim Program

Several highway improvement programs had been prepared by agencies other than DGOH. It seemed only appropriate that the agency with official responsibility for the highway transportation requirement of the RVN should express its opinion on a priority improvement program. Early attention, therefore, was given to the programming activity. Recognizing that the development and implementation of a complete planning procedure would take time, interim procedures were developed to use in formulating an Interim Program of highway improvements. This Interim Program was completed with the assistance of District and Planning personnel and the planning advisor and has been adopted.

The Interim Program is designed to be updated each year until sufficient planning data are available to produce a priority program.

(5) Financial Management and Accounting

A major conclusion of the Booz, Allen study, concurred in by the Ministry of Public Works, DGOH, USAID and other informed persons, was that a totally new, overall system for accounting and financial management was required. Only with the establishment of such a modern, performance-oriented system could meaningful improvement in the management and control of DGOH functions take place. This requirement for DGOH became even more important with the establishment of the autonomous VHA.

Clearly, the establishment of such a comprehensive system calls for extensive participation and rearrangement of activities and procedures in functions beyond the immediate accounting area.

- . Organization and administrative practices must be clearly established as a basis for assignment of financial accountability
- . Personnel must be trained in the overall purpose, methods and detail exercise of the new system - an extensive training requirement for personnel from top management down through clerical levels
- . Highway plans and programs must be developed with more specific content and supporting

justification as a basis for financial planning and budgeting

- . Data inputs from operating and administrative functions must be developed which are compatible with the operational duties and day-to-day activities of these units.

The development of the financial management and accounting program has been carried out with major emphasis on integration with the requirements of other functions.

Accomplishments in the year 1973 are summarized in the following sections.

1. Preparation of Policies and Chart of Accounts

The chart of accounts and associated function and object class codes have been completed and presented to the Administrative Council for final approval. Preliminary authorization has been given to permit preparation of implementation detail.

The policy document covering the basic policies controlling the financial administration functions of VHA, including commitment and expenditure approval authorities, has also been completed for presentation to the Administrative Council.

Taken together, these two documents comprise the basic statement upon which the entire financial management and accounting system is structured.

2. Budget Preparation and Control

The FY 1974 Budget Request has been reformatted to the new chart of accounts. As of 1 January 1974,

budgetary control will be under the new system. The new system accommodates the National Budget, MOF, and DGBFA requirements as specified for VHA in the enabling Decrees.

### 3. Installation of Cost Accounting System

The initial cost accounting system has been developed and installation scheduled for 1 January 1974. Since the concept is new and experience in the use of such systems is absent in VHA, the initial system has been simplified to the maximum extent deemed feasible.

The system is a modern, performance-oriented system adapted from the American Association of State Highway Officials system. The fundamental elements of the new system are being installed in the initial phase. Once VHA has demonstrated that they can satisfactorily operate the simple initial system, progressive refinement and extension to the ultimate system will be undertaken.

### 4. General (Fiscal) Accounting Installation

The general accounting system now designed and scheduled for installation during the first quarter of FY 1974, is also a simplified, double-entry system capable of later refinement and extension as operating experience is gained. Again, the major features of the ultimate system have been included in the initial installation, and the Statements of Assets and Liabilities and other required fiscal reports will be generated for the close of the first quarter. Further refinement will be paced to the developing capabilities of VHA to operate and administer the system.

A near-term deficiency is the valuation of inventories, equipment and fixed assets. Current data are inadequate for fully adequate fiscal accountability. For this reason, gross figures and justifiable estimates will be used until the program of detail inventorying and asset valuation is completed.

### 5. THE FUTURE WORK PLAN

During the coming year, 1974, RJA advisory efforts will give priority through all functional areas to the development and implementation of

- . The financial management and accounting system
- . Organization and training, giving emphasis to those areas and levels most critical to gaining early, total effectiveness of VHA operations
- . Key administrative systems required to guide and control the overall activities of VHA.

These priorities impact upon the work plans in every functional area. Thus, early effort will be devoted to the organization and administration of the personnel function to build a staffing capability and guide training programs.

The planning function must be organized to provide the plans upon which the development of agency-wide programs, budgets and management controls depend. The 1975 budget cycle, under new procedures, will require participation by all units of the organization. And training activities will be paced to support all of these efforts in a timely manner. Regardless of the specific functional assignments of the individual advisors, it is clear that a totally integrated effort must and will be accomplished.

In order of basic priorities stated above, the general emphasis in each of the functional areas will be as follows.

(1) Financial Management and Accounting

In the area of fiscal management, the FY 1975 budget cycle, beginning in April 1974, will be carried through by

the responsible supervisors using the new procedures developed for preparation of budget estimates. These estimates will be based upon the specific activities and projects included in the approved interim short-term program. Thus, FY 1975 will be the first complete budget cycle under the new system.

At the same time, a planned approach and schedule for the future refinement and implementation of the accounting system at both Headquarters and District levels, as described in detail in Chapter VI, will be developed. Although initial systems have been cut back to fundamentals, and forms and procedures made as simple as possible, a considerable amount of work is needed to get source reporting systems implemented and a timely flow of report information established. The lack of training of VHA personnel will be felt initially. For these reasons, a major share of the accounting advisor's efforts will be devoted to day-to-day monitoring and assistance.

(2) Organization and Administration

In the organization and administration area, such advice and guidance will be provided as necessary to establish position responsibilities, authorities and relationships at the levels of organization established by Decree or Arrete'. Basic policies and detailed operating

policies will be developed and recommended, as appropriate, for the VHA as a whole and for the Directorates and the Divisions as related to the objectives of the three levels of organization. Objectives will be fully developed and functional statements finalized or written, as necessary, for the District organization and levels of Central Headquarters below the Divisions. Work will continue on recommending basic procedural systems throughout the organization. A management information system - described later in this chapter - will be developed in outline and methods of coordination and control described and recommended in connection with this system.

### (3) Planning

Planning activities will concentrate on

- . Establishment of a planning process with the purpose of developing a plan for highway improvements which will give consideration to economic and other impacts, desirable priorities and the financial requirements and possible sources of funding
- . Further development of the programming process.

Attention will be given to further refinement and development of the traffic counting program, the road

inventory program, and other systems to provide and maintain data requirements. A thorough analysis will be made of the data supply as related to basic planning procedure needs and data needs outside the planning function. Recommendations will be made pertaining to a complete data system.

(4) Personnel Administration

In personnel administration, position descriptions will be completed for new positions based on finalized functional statements. The positions will be classified. Manpower needs will be determined in critical organization areas in accordance with procedures established by VHA on the recommendations of advisors in operational areas. Available manpower will be evaluated. Training needs will be determined. Recruitment will be an ongoing process with emphasis on recruitment for the identified priority manpower needs.

Organization of the personnel and training function, as recommended, will be emphasized as deserving priority in the whole process of filling organizational requirements. Adequate staffing of the entire organization will be dependent upon having an adequately staffed personnel function. It is anticipated that complete organization of the personnel function will be completed by the end of January 1974. Staff development will be pursued throughout the year.

(5) Training

On-the-job training for the four VHA training specialists assigned in 1973 will be continued. During 1974 they will gain experience in all the steps necessary to determine training needs and to develop self-instructional courses. Their English language capability will also be increased through daily interaction with the highway training advisors.

VHA training needs for 1975 will be identified and used as an input to the preparation of the VHA Master Training Program for 1975. The Master Training Program will provide the basis for the training budget estimate for 1975.

Development or adaptation of self-instructional courses will continue. Twelve self-instructional courses will be completed in 1974, covering such areas as preventive maintenance of heavy equipment, highway maintenance, construction inspection, materials testing, construction mathematics and contract plan reading. Seminars in management, accounting reporting and construction management will also be prepared and conducted during the year.

A centralized training capability will be established in VHA to provide for training requirements determination, development of training plans, development of self-instructional courses, integration with external training agencies,

conduct of training courses and support to training operations. The Highway Training School (HTS) will be a significant component of the new capability. Necessary reorientation of the HTS curriculum will be accomplished based upon training needs established early in 1974.

(6) Management Information (MI) System

Development of a management information system will be a major task to be undertaken during 1974. Such a system is basic to the ability of management at all levels properly to coordinate and control functional performance in order to achieve VHA objectives. Development of it could not logically begin, however, until the new organization structure was finally approved.

The processes of developing the MI system will include:

1. Identification at each level of management in each functional area precisely what the manager needs to know to effect proper coordination and control
2. Development of the systems which will supply the information needed, including the maintenance of suitable records

3. Development of the reports and forms which will transfer the information
4. Charting the flow of information from source to manager.

A considerable amount of work will be required to formulate and establish the specific need for information at different management levels. In the absence of a formal MI system, it is common for top managers to receive far more information than they need to properly coordinate and control. This adds to their workload in that they become involved in problems of minor consequence which others should solve. Added to the problem of too much information, the top manager often is not receiving information he really requires.

In contrast to inundating the top manager with too much of the wrong kind of information, operational managers at lower levels may not have enough information to properly control the processes entrusted to them.

In principle, with respect to specific conduct of operational procedures, the amount of information needed by managers should decrease the higher the management level. Top management can take advantage of "management by exception" principles. This means that once they have approved procedures and schedules, they only need to be

informed when there are departures from these procedures and schedules.

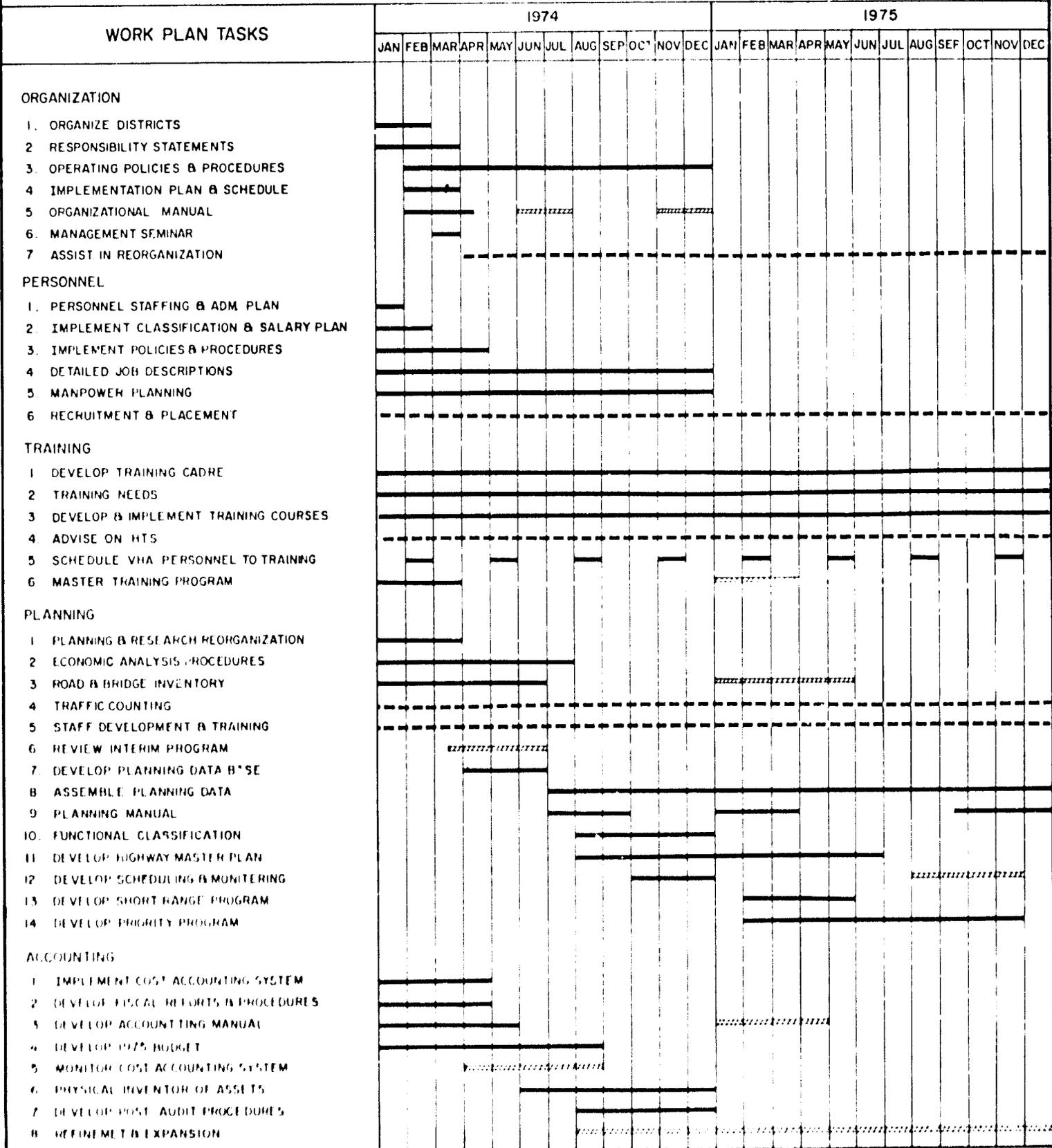
The use of data processing as part of the MI system should be and will be selective. The basic objective is to maintain information and make it available in required summary form as efficiently and with as little expense as possible.

These are principles which will govern the development of the MI system and the coordination and control functions which rely upon it during 1974.

\* \* \*

Figure 1 is a summary chart showing the progress anticipated in the several basic management areas in 1974. The detailed charts showing activities in each of these different areas are presented in the chapters dealing with the subject area.

# FIGURE I FUTURE WORK PLAN



BASIC OBJECTIVE   
 ADVISORY CAPACITY   
 UPDATE PREVIOUS WORK

## II. ORGANIZATION AND ADMINISTRATION

The Booz, Allen report of 31 August 1972 presented a conceptual plan for the reorganization of the Directorate General of Highways. The recommended organization plan was designed to fit a fully operational, enlarged DGOH "at some date in the future, with many uncertainties and obstacles to be overcome." With minor modification of detail, the organization plan could apply to either the continuing DGOH or to the proposed autonomous agency. The conceptual plan was approved by the Minister of Public Works as a guide to future organization planning.

### 1. OBJECTIVES OF THE REORGANIZATION

The objectives of the proposed reorganization as cited by Booz, Allen and concurred in by RJA are to

- . Organize VHA activities by function to minimize duplication and permit concentration of specialized talents in each function
- . Provide proper balance between centralization and decentralization within a function
- . Provide acceptable limits to the span of supervisory control

- . Provide an organization structure which encourages proper delegation of authority
- . Define specific responsibilities and intraorganizational relationships clearly in order to expedite management transactions and coordinations.

The work undertaken by the RJA advisory assistance team was a direct outgrowth of the tasks recommended in the Booz, Allen report to implement the new organization. This work can be summarized as follows.

- . Review of the conceptual organization and recommendation of any appropriate modifications required to accommodate present operational requirements
- . Preparation of necessary documentation such as drafts of enabling decrees, functional statements of responsibility for all organization elements and position descriptions for executive and supervisory positions
- . Development of a step-by-step plan for implementation of the new organization and assistance in accomplishing this plan.

The sequence of this work has been defined in nine work procedures which compose the organization work plan.

## 2. ACCOMPLISHMENTS DURING THE YEAR 1973

The first four work procedures advance the program to the point of approval of a specific organization plan and the promulgation of the series of enabling Decrees authorizing activation of the organization. As related to the objectives, these work procedures may be grouped into the major work phases described below.

### (1) Preparatory Work

The review of Booz, Allen organization recommendations and of the current status of DGOH operations and the review and definition of DGOH goals and objectives were completed in February and March. The DGOH Steering Committee was activated on 11 April and orientation by the RJA team completed during a series of weekly meetings held immediately thereafter.

### (2) Organization Plan

The conceptual plan of organization previously recommended by Booz, Allen was determined to be sound and was accepted by RJA as the basis for the development of the detailed plan. The detailed plan for the central headquarters, including the relationship to the Field Organization, was completed in May as a basis for discussion with the Director General and the Steering Committee. These discussions were delayed by the pending actions to

establish DGOH as an autonomous agency (as previously recommended) which understandably diverted executive attention from details of the new organization.

Decree No. 635-TT/SL was signed on 11 July establishing the Vietnam Highway Administration (VHA) an autonomous agency; and Decree No. 130-SL/CC dated 6 August fixed the composition of the overseeing Administrative Council of the VHA.

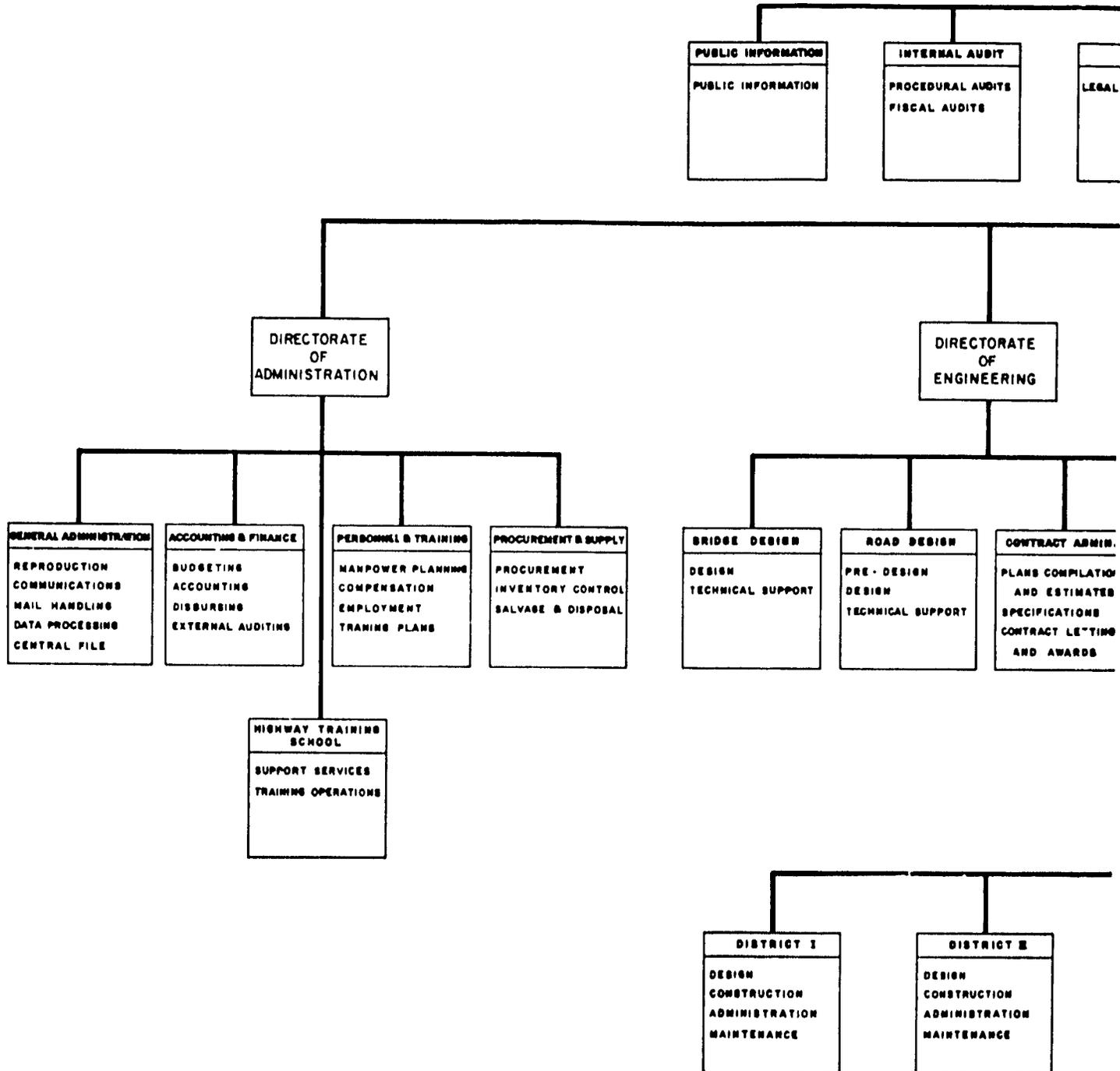
Conversion of DGOH to VHA required a complete review of the proposed organization to determine what, if any, modifications were necessary because of the autonomous agency status. This was accomplished in July and early August by the RJA staff, each advisor reviewing his assigned functional area. Changes were minimal. The draft organization plan was presented to the Director General on 22 August. A series of meetings resulted in further modification and : 18 October the organization plan was ready for presentation for approval by the Administrative Council.

The organization plan (Figure 2) does not depart significantly from the original Booz, Allen concept or the original RJA detailed plan. The most important changes are

- . Districts report directly to the Director General/Deputy Director General rather than through the Assistant Director General for Operations. This maintains the existing relationship. It also tends to maintain the present heavy supervisory load on the Director General/Deputy Director General which the original Booz, Allen, RJA recommendations sought to alleviate by shifting part of the workload to an intervening level of organization. The direct reporting relationship does offer distinct advantages during the period of implementing new management systems
- . The Highway Training School is removed from the Personnel and Training Division and reports directly to the Assistant Director General for Administration. This minimizes organizational disruption during the transitional period for training activities
- . The Secondary Roads function is assigned Division status in the Operations Directorate in view of the increased activity in this program.

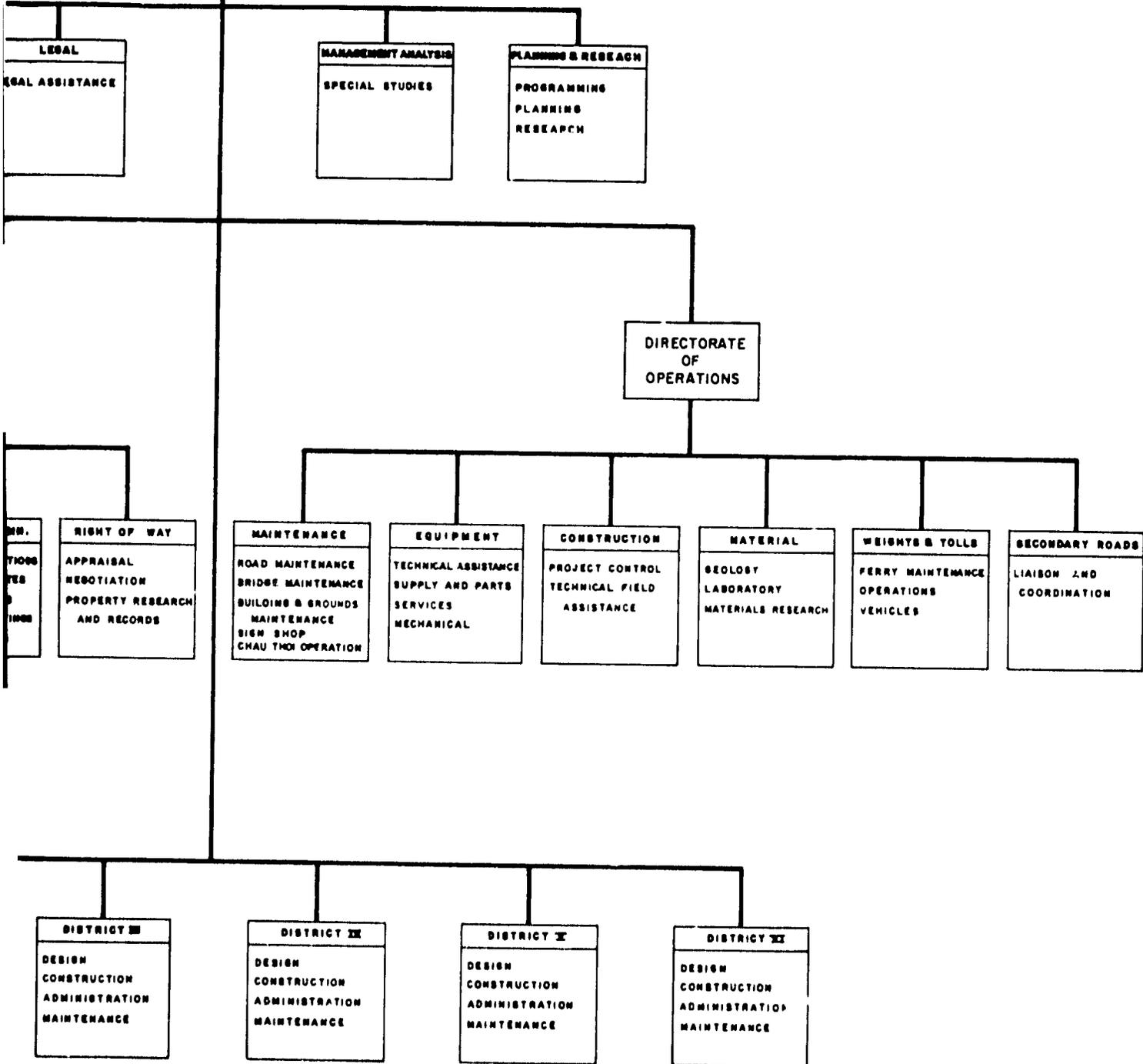
This recommended plan is the basis for the functional statements and positions descriptions prepared for the

**FIGURE 2  
PLANNED ORGANIZATION OF VHA**



DIRECTOR GENERAL

DEPUTY DIRECTOR GENERAL



implementation program. A chart of the final organization structure is shown in Figure 2.

(3) Enabling Documentation

Following promulgation of Decree No. 635-TT/SL establishing the VHA and Decree No. 130-SL/CC designating the Administrative Council, two additional decrees are required.

By Decree the Prime Minister must prescribe the overall organization of the VHA, the financial and accounting responsibilities and certain guiding policies for the transition of DGOH to VHA. This Decree was drafted, approved by the Director General, presented to and approved by the Administrative Council on 18 October and forwarded to the Prime Minister with the recommendation for approval and promulgation. The Decree had not been signed as of 10 December.

By Arrêté, authorized by the Prime Minister's Decree, the Minister of Public Works prescribes the organizational detail and operation of the VHA. This Arrêté has been drafted based upon the detailed organization plan as recommended and the functional statements supporting the plan. The draft was presented to the Director General on 22 August and, after a series of discussions through 14 November, was finalized and is now being held pending promulgation of the Prime Minister's Decree.

With the completion of the above work phases, all work has been accomplished leading to the final approval of the organization and official authorization to proceed.

\* \* \*

The next several work phases cover preparation of additional documentary detail required for implementation of the organization. These phases could not be completed until final approval of the organization plan. In anticipation of approval of the organization plan essentially as recommended and promulgation of the authorizing Decree and Arreté, the advisors moved ahead as far as possible with the phases of work described below in order to expedite implementation.

(4) Organization Plan for Subcomponents

Preliminary organization plans and some supporting functional statements have been prepared for subcomponents of the Central Headquarters (below Division level). These were presented to the Director General on 22 August in support of the top organization plan presented at the same time.

Field Organization subcomponents have necessarily received limited attention pending authorization to proceed with the reorganization. A general plan of organization for the Districts has been prepared. Preliminary

definition of Section functions has been completed. Further development has been held pending authorization to proceed with the overall plan.

Completion of detailed plans and functional statements for the Field Organization is also dependent upon the resolution of the specific roles and responsibilities of VHA for the primary highway system and the Provinces and local governments for the secondary system and unclassified roads. It now appears probable that organization plans and functional statements for the Field Organization must be developed on an interim basis to permit implementation to proceed.

Assuming authorization and promulgation of the pending Decrees by 15 January 1974, approximately six weeks will be required to complete subcomponent organization plans and functional statements for Central Headquarters and interim plans and statements for the Field Organization.

(5) Position Descriptions

Position descriptions have been completed for all positions at Division level and above. (See Personnel Administration.) These position descriptions anticipate adoption of the organization plan as recommended. Position descriptions below Division level down to the first management level of each organization unit will be

developed following authorization to proceed with installation of the organization. Assuming authorization by 15 January 1974, approximately eight weeks will be required to complete the remaining position descriptions, recognizing that they will be prepared concurrently with other implementation tasks.

(6) Preparation of Management Guide

It should be recognized that the Management Guide will be an evolving, growing information manual containing fundamental policy statements, organizational policy statements, organizational objectives, organization plans, functional statements, position descriptions and the necessary explanatory material. It will be a flexible, central compilation of essential documentation required to guide consistent management practice throughout the VHA.

At the time of initial issue it will be largely composed of material developed for implementation of the organization and will not require any substantial effort, other than the integration of the already existing material and preparation of expository statements covering the purpose and usage of the Management Guide.

The general format of the Management Guide has been prepared. Compilation and integration of material and

the planning of mechanics of reproduction and issue should require about four weeks - at whatever point in time it is deemed appropriate to make the first issue. It now appears probable, in view of the anticipated implementation, that the date of first issue should be on or about 15 April 1974.

\* \* \*

The accomplishments for the year 1973, despite schedule slippage caused by the necessary and highly productive diversion of effort required by the mid-year conversion of DGOH into the autonomous VHA, may be summarized as follows.

- . All work has been completed and required documentation prepared for formal approval and authorization of the new VHA organization as recommended
- . Preparation of supporting detail required for implementation of the organization has been completed as far as possible prior to approval and authorization. Final refinement can be accomplished in minimum time upon approval of the organization.

A summary of work accomplished in the organizational area during 1973 is illustrated in Figure 3. This shows the proposed progress schedule submitted at the beginning of the implementation project along with the percent completion of each of the work procedures listed in this schedule.



### 3. PRIORITIES OF FUTURE WORK

Priorities of work in the immediate future expedite completion of organizational detail following authorization and implementation.

#### (1) Implementation Plan

The implementation plan to be developed will detail the step-by-step actions required to establish the new organization. The plan and schedule will be constrained by two factors.

- . Priority of installation will be given to those organization units urgently required to enable VILA to discharge its enlarged responsibilities (i.e., Personnel and Training Division)
- . Undue operational disruption must be avoided by careful, sequential scheduling which requires that a reorganized element be operating adequately in the new pattern before moving to reorganize a contiguous element in the work flow.

The most important characteristic of the implementation plan is the sequence of actions rather than the exact time schedule. The time schedule should be regarded as a feasible target, with actual accomplishment advanced or slipped to accommodate the pace of installation - always maintaining the sequence.

The development of the implementation plan is estimated to take approximately four weeks.

(2) Implementation of the Plan

Implementation cannot be regarded simply as the mechanical installation of a predetermined organization plan. Inevitably, modifications will be required by circumstances which have changed during the period of program development. Furthermore, some opportunities to adjust functional detail and procedures for greater efficiency will become apparent when actual application is made. This is to be expected. Flexibility must be maintained to accommodate these problems and opportunities while holding to the essential pattern and objectives of the new overall organization plan.

No organization plan should ever be accepted as a rigidly stated plan for all time. Objectives change. New operational patterns arise. Fundamental problem areas disappear and new ones develop. The organization plan must be flexible and capable of purposeful, evolutionary change to support the changing requirements of the VHA in the future - and VHA management must be willing and able to exploit the positive benefits of such organizational evolution.

As the RJA advisors assist in the implementation of the new organization, attention will be given to explaining the purpose and principles of the organization to those involved. Even a most elementary appreciation of the objectives of organization can generate additional suggestions for further organizational improvement.

#### 4. RECOMMENDATIONS

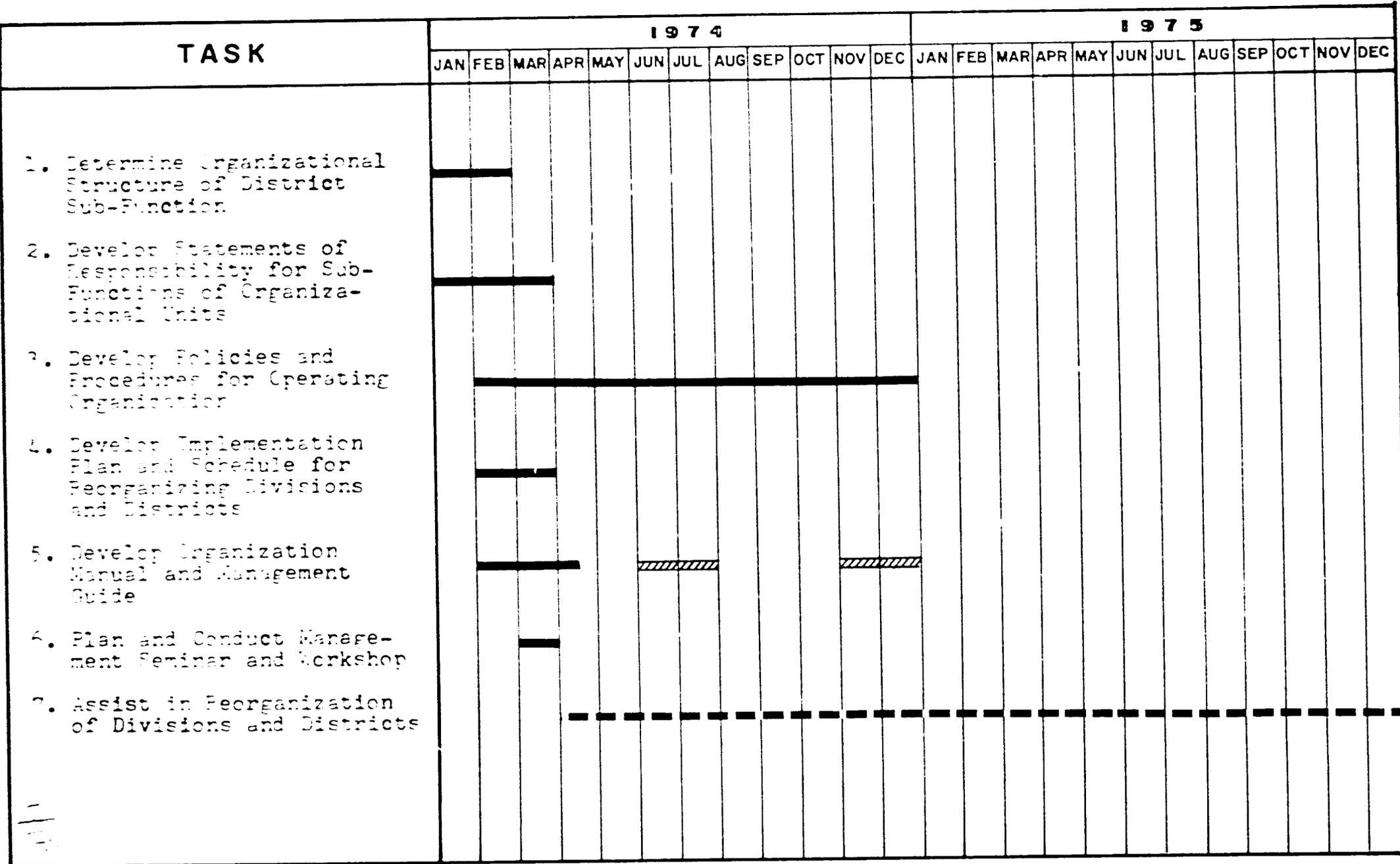
It is recommended that

- . Any questions which may be delaying official authorization of the recommended organization be identified, satisfactory solutions expedited and authorization obtained as rapidly as possible
- . Implementation of the Central Headquarters plan be essentially completed and adequate operation demonstrated before moving to the Field Organization
- . Resolution of the respective roles and responsibilities of the VHA and of the Provinces and Cities be pressed, with the target for accomplishment set as 1 July 1974.

#### 5. SCHEDULE FOR 1974

The schedule for organizational advisory work for the next two years is summarized in Figure 4.

# FIGURE 4 PROPOSED ORGANIZATIONAL WORK PLAN



### III. PERSONNEL ADMINISTRATION AND MANPOWER MANAGEMENT

Good organization for personnel administration and manpower management is a basic requirement for the effective operation of any public or private agency. The ability to achieve an organization's objectives is dependent on the availability, proper placement and motivation of adequately trained personnel. Availability of good personnel is influenced by factors such as the recruitment program and availability of adequate pay and compensation for different classes of employees. Proper placement of personnel is dependent on factors such as evaluation and classification of personnel needs as related to job requirements. Motivation of employees is proportional to the degree to which a system exists to assure reasonable opportunity for advancement. In order to make provision for all of these essential requirements of good administration, an agency must have a sound, adequately staffed and trained organization for personnel administration and manpower management.

Prior to the undertaking of the project, the Directorate General of Highways possessed very limited organization and capability for a sound personnel and manpower management program. The function was not well staffed. Standard procedures did not exist in crucial areas. Records were inadequate,

inaccessible or nonexistent. Personnel programs were not adequate for the professional or technical staffing requirements of a modern highway agency.

The situation was further complicated by shortcomings of the Vietnamese Civil Service System which made it difficult to attract, properly place and adequately compensate the calibre of professional employees required to adequately staff key positions in the DGOH.

The management study conducted by Booz, Allen found the following inadequacies in personnel administration and manpower management.

- . Lack of data or inaccurate data on existing employees and personnel requirements
- . Shortages of personnel or lack of properly trained personnel for many key positions
- . Difficulties in hiring and keeping qualified personnel due to classification, remuneration and other problems inherent in the civil service system
- . Inadequate organization for personnel administration and training.

One of the major efforts of the Booz, Allen management study was to make a survey of personnel on hand and an estimate

of personnel needs by category and level of employment at Headquarters and in the Districts - function-manning schedules. Categories were such as to indicate educational attainments of existing personnel as compared with requirements.

In addition to recommending that ways be found to overcome the civil service system problems (page 115, Final Report), the Booz, Allen report made the following recommendations on personnel and training (page 12, Task E-1 Report).

- . Perform a detailed personnel analysis of the DGOH Central Agencies
- . Develop job descriptions
- . Collect personnel requirements for ferry operations
- . Collect personnel on-hand information from the Provinces
- . Develop an improved personnel classification system
- . Develop a personnel management information system
- . Plan for adjustment of personnel assignments.

#### 1. RJA OBJECTIVES

In line with the above recommendations and specifications established by DGOH (now VHA) and USAID for the implementation project, RJA advisors reviewed the entire personnel system

then in effect with their DGOH counterparts. Policies and procedures of the Directorate of Civil Service, which controlled the personnel function, were reviewed. A Michigan State University study of the civil service system made in 1961 and other reference material on the French civil service system concept (the basis for the Vietnamese system), were reviewed to obtain an in-depth understanding of the system. Meetings were conducted with the Director of Civil Service to explore any anticipated revision of the system, and other meetings were held with USAID and DGOH officials to explore present policies and practices in hiring Vietnamese personnel. As a result of these reviews and study efforts, four basic objectives were developed for implementation of the personnel administration and manpower management function.

- Employee Procurement. To recruit, select and employ the best qualified individuals required by the overall objectives of VMA
- Employee Development. To provide educational and training programs to develop employees who will contribute more effectively to the goals of the organization and gain satisfaction from their work
- Employee Utilization. To assign employees in those jobs where the need for their services is greatest and which they can perform most effectively

- . Remuneration. To provide compensation programs that will ensure optimum consistency and equity in the relationships that exist between VHA, prevailing private employment in the labor market of the Republic of Vietnam and GVN agencies.

These objectives encompass all of the specific recommendations made in the Booz, Allen study, such as developing job descriptions, making analyses of personnel requirements, developing an information system, and developing a personnel classification system.

## 2. ACCOMPLISHMENTS DURING THE YEAR 1973

To accomplish the above objectives, several activities were scheduled and undertaken during 1973 in accordance with the project requirements. In order to make clear the relationship of these activities and the degree to which they have been accomplished to the project objectives, they are assembled below into logically related groups. Accomplishments during the year pertaining to each group will be discussed in turn.

### (1) Personnel Classification and Salary Plan

Activities in the first group were those performed in order to develop a complete personnel classification and pay plan for VHA. These included

- . Development of job descriptions for all VHA positions

- . Development of staffing, classification and compensation recommendations for key positions and other positions on a priority of need basis
- . Formalization of the classification and pay plan.

To the extent that accomplishment of activities in this group has not been dependent on factors outside of project control (such as approval of the new VHA organization structure), they have been completely accomplished. There were delays in accomplishment, as related to initial schedules, because of the uncertain status of the DGOH agency in the spring of 1973. Development of the classification and compensation program necessarily was delayed until it could be determined whether or not DGOH would be able to establish its own program as an autonomous agency or be required to follow the guidelines of civil service.

Six identifiable steps were utilized to develop the classification and salary plan.

1. Committee Selection

Committees composed of knowledgeable VHA personnel were selected to perform work analysis.

2. Work Analysis

These committees identified, in detail, functions and tasks being carried out by components of the organization as well as the requirements of key positions.

### 3. Market Study

A list of 70 employers competing directly with VHA on the labor market was compiled by the personnel staff.

### 4. Salary Survey

General descriptions of key classifications were proposed along with salary and benefit questionnaires. Each employer was personally interviewed by the personnel staff. The data collected was prepared and submitted to VHA in August. (See Figure 5.)

### 5. Classification Plan

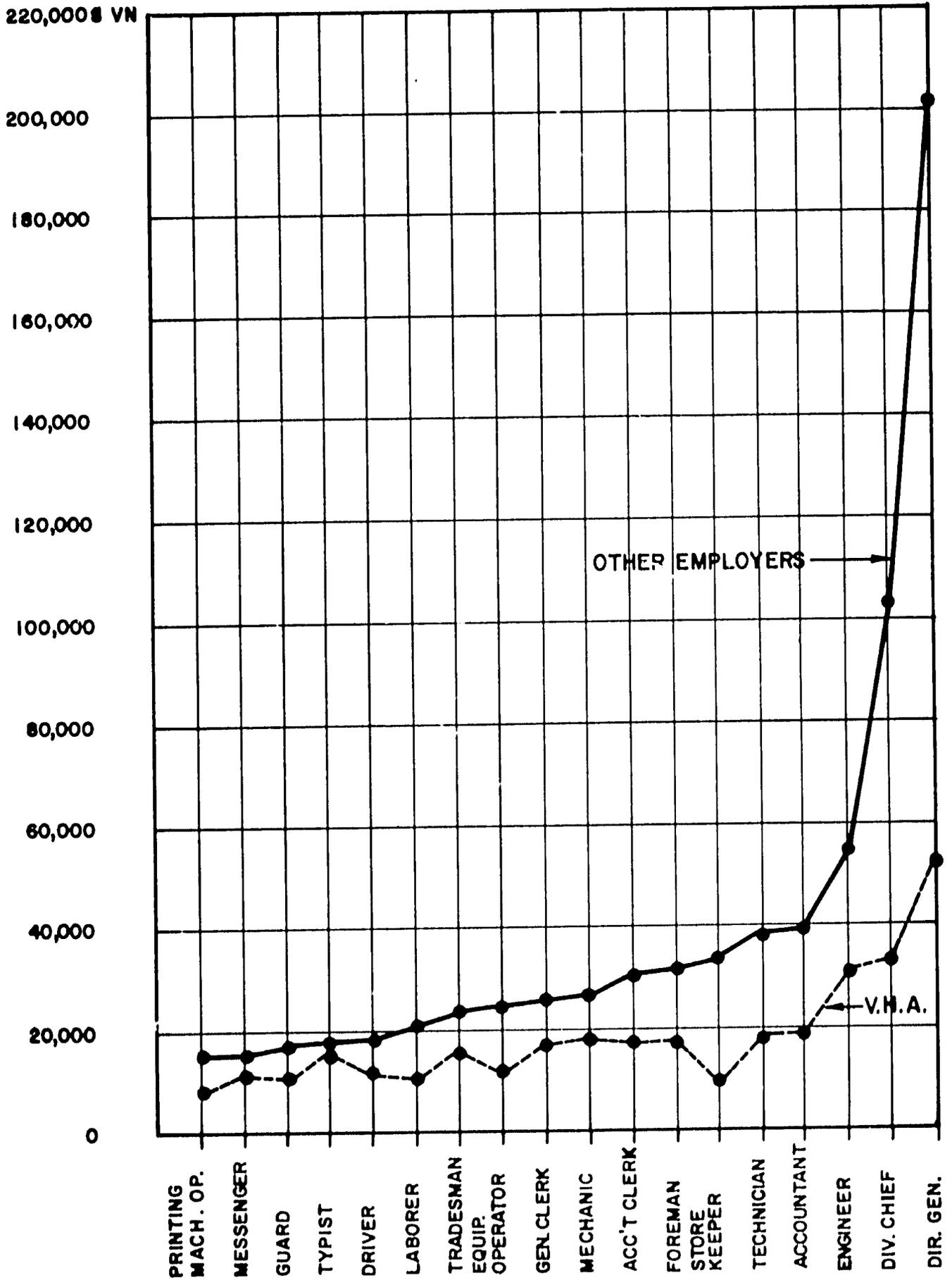
Detailed job descriptions or classification statements were prepared for existing top management positions. Based on the work analysis, general classification statements were prepared for positions below the top level. All classifications were ranked by level of difficulty. The results of these efforts have been submitted to VHA for review and approval. (See Attachment A) The Classification Plan was approved by the Administrative Council on 30 November. It has not been and will not be possible to finalize job descriptions (classification statements) for positions in the new organization until the organization structure is approved by VHA.

### 6. Salary Plan

Salary plans were developed to fit each personnel category (engineering, clerical, etc.), based on the salary survey conducted by Booz, Allen and DGOH and USAID. These included maximum and minimum ranges for the different personnel classifications. Criteria for the (classification and) salary plan included such desirable features as

- . Equal pay for equal work
- . Increase in pay for merit
- . Provision for opportunities for advancement
- . Titles to fit the work
- . Salaries to fit the work
- . Fiscal capability.

**FIGURE 5  
SALARY SURVEY SUMMARY  
AUGUST 1973**



(8)

The salary plan and the initial implementation procedures were submitted and approved by the Administrative Council on 30 November with the following Council recommendations.

- . The salary range minimums be lowered to match available funds
- . During the employee evaluations, the necessary data be collected but the actual classification and rate of pay for each employee be assigned by a Central Headquarters committee
- . The total cost of the salary plan and benefits be presented to the Council for approval prior to implementation.

Revisions are presently being made in compliance with these recommendations. The employee evaluations will be conducted upon completion of the revisions and appointment of the evaluation team by the Director General.

All of the basic objectives pertaining to employee procurement, employee development, employee utilization and proper remuneration are dependent on the existence and implementation of the classification and salary plan.

## (2) Personnel Needs and Selection

The second group of activities undertaken related to the determination of personnel needs and selection,

recruitment and placement of key personnel. This included such activities as

1. Development of a complete manpower inventory, including pertinent information on all existing employees
2. Performance of a manpower needs determination
3. Development of employment policies
4. Development of a Personnel Policies and Procedures Manual
5. Development of detailed data on labor source and manpower availability
6. Initiating recruitment, screening and placement activities.

As in the case of the first group, these activities have all been accomplished to the extent possible pending approvals of the new organization structure and the salary and classification plan. A complete inventory was made of existing personnel, including information on personnel characteristics such as age, education, experience and length of service. Data processing facilities of the Vietnam Power Company were used to tabulate and arrange the data in a form suitable for making the analyses needed

initially to determine personnel needs and develop the selection, recruitment, placement and training programs. (Figures 6, 7, and 8 illustrate the summaries obtained.) A records system was established to keep the data current and provide a simple and inexpensive working base which later can be transferred permanently to automatic data processing.

### (3) Personnel Policies

Recommended personnel policies were submitted for approval in September. A personnel committee has been established for the development of a Personnel Policies and Procedures Manual. Draft outlines have been prepared and submitted to this committee for procedures to be included in the manual along with a recommended format for the manual. To date the committee has finalized all procedures. (See Attachment B to this report for an illustration.)

### (4) Employee Benefits

Specific advice and guidance has been given in many areas that relate to the establishment of a retirement trust fund. Also, VHA requested and received a proposal for a medical and hospital workmen's compensation and disability insurance program from the American International Underwriters, Vietnam. Presently the law requires that

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**FIGURE 6**  
**NUMBER OF PERSONNEL BY AGE**

GROUPED PERSONNEL CLASSIFICATION	Less Than 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45-49 Years	50-54 Years	55 Years or More	Average Age	Total Force
Chief Eng. Tech. Administrator			7	1	4	7	1	1		32	11
Engineer Assistant Engineer Administrator		23	10	24	12	15	8	5	1	27	117
Chief Clerk		1		3	2	7	4	8		44	25
Technician		20	41	20	16	6	3	10	1	31	126
Fore. an		2		1	3	6	9	16		46	37
Surveyor	1	5	7	10	14	4		11		37	52
Drafts an		3	9	5	14	11	8	24	3	41	82
Administration Clerk	7	36	65	61	35	30	17	10	2	36	453
Accounting Clerk		10	14	6	2	2		4	1	32	35
Typist	14	57	35	2	31	19	41	50	6	37	319
Storekeeper					1		5			45	6
Chief Mechanic					1	1	1	3		48	6
Skilled Worker	2	22	13	20	15	17	12	33	3	43	340
Equipment Operator		10	7	7	14	12	9	11		33	69
Nurse				1				2		32	1
Boatswain								54		54	2
Car Driver		14	3	30	49	127	135	63	7	42	443
Boat Operator					4	10	10	30	1	43	65
Messenger		4		12	3	17	31	40	4	46	116
Guardian		2		2	5	14	15	35	2	47	76
Telephone Operator				1	2	2	16	5		46	46
Unskilled Worker	37	45	37	59	110	305	310	473	23	45	1413
Clerk	15	30	15	34	61	193	200	164	34	43	376
Laborer	63	73	57	77	120	281	341	457	55	43	1530
Computer Programmer				1					1	45	2
Unclassified	39	2	3	5	4	12	17	10	7	34	99
<b>TOTAL</b>	<b>212</b>	<b>438</b>	<b>376</b>	<b>421</b>	<b>575</b>	<b>1193</b>	<b>1335</b>	<b>1701</b>	<b>159</b>	<b>40</b>	<b>6358</b>
<b>PERCENT OF TOTAL</b>	<b>3.4</b>	<b>6.9</b>	<b>5.1</b>	<b>6.6</b>	<b>9.0</b>	<b>18.8</b>	<b>21.0</b>	<b>26.8</b>	<b>2.4</b>		

915

**FIGURE 7**  
**NUMBER OF PERSONNEL BY EDUCATION**

GROUPED PERSONNEL CLASSIFICATION	Less Than 5 Years	5 Years	6-11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	Average Years of Education	Total Force
Brief Eng./Tech. Administrator			4			3		2	2	15	11
Engineer/Assistant Engineer	6	1	23	17		9		60	1	15	117
Administrator			1							3	1
Chief Clerk	1	3	13	2		4	2			9	25
Technician	11	3	25	6		32	21	14		11	126
Foreman	1	18	17					1		6	37
Surveyor	8	24	13			2				5	52
Craftsman	12	25	45							6	82
Administration Clerk	36	103	184	9	1	17	1			7	453
Accounting Clerk	10	7	15	2	1					6	35
Trickster	49	153	107							5	319
Storekeeper	2	2	2							5	6
Chief Mechanic		4	2							6	6
Skilled Worker	39	134	67							4	340
Equipment Operator	30	24	15							4	69
Nurse			1							2	1
Boatwain	1	1								4	2
Truck Driver	175	214	59							4	449
Boat Operator	1	5	18							4	65
Messenger	19	56	21							4	116
Guardian	35	27	14							4	76
Telephone Operator	20	14	7							3	46
Unskilled Worker	310	393	145							3	1418
Clerk	169	436	111							4	876
Laborer	361	418	161							3	1530
Computer Programmer	1		1					2		4	2
Unclassified	43	42	10							6	99
<b>TOTAL</b>	<b>2705</b>	<b>3157</b>	<b>1669</b>	<b>36</b>	<b>4</b>	<b>67</b>	<b>34</b>	<b>83</b>	<b>3</b>	<b>6</b>	<b>6358</b>
<b>PERCENT OF TOTAL</b>	<b>42.5</b>	<b>33.8</b>	<b>19.9</b>	<b>.6</b>	<b>-</b>	<b>1.0</b>	<b>.5</b>	<b>1.3</b>	<b>-</b>		

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FIGURE 6  
NUMBER OF PERSONNEL BY EXPERIENCE

GROUPED PERSONNEL CLASSIFICATION	Less Than 2 Years	2-4 Years	5-9 Years	10-19 Years	20 Years or More	Average Years Experience	Total Force
Chief Eng. Tech. Administrator			3	4	2	15	9
Engineer Assistant Engineer	26	14	23	8	17	10	114
Administrator					1	15	1
Chief Clerk	4	3	3	4	11	15	25
Technician	32	32	26	25	9	7	124
Foreman	1	2	4	15	13	17	34
Surveyor	20	2	5	13	5	9	50
Craftsman	11	6	4	27	22	14	74
Administration Clerk	63	65	101	113	91	11	433
Accounting Clerk	5	6	6	6	11	13	34
Typist	32	47	79	84	56	10	314
Storekeeper	1		1	2	1	11	6
Chief Mechanic			1	2	2	17	5
Skilled Worker	65	15	17	123	59	14	325
Equipment Operator	4	12	3	23	2	9	66
Boatswain					1	25	1
Car Driver	13	13	71	165	65	11	436
Boat Operator		2	9	10	14	16	35
Messenger	7	13	21	40	26	13	112
Guardian	10	11	13	16	4	8	61
Telephone Operator					6	25	6
Unskilled Worker	260	131	160	455	303	12	1409
Clerk	101	111	149	364	147	12	672
Laborer	394	260	331	331	130	8	1436
Computer Programmer	1		1			4	2
Unclassified	23	6	6	16	12	10	63
TOTAL	1/6107	1207	774	1160	1324	1042	13
PERCENT OF TOTAL		19.8	12.6	19.0	31.5	17.1	

1/ No data was available for 251 employees, therefore percentage is base of known total.

7  
SIC

every employer of 1500 or more workers shall provide medical and health service, including full-time availability of a medical practitioner (holding the State Diploma of Doctor of Medicine) and one or more nurses. An insurance program was recommended to fulfill the requirements because of

1. The necessity, otherwise, to establish several dispensaries throughout the country
2. The availability of better programs at less cost
3. Simpler budgeting and disbursement requirements
4. A 75 percent reduction in administrative duties and costs
5. The insurance program will fulfill legal requirements.

Despite these positive accomplishments, a considerable amount remains to be done to design and implement a program for personnel selection, recruitment and placement. Little could be done in the area of manpower needs determination beyond the rough estimates resulting from the Booz, Allen study. Specific determination of requirements to fill positions in the new VHA organization

necessarily must await approval of the new organization structure.

Recruitment, selection and placement of personnel is considerably hampered by the lack of official approval of the organization structure and classification and pay plans. However, assistance is continually being provided in recruitment, screening and placement efforts. Also, data has been compiled on labor source and manpower ability. These data include

- . A list of all schools, colleges and universities in Vietnam
- . A current list of local personnel terminated by the U. S. government
- . A list of individuals attending foreign colleges and universities through government-sponsored programs.

The second group of activities, as identified and described above, is particularly related to the employment procurement objective stated earlier in this report.

### 3. PERSONNEL ORGANIZATION

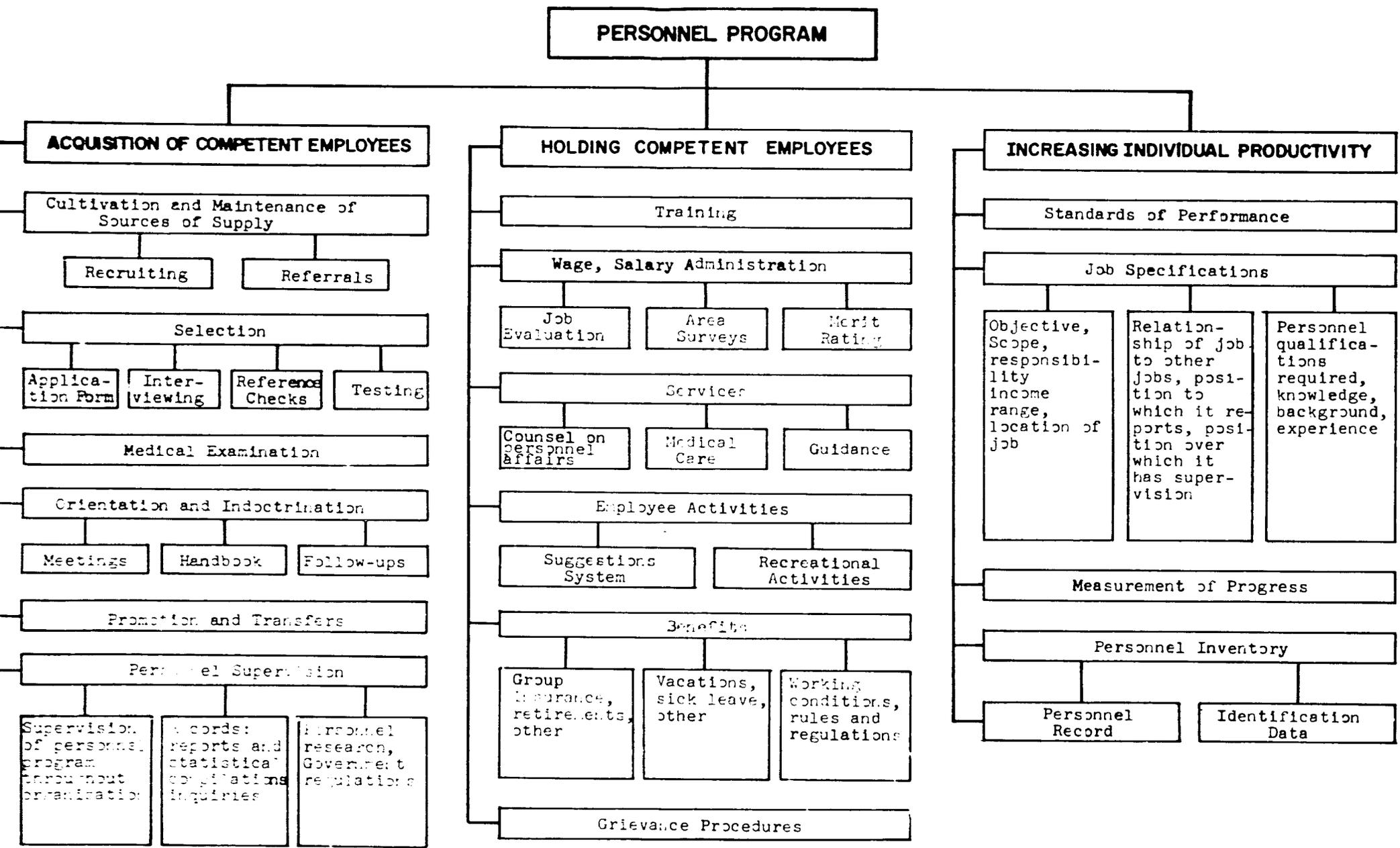
In addition to accomplishments previously described that relate to this area of endeavor, preliminary steps have been

taken in the organization and staffing of the personnel function. Early in the project an interim personnel program was designed and submitted to DGOH. This program, illustrated in Figure 9, recommended assignment of two personnel project coordinators to work with the RJA advisor in establishing some of the required systems and procedures. In addition, it recommended assignment of three additional personnel to assist in the development and implementation of each of the three sections of the program identified in the illustration. Subsequently, the program was approved and the coordinators and other personnel assigned by DGOH - the coordinators full-time and the other personnel part-time. An RJA translator was assigned to assist the group, which has since worked with the RJA advisor in the performance of studies, development of procedures and forms and initial personnel recruitment and selection.

In addition to the development work which has been performed by the interim organization group, a plan for more permanent organization a Personnel and Training Division has been developed and submitted to VHA. As shown in Figure 10, recommended organization of the Division will consist of six sections. These sections will have responsibilities as outlined in Attachment C.

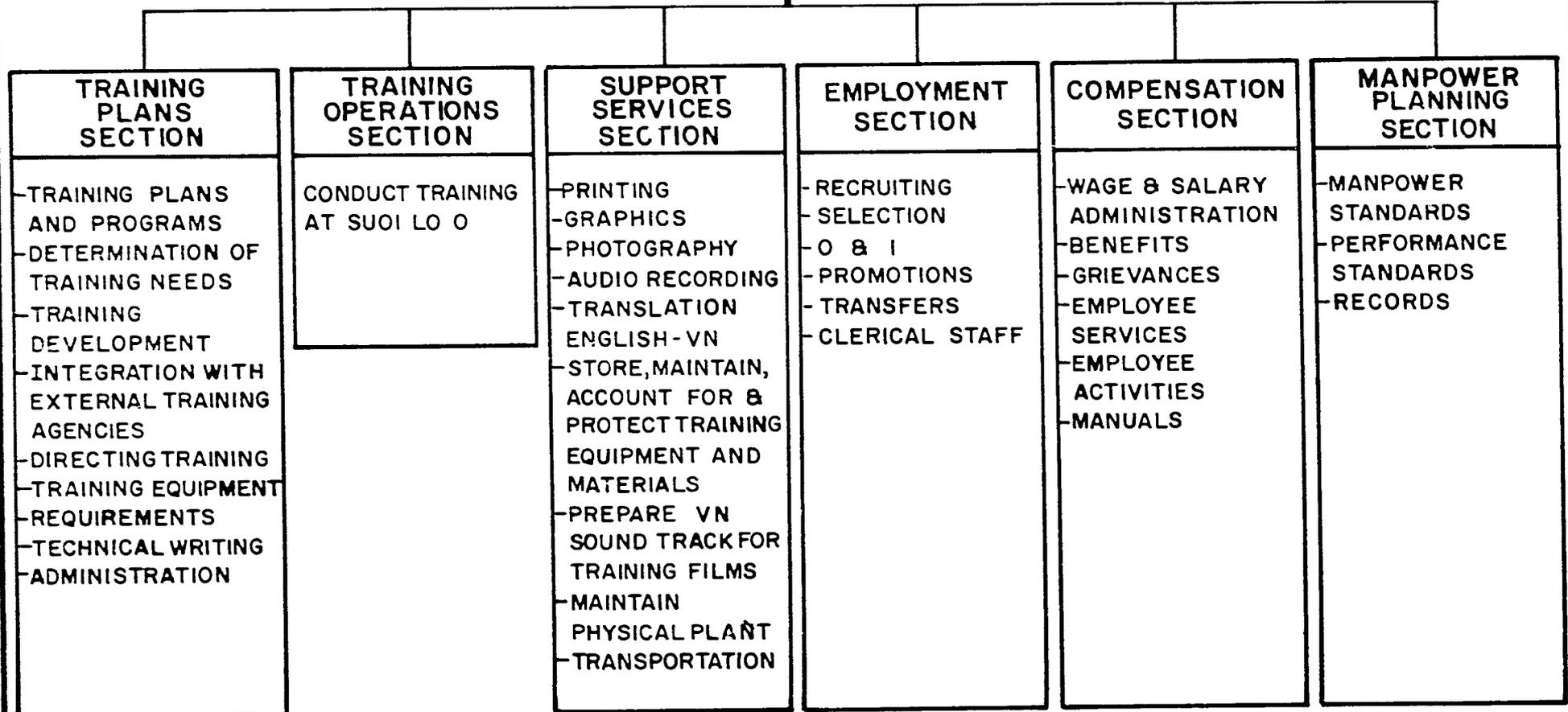
Other activities directed toward organization of the personnel function, such as the development of forms and documents are being performed in an ongoing manner as the Personnel

FIGURE 9  
INTERIM PERSONNEL PROGRAM



**FIGURE 10  
PERSONNEL ORGANIZATION AND STAFFING PLAN**

**PERSONNEL & TRAINING DIVISION**



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Policies and Procedures Manual (previously discussed) is being developed. Initial draft forms have been proposed for most regular processes. Training of employees assigned to the personnel function is also being pursued on an ongoing basis. A short seminar on personnel management was conducted for these employees. The personnel advisor has moved his office to the VHA personnel office to be on hand to provide guidance and assistance to the personnel officer on the conduct of his daily affairs.

Additional steps cannot be taken toward future implementation of organization and staffing for the personnel function until there is formal approval of the new organization of VHA outlining authorities and responsibilities in the personnel area.

A summary of all of the activities and accomplishments in the personnel area is given in Figure 11. This bar graph shows the proposed schedule of activities submitted at the beginning of the project and the percent complete of each activity.

#### 4. PRIORITY DIRECTION OF CONTINUING WORK

The groups of activities and related accomplishments described in the previous sections constitute the work accomplishment to date in the personnel area with the exception of work in the personnel training area, which is the subject of the following chapter. While the development, organization and

# FIGURE II PERSONNEL WORK ACCOMPLISHED

TASK	1973											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. Current Status Review			COMPLETE									
2. Develop Preliminary Personnel Organization				COMPLETE								
3. Conduct Manpower Inventory											COMPLETE	
4. Develop Staffing, Classification and Compensation Recommendations for Key Positions								COMPLETE				
5. Develop Initial Personnel Forms										COMPLETE		
6. Develop Staffing, Classification and Compensation Recommendations for Priority Employment							COMPLETE					
7. Complete Plan for Administration and Staffing										COMPLETE		
8. Develop Job Descriptions											50%	
9. Classification and Pay Plan							COMPLETE					
10. Recruit Key Personnel										CONTINUING		
11. Conduct Priority Employment Program										CONTINUING		
12. Perform Manpower Needs Analysis											0%	
13. Adopt Overall Training Program											100%	
14. Develop Personnel Policies											100%	
15. Develop Personnel Procedures Manual											50%	
16. Continued Recruitment and Placement										CONTINUING		

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conduct of training programs logically will be the responsibility of the personnel organization, the training workload associated with this project is sufficiently large to require the assignment of advisors exclusively to this activity area.

It may be seen that there has been significant work accomplishment in the personnel area. There is not much more that can be done until there is approval of the new VHA organization and of the proposed organization for the personnel function. Nevertheless, only a beginning has been made in developing an effective and efficient organization for personnel administration. Less has been accomplished in the actual recruitment, selection and placement of needed employees.

Now that the new VHA top organization is approved, manpower planning to fill new key positions can begin. Job descriptions for these positions will be finalized. Related classification and salaries will be established - the salaries to be in accordance with the newly approved classification and salary plan. Evaluation of existing employees will be undertaken to determine potentials for new position assignments as well as training needs. Also, recruitment, selection and placement of new employees will be pursued earnestly.

In addition to pursuing these efforts at staffing the new VHA organization, the organization of the personnel function itself can be undertaken now that the top Organization Plan is

approved and key personnel assignments can be made. The consultant advisor will be continuously on hand to assist in the implementation of all programs and in the training of new personnel.

Concurrent with the organization of the personnel function and the implementation of new procedures, the Personnel Policies and Procedures Manual will be further developed. Job descriptions will be written for all supervisory positions in the new VHA organization. Manpower planning will be performed in connection with the needs of all VHA functions. Employee evaluation will be carried out and recruitment, screening and placement of employees will be continued. Most of these activities will be ongoing.

## 5. RECOMMENDATIONS

To allow development of the personnel function to continue at a desirable pace - the pace which so far has been established - certain actions by VHA and the Ministry are essential. The following are recommended.

- . Key personnel should be selected, approved and appointed as soon as possible
- . Complete organization for the personnel function should be approved quickly

# FIGURE 12 PROPOSED PERSONNEL WORK PLAN

TASK	1974												1975												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1. Complete Personnel Staffing and Administration Plan	█																								
2. Implement Classification and Salary Plan	█																								
3. Implement Personnel Policies and Procedures	█																								
4. Develop Detailed Job Descriptions for Positions Below Division Level	█																								
5. Develop Agency-Wide Manpower Planning	█																								
6. Continuing Recruitment, Screening and Placement of Personnel for VHA	- - - - -																								

1/11/74

- . To the extent possible, time between submission of proposed plans and approvals and between approvals and actions to implement should be reduced
- . A Personnel Committee should be established under the direction of the Minister of Public Works and Communications to coordinate all personnel efforts by autonomous agencies and corporations under the Ministry in order to achieve common objectives without undesirable competition.

#### 6. SCHEDULE

The proposed bar graph schedule for personnel activities in 1974 is shown in Figure 12. Descriptions of the work procedures shown on the figure are as follows.

- . Reorganization of the personnel function and sub-functions as described in the overall organization of VHA
- . Implement the classification and salary plan within approved guidelines and budgets at the earliest possible date
- . Upon completion and approval of the Personnel Policies and Procedures Manual, schedule seminars with Division and District personnel for a smooth and orderly transition

- . As Divisions and Districts are reorganized and programs implemented, detailed job descriptions will be developed for each position
- . As Divisions and Districts are reorganized, the Personnel Division will assist in manpower planning in relation to workloads
- . Continued assistance will be given to establishing an effective recruitment, screening and placement process. This will not be limited to new employees, but will include all employees presently with VHA in need of retraining.

#### IV. TRAINING

A major recommendation of the Booz, Allen study of DGOH concerned the development of a comprehensive training program. In view of the substantial number of new supervisors and employees to be added to the agency, and in view of the general introduction of new operating procedures and management systems, this requirement for training is critical to the success of the VHA improvement program. RJA, after review of the existing situation and early discussions with VHA (formerly DGOH) managers, concurred in the Booz, Allen judgments and basic training recommendations. RJA is uniquely qualified to pursue the training objectives recommended by Booz, Allen because of the firm's worldwide reputation for leadership in the highway training field.

##### 1. RJA TRAINING OBJECTIVES

The objectives sought by RJA envision the creation of a well integrated, continuing training program to serve the evolving needs of VHA both in the near- and long-term future. Specifically, the objectives include

Establishment of a VHA training organization capable of self-generation of training programs and the direction and implementation of the programs

- . Development of a series of courses specifically designed to meet present urgent needs and also having longer-term usefulness in training activities
- . Use of the training resources of agencies external to VHA when their course material and schedules are consistent with VHA training needs
- . Implementation of the training program with maximum feasible participation and supervision by VHA personnel in order to develop VHA capability to maintain the ongoing program.

## 2. ACCOMPLISHMENTS DURING THE YEAR 1973

The work completed in 1973 and that under way at the year end is largely related to the establishment of the training organization and development of the training plan and procedures. However, one self-instructional course in basic mathematics has been completed and translated into Vietnamese and is presently being reviewed. A detailed description of the accomplishments to date is given in the following sections.

### (1) Establish Priorities for Training Needs Areas

The Booz, Allen Task Report, "Skills and Training Requirements (E3) and External Training (E2)," identified personnel shortages in 36 skill areas. In order to make most effective use of available training resources, it was

necessary to identify the most urgent training need areas.

To obtain the necessary information, a survey was made of the judgments of all the District Engineers. Each District Engineer was interviewed and requested to identify the five skill areas that represented the most critical training needs in his District and to rank them in order of priority. Two District Engineers grouped more than one skill area into the same rank.

Responses from the District Engineers were arranged in the matrix shown in Figure 13. Skill areas identified by the District Engineers were entered at the left of the matrix and the source of data (for example, Saigon District) was indicated across the top of the matrix. Rankings provided by each District Engineer were entered into the appropriate cell.

From Figure 13 it can be seen that the District Engineers differed on the priority to be accorded a given skill area. They also differed on the training areas to be addressed. In order to obtain a set of five skill areas, the decision rule applied was that those skill areas would be chosen which showed agreement of three or more District Engineers. On this basis, the following skill areas were selected.

FIGURE 13

TRAINING PRIORITIES

	SAIGON	DALAT	CAN THO	NHA TRANG	DA NANG
1. General	2	2	4	4	1
2. General Training			2	3	3
3. General Administration	3				2b
4. General	4	5		5	2c
5. General Maintenance	5		5b		4
6. General Administration	1				
7. General		1			
8. General Training Center		3			
9. General			3a	1	
10. General			3b	2	
11. General			5a		2a
12. General Maintenance		4	1a		5
13. General Administration			1b		
14. General			1c		

- . Management
- . Materials Testing
- . Accounting
- . Routine Maintenance
- . Equipment Maintenance (1st and 2nd echelon)

These priorities were used to guide the training development effort.

(2) Review Local Training Resources

The Booz, Allen Task Report, "Skills and Training Requirements (E3) and External Training (E2)," described local training resources and capabilities. This document was reviewed by the highway training advisors. Subsequent to the review, visits were made to the National Institute of In-Service Training (NIT), National Technical Center at Phu Tho, the Ministry of Labor National Training Center in Gia Dinh, and the Highway Training School at Suoi Lo O.

The survey revealed that the National Training Center in Gia Dinh is poorly equipped and instruction is at a most elementary level. By contrast, the Highway Training School is much better equipped for teaching the subjects in its curriculum.

The National Institute of In-Service Training (NIT) is playing a significant role in the development of training

capability in the various ministries, in accordance with its charter. In addition, it offers a number of courses which have application to all ministries, but for which the number of students from each ministry is small, making it uneconomical for each ministry to establish its own course.

One particularly significant training area which has now been taken over by NIT is that of modern accounting. The program was transferred from the Ministry of Finance where it had been established under the sponsorship of USAID/PA. The planned series of eight courses will introduce modern accounting methods to the Government of Vietnam. The first two courses, Accounting I and Accounting II, are now being taught by NIT. These courses lay the foundation for cost accounting and performance budgeting, so necessary to effective management control of operations.

At NIT the Rector, Mr. Vu Trong Canh, was interviewed to determine the procedures for scheduling DGOH personnel to applicable courses. A working relationship was also established with Mr. Tran Huyen Thanh, Training Advisor to NIT. Mr. Canh explained the operation of NIT in detail and made available information on courses offered by NIT.

Dr. Bernard Sarnet, Chief of Party of the University of Missouri (Rolla) team, was interviewed regarding

improvements in the Civil Engineering curriculum of the National Technical Center. There has been a pronounced shift from the theoretical approach to heavy emphasis on laboratory work in support of lecture material. Syllabi and course descriptions have now been prepared and there now exists a college catalog based upon a credit system. Teaching methods have been improved and standardized objective tests of accomplishment are being developed with the help of the Asia Foundation.

A Management Institute of Vietnam is being established. The Institute will offer a master's degree program in management to holders of bachelor's degrees with two years experience in business. The 36-hour program will be offered in evening classes. The main purpose of the program is to develop qualified teachers.

Improvements in the Civil Engineering College should make the graduates better prepared to perform the tasks of DGOH.

(3) Schedule DGOH Personnel to Applicable NIT Courses

Mr. Vu Trong Canh, Rector of NIT, was interviewed to determine the procedures to be followed to obtain admission of DGOH employees to courses offered by NIT. The procedure is simple.

- . NIT publishes a list of courses to be offered during the next 3-month period. The list is sent to every ministry
- . Organizations which desire to send their personnel to NIT courses submit the names of persons to attend specific courses
- . When NIT receives the requests for attendance from all ministries, it determines total numbers of persons desiring to attend each course offered. This information is used to determine the number of classes needed for a given subject in order to keep the student/instructor ratio at a desirable level
- . NIT notifies each agency of the action taken on the agency's request. The agency ensures that its personnel report to NIT on the scheduled date.

The training advisors participated in the process of nominating DGOH personnel for attendance at NIT courses.

A less formalized process was followed to nominate DGOH personnel for attendance at a course in system analysis to be given at the Office of the Prime Minister Computer Center (OPM/CC). In this exercise, the training advisor

collaborated with the information systems advisor. Candidates must pass an English language comprehension test and the IBM Computer Programmer Test (an intelligence test). The course is presently scheduled to start in January 1974.

(4) Develop Permanent Training Cadre

One of the major objectives is the development of training specialists who will be able to apply modern training technology to the satisfaction of VHA training requirements. In May 1973 the Director General of Highways was requested to select four candidates. It was suggested that experience in one of the priority training needs areas would be useful. Also, because these men would be working with the training advisors, who spoke no Vietnamese, it was desirable that they possess adequate English capability.

1. Selection

The candidates included one Civil Engineer (Ky Su) and three Agents Technique (Can Su). The candidates had had some experience in one of the following areas: management, materials testing, routine maintenance, equipment maintenance.

The Michigan Test of English Comprehension was administered to the candidates at the Vietnamese-American Association (VAA) in Saigon. Two men were close to the required standard and two somewhat lower.

It was decided to see how well the candidates performed on the Raven Progressive Matrices Test of general intelligence before ruling on their acceptability. All men demonstrated substantial intellectual

capability on the test, with one ranking higher than the 95th percentile. It was recommended to the Director General that the men be accepted and that their English capability be improved through attendance at the course in accelerated English at the VAA.

## 2. English Language Training

The four training specialists attended the VAA Accelerated English Course from 5 July to 20 September 1973. In addition to this formal training, it was believed that direct interaction with the training advisors on a day-to-day basis should help to increase the ability of the training specialists to communicate in English. To assist the training specialists in developing their command of English, each has been provided with the following books.

- . Webster's Seventh New Collegiate Dictionary
- . Webster's New Dictionary of Synonyms
- . A Vietnamese-English Student's Dictionary (Hoa)
- . Anh-Viet Tu Dien (Khon) (English-Vietnamese dictionary)
- . Roget's Thesaurus of Words and Phrases
- . Harbrace College Handbook, 7th Edition (English Grammar)

The training advisors have had no difficulty in communicating with the training specialists. The training specialists have translated material from Vietnamese into English. For example, the new log book for heavy equipment. The translation is not always in idiomatic English but the meaning is adequately clear. The training specialist making the translation works with the training advisor to correct mistakes in grammar and in choice of words.

## 2. Attendance at NIT

Arrangements were made for the training specialists to attend NIT courses in Basic Administration and Management (BAM), Training Techniques and Training Management. The BAM course has been completed by one training specialist.

#### 4. Guidelines for Training Specialists

A document titled "An Orientation to the Determination of Training Needs" was published the first week in August. This document is being used by the training specialists as a guide to the conduct of training needs analyses. The document will be revised and expanded as the training specialists accumulate experience in the use of the techniques. Present illustrations, which are based on U. S. experience, will be replaced by illustrations drawn from Vietnamese experience. The document will eventually be translated into Vietnamese and will serve as a handbook for training additional training specialists.

#### 5. Orientation of Training Specialists

A seminar was held to acquaint the training specialists with the content of the document, "Orientation to the Determination of Training Needs." A training consultant from RJA also briefed the training specialists on the dynamics of the process of programmed learning and on the sequence of events leading to the development and implementation of new training courses.

As part of the seminar, the training specialists were taken on a field trip to the Equipment Division. At the Equipment Division the process of data collection was explained. A motor grader was used to illustrate data collection for development of a course in preventive maintenance.

#### 6. Assignment of Responsibility for Course Development

On 15 October each training specialist was assigned responsibility for the development of specific courses in accordance with a proposed program (see Figure 17). To permit the training specialists to devote full time to this work, the Director General, VHA, issued a Mission Order detaching the training specialists to the Training Advisory Section.

(5) Identify Training Requirements in Selected Areas

1. Training Needs Analysis

In the discussion of the task, "Develop Permanent Training Cadre," reference was made to a document titled "Orientation to the Determination of Training Needs." The document describes the systematic approach to the identification of training needs which will be applied by the VHA training specialists. A diagram of the process is shown in Figure 14.

The approach is based upon the premise that the job to be done determines the knowledge and abilities which the person must possess in order to accomplish the job in a satisfactory manner and, further, that the person needs to know only the knowledge necessary to do the job. That is, training should be specific to the job rather than general.

The process may be summarized as follows.

. Perform Job Analysis

In this step the activities that make up the job are identified. Activities are further broken down into individual tasks.

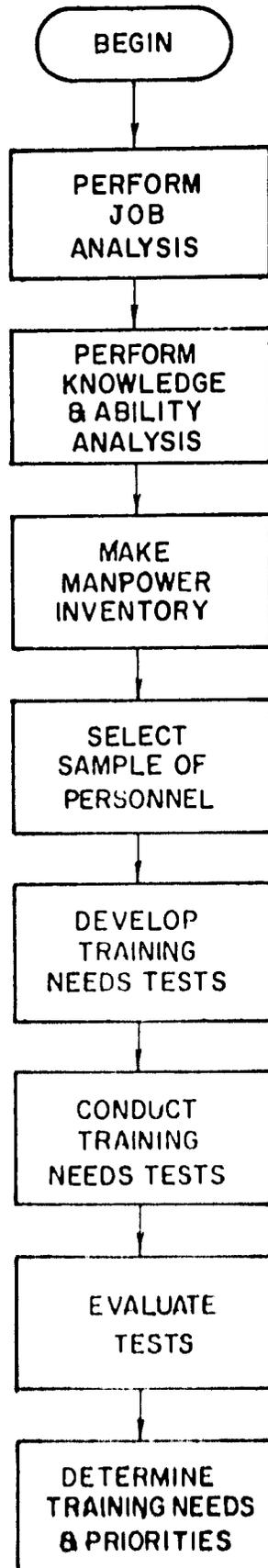
. Perform Knowledge and Ability Analysis

The tasks required to accomplish a given activity are analyzed to determine the need for specific knowledge and abilities (KA). The results are summarized in a set of KA statements. Attachment D shows the evolution of KA statements from identified job tasks.

. Make Manpower Inventory

The manpower inventory is carried out to determine the characteristics of the work force in the function for which training is to be developed. These include size of force; geographical distribution; age, education and experience levels and general capacity to learn. If a personnel information system exists and contains current data, all the characteristics, except general capacity to learn, should be available. Capacity to learn is estimated from a test given to a representative sample.

**FIGURE 14**  
**TRAINING NEEDS ANALYSIS PROCESS**



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. Select Sample of Personnel

Because it is usually infeasible to test all the persons working in a given function, a representative sample of that work force is chosen for testing. The test results are then generalized to the total work force in the function to provide an estimate of the magnitude of the need in each KA area.

. Develop Training Needs Tests

Usually four to six questions are developed for each KA statement. Performance tests (samples of the actual work to be done) are used where possible. Other forms of data collection are written tests, supervisory appraisals and structured interviews.

. Conduct Training Needs Tests

The training needs tests are administered to the sample of the work force selected in the fourth step of Figure 14. A test of general capacity to learn is also administered to these personnel.

. Evaluate Tests

The tests of job-related knowledge and ability are graded with the help of members of the Training Needs Committee. The test of general capacity to learn is graded by the training specialists.

. Determine Training Needs and Priorities

Results of the training needs tests are tabulated, counting only test sections graded "serious training need." The proportion of the sample population requiring training in a given KA area (for example, soils and aggregates) is used to obtain an estimate of the number of persons in the total work force (of the given function) who will require this training.

Priorities for course development are assigned on the basis of total number of persons requiring the training or other criteria established by the Training Needs Committee.

## 2. Test of Capacity to Learn

The design of training programs must take into account the level of general intelligence of the persons to be trained. There is no government-wide intelligence testing program in the Republic of Vietnam, so it was necessary to obtain a test which could be adapted for the Vietnamese population. In order for the results of the test to be valid, the test should be free of the effects of any given culture.

Fourteen U. S. publishers of intelligence tests were requested to send samples of suitable tests. The test selected was one which contained no words in the test items themselves and only a few words on each page (such as "End Test I," "Examples," "Answers," "Go on to the Next Page"). The name of the test is "Culture Fair Intelligence Test (CFIT)." It is published by the Institute for Personality and Ability Testing (IPAT).

There are three scales of the test, covering the full range of intelligence. Examples of test items are given in Figure 15. The type of test item (series, classification, matrices, conditions) is not labelled on the test itself. The person being tested is given detailed instructions by the test administrator and is given practice in solving sample problems before starting the test proper.

Scale 2 (250 copies each of Form A and Form B), scale 3 (50 copies each of Forms A and B) and Scale 1 (100 copies) are on hand in secure storage. The few English words in the test booklets for Scales 2 and 3 have been translated into Vietnamese and printed adjacent to the English words. These test booklets are now ready for use.

Before the tests can be used it is necessary that the "Instructions for Administration and Scoring" for each scale be translated into Vietnamese. This has been accomplished for Scale 2. It has been extremely difficult to obtain a good translation of the English text into Vietnamese. Dr. Nguyen Huy Giao, Professor and Chairman of the Department of Psychology of Saigon University, was requested to review and revise the original translation. Dr. Giao has had extensive experience in psychological testing and is familiar with the difficulty in translating technical material into

# FIGURE 15

## SAMPLE PROBLEM

### CULTURE FAIR INTELLIGENCE TEST

Do the following sample problems: ANSWERS

**SERIES**

1  2  3  4  5

**CLASSIFICATION**

1  2  3  4  5

**MATRICES**

1  2  3  4  5

**CONDITIONS**

1  2  3  4  5

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Vietnamese. Copies of the translation have been printed and are on hand.

The "Instructions for Administration and Scoring" for Scale 3 are being translated by the contractor's staff translator, using Dr. Giao's revision of the Scale 2 translation as a guide.

The training specialists must now be trained to administer and score the test properly.

### 3. Personnel Data

Data on classification, age, education, experience, and location for the VHA work force have not been available in a usable form. These data have been collected by the VHA personnel officer, working in concert with the personnel advisor. The first computer print-outs have been received and errors are now being corrected. Data will be updated by means of employment applications for new hires, by termination notices, and by reports of change of status when the personnel system is fully operational.

## (6) Develop Training Materials

### 1. Course Development Process

Figure 16 shows the sequence of activities to be followed in the development of training courses. The steps are summarized below.

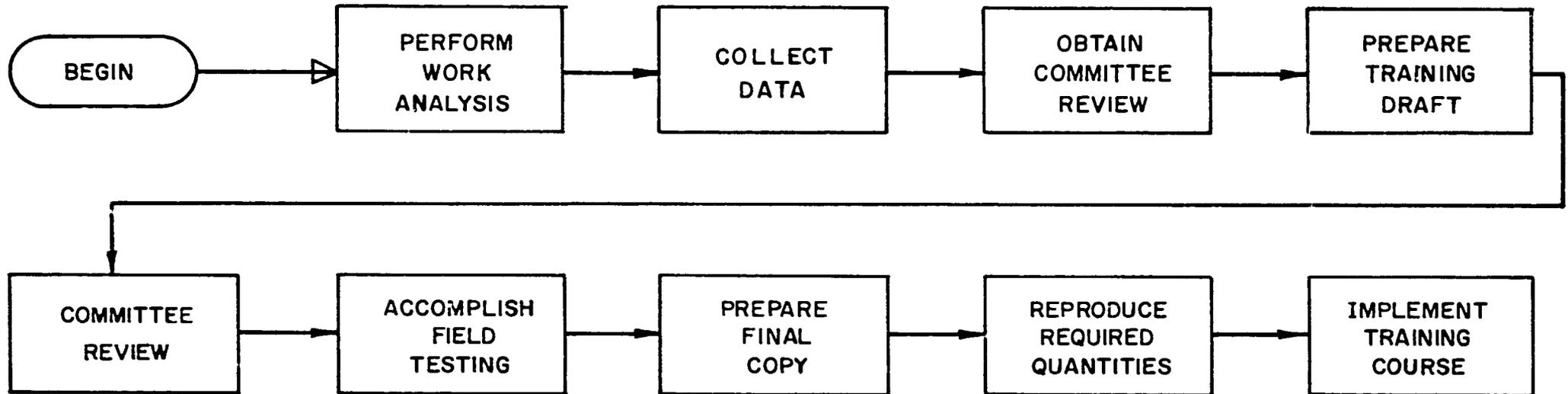
#### . Perform Work Analysis

The training specialist analyzes performance of the work in detail, making notes and sketches as necessary. Each individual action is recorded in the proper sequence.

#### . Collect Data

Visits are made to sites where the work is being carried out. The training specialist observes the process and determines how and why each step is accomplished. Work methods are examined for potential improvement. Relevant documents are collected. These may include manuals, specifications, contract memoranda, special provisions.

FIGURE 16  
COURSE DEVELOPMENT PROCESS



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. Obtain Committee Review

The Training Committee reviews all data that were collected for currency, relevancy and adequacy.

. Prepare Training Draft

The training technique to be employed is decided upon. The analysis of training needs provides the information required for the decision. Some items to be considered are

- . Number of persons to be trained
- . Reading capability
- . Capacity to learn.

When the technique has been chosen, a draft is prepared. For audio-visual materials this will consist of a "camera script" showing the drawings or photographs to be used and an "audio script" correlated with each photograph or drawing.

. Obtain Committee Review

When the training draft is completed, it is reviewed by the Training Committee for adequacy.

. Accomplish Field Testing

Sufficient copies are prepared for field testing the course. Field Testing includes

- . Pre-test to establish level of knowledge before training
- . Training
- . Post-test to determine how much of the material has been assimilated
- . Post-test analysis to determine the gain over pre-test score and to analyze questions answered incorrectly for ambiguity and possible replacement, re-casting or deletion.

. Prepare Final Copy

This step includes final typing for programmed texts, preparation of master tape for audio scripts and preparation of final slides.

. Reproduce Required Quantities

This step includes printing of programmed texts and reproduction of slides and tape cassettes in the number decided upon by the Training Committee.

. Implementation

This is the process of arranging for and accomplishing instruction using the newly developed training materials.

2. Training Program

Delay in availability of VHA personnel data and the test of capacity to learn made it impracticable to conduct formal training needs analyses. However, work was initiated on an adaptation of a programmed text in mathematics for construction inspection personnel and on the development of a course in operator (1st echelon) preventive maintenance for heavy equipment.

In September 1973 a proposed program of training development and implementation was prepared for VHA for the remainder of the 1973 contract year and extending through 1974 and 1975. Copies of self-instructional courses prepared for other highway agencies have been accumulated and will provide a point of departure for development of the VHA courses. The list of courses to be developed and implemented is shown in Figure 17. The list does not include courses to be taught at the Highway Training School.

3. Development of Courses

Status of work on courses under development is given below.

. Mathematics One

Review of the Vietnamese draft by VHA was completed on 20 November 1973. The final copy is being prepared for printing.

## FIGURE 17

### VHA TRAINING PROGRAM

#### ADMINISTRATIVE COURSES

Accounting Reporting  
Management Seminar  
Construction Management Seminar  
Maintenance Management Seminar

#### TECHNICAL COURSES

Equipment Operator Preventive Maintenance  
Construction Mathematics One  
Sampling  
Soils and Aggregates Orientation  
Contract Plan Reading  
Soils and Aggregates Field Testing  
Excavation and Embankment Inspection  
Base Course Inspection  
Asphalt Field Testing  
Asphalt Plant Inspection  
Asphalt Paving Inspection  
Bridge Inspection  
Portland Cement Concrete Testing  
Drainage Maintenance  
Premix Patching  
Asphalt Sealing  
Premix Levelling  
Construction Mathematics Two  
Maintenance Mathematics  
Base Repairing  
Gravel and Dirt Road Conditioning  
Physical Testing - Central Lab  
Chemical Testing - Central Lab  
Soils and Aggregates Exploration  
Pipe Installation

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- Preventive Maintenance of the CAT 120 Motor Grader (operator)

Work analysis and data collection have been completed, the results of data collection have been reviewed by the Training Committee and approval given for the preparation of the training draft. Preparation of the training draft is under way.

- Spot Premix Patching; Premix Levelling; Asphalt Sealing

Activity and task statements for these three courses were completed and reviewed with Chief, Maintenance Division, VIIA, on 14 November. Data collection for the three courses is under way.

- Sampling

The programmed text on Sampling and Testing for Excavation and Embankment prepared by RJA is being reviewed preparatory to the development of a course in sampling.

- Accounting Reporting

This short course will be given to accounting and administrative personnel, supervisors and foremen at the District level. The instruction will be in the form of a workshop, with flip-chart illustrations and preparation of input documents by the class. Preparation of training materials was completed in December. Instruction will begin in Danang District in January 1974.

(7) Review and Upgrade DGOH Training Capability at the Highway Training School and Districts

1. Visits to Highway Training School and Districts

District Engineer offices were visited in Danang, Nha Trang, Dalat, Saigon and Can Tho to obtain information on training facilities, training courses and training personnel. Visits were also made to the Highway Training School (HTS) at Suoi Lo O to identify requirements for new training equipment and repair or replacement of existing equipment.

The Districts were found to have no training equipment, no active training program and, with the exception of Dalat, no facility within which to conduct training. At the Dalat District Engineer's office a room has been set aside for seminars and appropriately furnished.

The HTS is a well equipped facility. Techniques of instruction include lecture, demonstration, practical exercise and training films. No programmed instruction is presently in use. Inspection of the facility, supplemented by discussion with the Director and the Operations Officer, served to identify requirements for equipment for use in the mechanic course and for the reproduction facility. Most equipment requirements were derived from the objective of developing and implementing self-instructional courses.

The principal problem at the HTS was one common to all of VHA - low salaries and inability to attract or retain qualified personnel.

The creation of VHA as an autonomous agency is intended to remedy this problem, but the change in salary level may not take place for some months.

Another problem is that of low per diem for personnel from the Districts who attend the HTS. These personnel are said to lose money if they attend HTS, so they are reluctant to enroll. If few persons enroll, the cost per student could be high.

## 2. Training Equipment Requirements

Training equipment requirements derived from the visits to the Districts and discussion with the Director, HTS, were consolidated into a single list in the format required by USAID. Approximate costs were obtained from searching catalogs in the library of USAID.

Following USAID concurrence, necessary information on sources, specifications and cost of the items was obtained from the catalog library. (Attachment E lists the equipment being purchased.) The contractor initiated purchase action in October 1973.

## 3. Highway Training School Study

A study was made of enrollment at HTS during the period 1969 to July 1973 to determine what proportion of the students were from DGOH (Central and Districts)

as a measure of the benefit derived by DGOH from operation of the School. The study showed that the number of graduates from DGOH and the Districts never exceeded seven percent of the total number of graduates in any year of the period. Because of the responsibility DGOH had for strengthening Province Public Works forces, it was appropriate that personnel from these organizations be trained at HTS. Now that VHA has been created as an autonomous agency, the problem is one of budgetary support for training of personnel from organizations other than VHA.

It was recommended that the HTS be kept intact with the following stipulations.

- . The National Budget subsidize the prorata share for all trainees except VHA personnel
- . Training for some courses be carried on at HTS. Other training to be carried out at Province or District level utilizing self-instructional methods and on-the-job training
- . The courses in drafting and surveying be relocated to HTS. Self-instructional courses be developed for surveying and drafting
- . The scope of the mechanic course enlarged to improve the capability for repair and maintenance of VHA and Province road and ferry equipment
- . HTS facilities be utilized by the VHA training specialists to develop self-instructional courses for administrative as well as technical personnel
- . Personnel procedures be established for proper selection of personnel to be trained.

#### 4. Proposed Training Organization at Central VHA

The HTS has been the sole training capability in DGOH and VHA. Courses at HTS have been limited to surveyor, draftsman, heavy equipment operator and mechanic. No organization has had overall responsibility for all types of training, including training in administrative skills as well as technical skills. Nor has there been a central point for systematic determination of VHA-wide training needs or integration with external training agencies, such as NIT, which can support some of VHA's training needs.

An effective training system for VHA requires the existence of the functions of training planning and development, conduct of training, and training support. For proper coordination of these functions, they should be placed under the management of one man. Also, because of the close coordination needed between the training and personnel functions, they should report to the same manager. Physical proximity of the personnel and training functions is desirable. Location of the training function at Suoi Lo O and the personnel function at VHA is workable, although less than optimal.

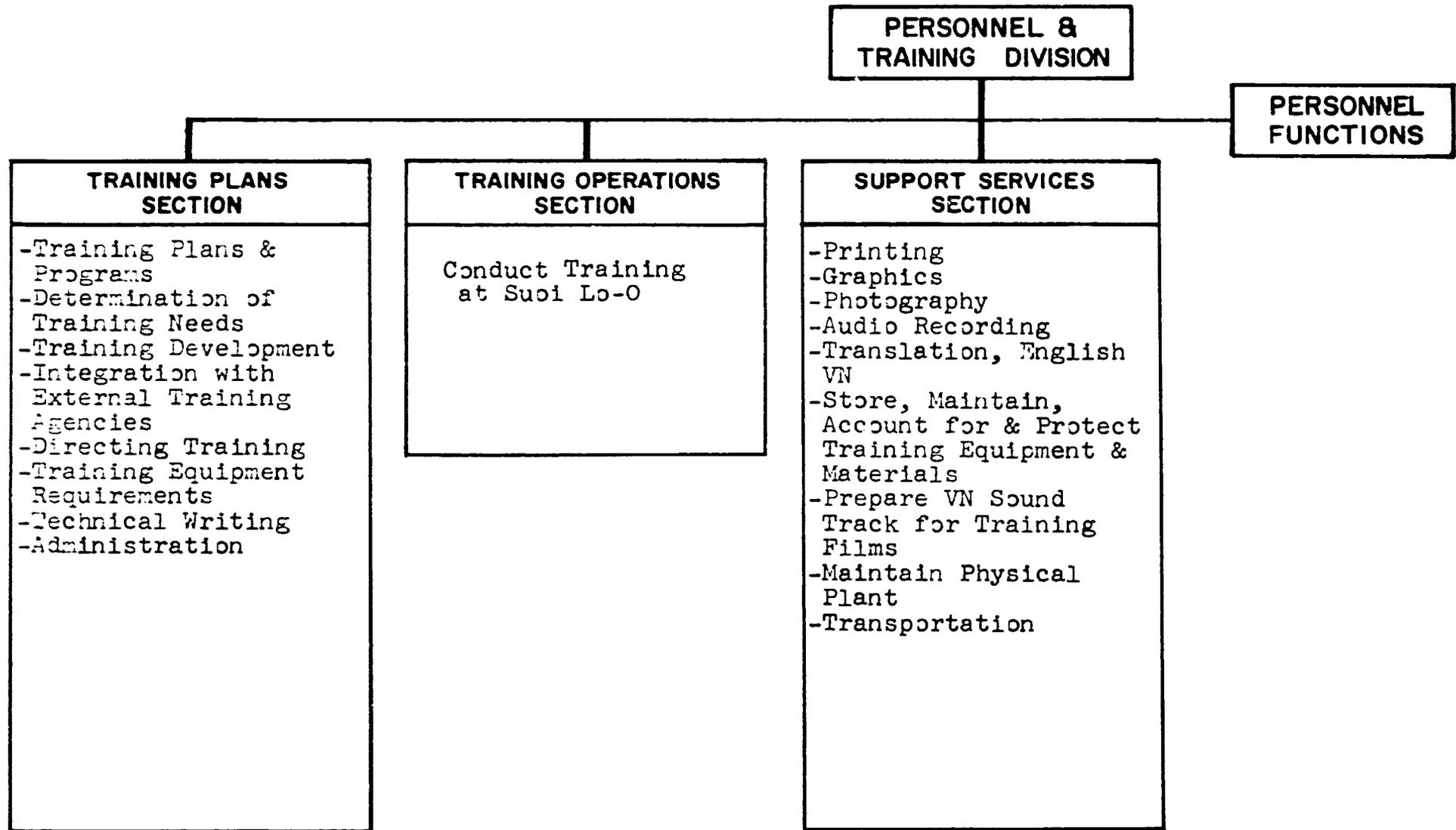
It is recognized that there may be some obstacles to an immediate implementation of the functional organization shown in Figure 18 because of potential personnel considerations. However, management of the training function will be facilitated when the proposed organization is brought into being.

\* \* \*

During the year three of the individual work procedures were altered.

- . The preparation and approval of the program of instruction (original Work Procedure 5) was combined with the development of training materials (original Work Procedure 6) as an appropriately integrated task
  
- . The establishment of a Participant Training Program for VHA highway engineers (original Work Procedure 10) was deleted because it was considered that the highway engineers would obtain more relevant knowledge and experience in Vietnam highway problems by working

FIGURE 18  
PROPOSED ORGANIZATION FOR TRAINING



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with RJA advisors than would be gained by a visit to the United States

- . The preparation and conduct of a management seminar (original Work Procedure 11) was rescheduled for early in 1974 because of higher priority activities related to the establishment of VHA.

The estimated progress against the 1973 Work Plan is given in percentage accomplishment in Figure 19.

### 3. PROPOSED WORK PLAN FOR 1974-1975

Training advisory support for calendar year 1974 and 1975 includes six major work procedures. Each is described briefly below and the schedule for accomplishment given in Figure 20. Planned milestones are indicated by open triangles (Attachment F). A dashed line extending through the entire year indicates an activity which cannot easily be scheduled at the present time, but from which outputs are required at specified times. The required outputs are identified by milestones.

#### (1) Develop Permanent Training Cadre

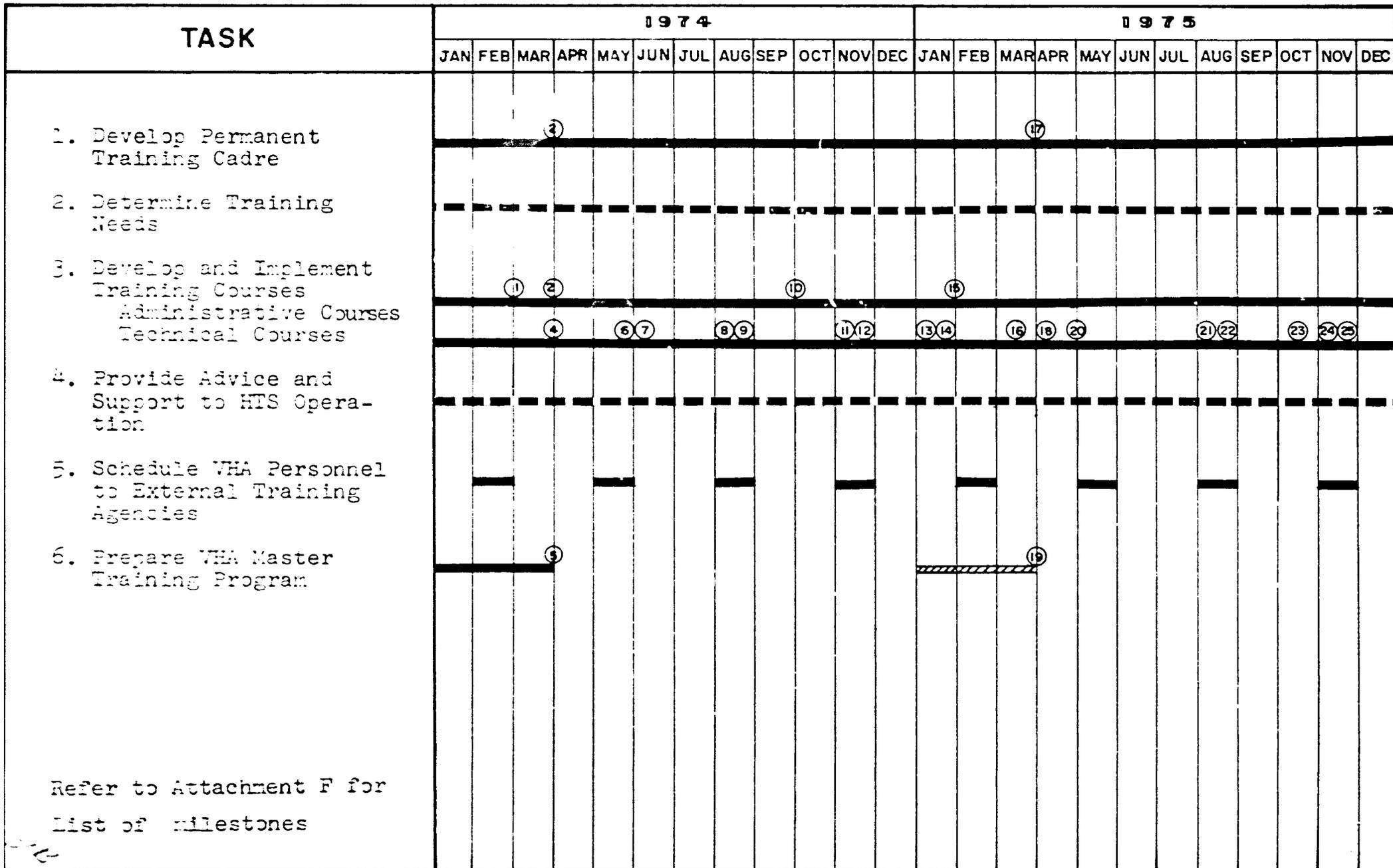
Development of the four VHA training specialists will continue through 1974 and 1975. Each training specialist has been assigned responsibility for development of self-instructional courses in several areas of highway work (for

# FIGURE 19 TRAINING WORK ACCOMPLISHED

TASK	1973												
	JAN	FER	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1. Establish Priorities for Training Needs			COMPLETE										
2. Review Local Training Resources				COMPLETE									
3. Establish Participant Training Program for VHA Engineers				POSTPONED									
4. Develop Permanent Training Cadre										CONTINUING			
5. Review and Upgrade VHA Training Capability at HTS and Districts								50%	-----				
6. Identify Training Requirements in Selected Areas										50%	-----		
7. Schedule VHA Personnel for NIT Course					COMPLETE								
8. Prepare and Conduct Management Seminar								POSTPONED		-----			
9. Develop Training Materials Prepare and Approve Program of Instruction								CONTINUING					

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# FIGURE 20 PROPOSED TRAINING WORK PLAN



example, routine maintenance, materials testing, and construction). The training advisors will continue to work closely with the training specialists to ensure proper application of technique and attention to product quality.

(2) Determine Training Needs

We will work with the training specialists to identify training needs. A print-out of information on the characteristics of the VHA work force (as of November 1973) became available in December 1973. Scale 2 of the Culture Fair Intelligence Test (CFIT), together with an acceptable translation of the instructions for its administration and scoring, also became available in December 1973. These two capabilities will facilitate the determination of training needs. The output from this task will be used to prepare the VHA Master Training Program for 1975.

(3) Develop and Implement Training Courses

We will continue the development of self-instructional courses. In some cases, courses developed by the contractor for other highway departments will be used as a point of departure for development of similar courses for VHA. New photographic and graphic materials will be prepared based upon the Vietnam environment. Preparation of course material

will proceed in English initially. When the training specialists have acquired sufficient skill in course development, they will begin to develop courses directly in Vietnamese. Adequacy of the work will be checked by the training advisors through translations of selected course material into English. Most courses will follow the full development sequence diagrammed in Figure 16 described earlier. Courses in management topics will be presented as seminars.

(4) Provide Advice and Support to Highway Training School (HTS) Operations

The year 1974 will be one of preparation and transition for the HTS. Because of organizational changes in VIIA, requirements for courses previously taught at HTS have also changed. In addition, the introduction of self-instructional techniques will have an impact on HTS. In 1974, the HTS will provide the support necessary to the development of self-instructional courses. Also, the need for courses to be taught at HTS will be assessed. The results of this assessment will be reflected in the HTS program for 1975.

The development of the course in Preventive Maintenance of Heavy Equipment at all levels will utilize equipment available at HTS. Field lubrication team members will be

among the first to receive this instruction when the course is implemented.

The Heavy Equipment Operator course and Mechanic Course will be offered in 1974, but the number of persons who need this training will have to be determined subsequent to the organization of the sub-districts. This determination will be accomplished as part of Work Procedure 2, Determine Training Needs. For this reason, the scheduling shown in Figure 20 for these two courses is tentative.

(5) Schedule VHA Personnel to External Training Agencies

This work procedure includes coordination and integration with the National Institute of In-Service Training (NIT), Office of the Prime Minister Computer Center (OPM/CC) and other training organizations external to VHA. NIT solicits nominations quarterly for attendance at courses offered for the coming quarter. The schedule takes account of this phasing requirement. OPM/CC has not yet established its training program on a regular cycle as NIT has done, so programming of VHA personnel will have to accommodate to announcements from OPM/CC.

(6) Prepare VHA Master Training Program

The VHA Master Training Program development must phase with the development of the budget for the following year.

Initial budget submissions to the Director General, VHA, are scheduled for 1 April. Accordingly, the VHA training budget, based upon the VHA Master Training Program, must be available not later than 31 March. This requirement is recognized in the schedule.

The Master Training Program will be based on the results of Work Procedure 2 as it affects both Work Procedures 3 and 4, and by progress on Work Procedure 3. Experience gained in 1974 should substantially improve the accomplishment of Work Procedure 6 in 1975 because assessment of training needs will have been continued through 1974, thus providing a larger data base for planning purposes.

## V. PLANNING

In order to understand the approach which RJA has taken in providing advice and guidance in the planning area, and to appreciate the progress that has been made in the development of the planning function, it is necessary to understand fully what planning is and its relationship to sound highway organization and administration.

### 1. THE NATURE OF PLANNING

There are many common misconceptions of the nature of planning as it should be practiced by a progressive organization. One misconception is that planning essentially is a function whose purpose is to produce or provide data as the basis for working decisions. Another misconception is that planning is the performance of several standard procedures such as - in a highway department - the performance of highway inventories, or of traffic counting programs, or of economic studies. Although these procedures may be basic to planning, they are not the essence of planning. Still a third misconception is that planning is only that which is performed in a division of the organization called the planning division.

A progressive, modern organization understands that planning essentially is a group of processes concerned with establishing

the organization's goals and objectives and setting in motion the forces by which the organization will achieve its goals and objectives.

To make the same statement in another way, it can be said that the main purposes of planning are twofold

- . To develop a plan
- . To develop a program.

Unfortunately, the distinction between a plan and a program is not always clear. However, the most common understanding of the two terms as they are utilized in the highway industry is as follows.

- . A plan presents a complete, overall objective which is sought at some future date and the general means of accomplishing the objective
- . A program lists a number of individual projects which are to be accomplished by some future date - they may or may not be interrelated so as to form a plan - and the specific resources needed to accomplish each project.

These concepts of a plan and a program can be made general is application. They do not need to refer to only those activities which go on in the planning division. Thus, there can be

a personnel plan and a personnel program which may be developed in the personnel office. Or, in a sense, a highway project design is a plan developed in the design division. It is not a program because there is always more than one project in a program.

In considering planning in the general sense, it is obvious that an organization cannot get very far without it. If there are to be any accomplishments, there needs to be some plan as to how they will be obtained. Planning may involve planning for a meeting a few hours away to accomplish a particular goal, or planning a new highway route, or a new highway system.

Organization leaders usually have no difficulty in recognizing the need for short-range plans - what will be done tomorrow or next week. They know that if the plans are not made, the desired result is not likely to be obtained.

However, organization leaders sometimes have difficulty in recognizing that the same principle applies to long-range plans. It is not as apparent, but it is true that if definite plans are not established for some future goal, it is not likely to be achieved.

Thus, if VHA desires to develop highways in Vietnam so they will be equal to the demands made on them in ten years or fifteen years, the agency must make specific plans for the desired accomplishment.

This is the real function of the Planning Division - to develop and propose to VHA leadership plans for obtaining desirable future objectives. The leadership needs these plans so it can make decisions and establish the course of action which will obtain the goals.

The needs of the organization leaders influence the way planning should be carried out. For example

- . Management needs to have a clear overall picture of what the proposal will accomplish and the anticipated impacts on the citizens of Vietnam
- . Management needs to know what the resource commitment will have to be for the proposed accomplishment
- . Management will need to know specifically how the proposed accomplishment will be obtained - that is, management needs to know the nature of contemplated programs.

One of the reasons organization leaders sometimes do not appreciate the value of planning is the failure of planners to produce sound, responsive plans with enough support to provide the basis for sound decisions. When this happens, planners are discouraged because their plans are turned down. In this case, they need to recognize that their function is to provide decision-makers with a sufficient basis for decisions (not to make decisions

themselves), to provide concrete support for their proposals, and to be flexible and provide more support (or do it over) as top management desires.

## 2. BOOZ, ALLEN STUDY

Recognizing the principle objectives of planning which are described on pages 87 to 90 of the Final Report, the Booz, Allen management study identified several weaknesses in the then current planning function. These included

- . Lack of relationship between short-range programs and long-range plans - the programs being formulated were not stages in the development of a planned concept
- . Lack of project justification
- . Lack of a sufficient data base.

In addition to the above general weaknesses of the existing planning function, the Booz, Allen report also identified several specific areas where the data base was lacking and where specific processes to provide the data requirements were non-existent. These processes included such things as

- . Highway condition inventory
- . Traffic counts
- . Project cost analysis
- . Economic analysis.

And the Booz, Allen reports also included specific recommendations for performing analytical processes in the planning function.

### 3. RJA OBJECTIVES

A high priority activity for the planning phase of the implementation project was the determination of objectives for development of initial planning processes and data systems. These are listed below but not necessarily in order of importance or sequence in which they appear in the Work Plan.

- . Develop and maintain a Master Plan for the development of the highway transportation system which will accommodate travel demands within imposed budget constraints and promote and enhance economic growth and development of the nation
- . Advise the Director General and furnish functional guidance to the other Divisions and Districts of the following
  - Highway revenues and forecasts
  - Highway improvement programs
  - Work program budgets
  - Program administration
- . Develop and maintain a continuing program of traffic counting and vehicle classification that will provide

the highway engineer, planner, maintenance supervisor and administrator with essential information for the determination of design standards, systematic classification of highways and the development of plans and programs for improvement and maintenance in establishing a highway network capable of accommodating highway traffic in an orderly, safe, efficient and economical manner

- Functionally classify all highways on the highway system according to the character of service they are expected to provide (i.e., types of trips and levels of service)
- Establish acceptable design controls required to maintain services commensurate with each respective functional classification
- Develop a road and bridge inventory file and a physical features file that will provide data for the highway needs analysis, transportation studies and other information concerning all or any part of the highway system upon demand
- Develop and maintain a continuing program of highway needs analysis that will determine the deficiencies of the entire highway system, an entire route, or any section thereof, according to functional classification.

The Needs Report will be the basis for the preparation of the Master Plan

- . Develop and maintain various planning studies (nationwide, corridor and urban) that will satisfy the management objectives of VHA and will serve transportation decision-making processes throughout the rural and urban areas
- . Assemble and analyze highway revenue data, forecast highway revenues and formulate policy proposals relating to highway revenues
- . Prepare and update on an annual basis a priority program covering a period of five years and consisting of such items as major maintenance, upgrading, new construction and bridge replacement
- . Prepare and process a project analysis for each project in the priority plan on which the character of work is defined and which includes data upon which justification for expending money on the project can be justified
- . Prepare and update on an annual basis a work program budget that will recommend to the Director General certain programs together with proposed funding levels which will enable VHA to achieve its objectives

- . Provide management controls of the highway improvement program through
  - Scheduling
  - Monitoring
  - Revision
  - Progress reporting.
  
- . Develop an annual work program for all sections of the Planning and Research Division based upon the goals and objectives of VHA and which will act as a guide for the supervisors of the Planning and Research Division to accomplish their assigned tasks.

In order to better understand the above planning objectives, a Glossary of Terms was prepared defining some of the terms which were not in general use in VHA. This Glossary is included as Attachment G.

#### 4. ACCOMPLISHMENTS DURING THE YEAR 1973

One of the earliest activities of this project was the preparation of a policy for the planning and programming function of DGOH which was to be used as a general guide for developing management objectives and the organizational procedures of the Planning and Research Division. This policy is shown in Figure 21. This policy does not refer to the research function since the role of research in DGOH has not yet been determined.

## FIGURE 21

### PLANNING & RESEARCH POLICY

In accordance with Decree Number 67/54-ND/CC dated 3 February 1967, the organization and responsibilities of the Planning Division have been established. Notwithstanding contemplated changes in the future the following policy is applicable for guidance of this Division in developing its management objectives and organizational procedurals:

The Director General will prepare and maintain on a continuing basis a Master Highway Development Plan directed toward the formation of an adequate system of highways. The Master Highway Plan will be consistent with National development objectives and will recognize highway planning accomplished by all levels of government in the Republic of Vietnam.

Within the limits of the Master Highway Development Plan, VHA will prepare and up-date on an annual basis a two phase Highway Improvement Program. The first phase, known as the Four Year Priority Program will consist of a series of improvement projects that reflect the most urgent needs of the highway system. The second phase or the Long Range Priority Program will be composed of highway improvement projects considered of vital importance to the needs of the Republic of Vietnam although of lesser importance than those listed in the Four Year Priority Program.

These programs will indicate the priority, location, type of improvement and total estimated cost to correct existing deficiencies on the highway system. Each annual up-date will be approved prior to the time the annual budget submission is made and will include projects of an emergency nature which were not included in the previous program.

A Project Analysis Report will be prepared for each project included in the Master Highway Plan, the priority listing for the improvement programs will be based on those projects with the highest rating as shown by the Project Analysis Report.

The Master Highway Plan and the Improvement Program will constitute the official objectives of VHA in accomplishing the planning, surveying design, right of way acquisition, construction and maintenance of the highway system. Program development, production scheduling and the organization, staffing and budgeting will be directed toward the fulfillment of these objectives.

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(1) Design and Implementation of a Traffic Counting System

The last nationwide traffic count taken on the highway system was during the year 1958. Since that time estimates of traffic growth have been based upon isolated counts. During this period, planning studies have used a growth factor of twelve percent.

This factor is not unreasonable when consideration is given to the escalation of the war effort. But with the signing of the cease-fire, military use decreased and it was apparent that immediate action was necessary to resume a traffic counting program.

Even though military engagements between the combatants were supposedly suspended, security remained a problem to be considered in all highway operations. This situation had a great impact upon the development of a traffic counting program.

A considerable portion of the highway system was either under control of the Viet Cong or traversed areas of VC activity and was considered unsafe for travel without an escort. Another important consideration was that portable counting machine stations had to be located at sites where armed guards were constantly on duty. Otherwise, the machines would be stolen or destroyed. The

curfew which has been in effect throughout the country also presented certain problems that had to be considered.

Prior to preparing the traffic counting program, an inventory of equipment was made. It was determined that DGOH had ten portable counters and four manual counters on hand. These were hardly adequate to conduct a large scale traffic counting program.

Additional constraints were encountered. Funds were not available to finance a nationwide program. Trained manpower was not available and that which was available was recruited from the Provinces to the detriment of other highway-related activities such as maintenance.

The immediate needs for a traffic counting program were analyzed in detail. It was determined that the greatest need was to provide data which could be used as (1) a basis for justifying ongoing programs of highway improvements, and (2) a basis for preparing design plans for the projects contained in the highway improvement program.

With the above thoughts in mind, an interim program was developed. Counting stations were selected at sites that would offer security when portable machines were used and that would provide data for the projects included in anticipated highway improvement programs.

Additional portable and manual counters required to conduct the program were requisitioned in April and have not yet been received. The counting program was implemented during April 1973. By mid-year it was evident that the original objective of completing 3-4 day counts at each station could not be accomplished because of lack of funds. Therefore, authority was granted the Can Tho and Nha Trang Districts to conduct only 2-4 day counts at each station.

Several other modifications were made to the original program during the implementation phase. These were

- . The counting period was reduced to 4 consecutive days including Saturdays and Sundays. This change was due to a manpower shortage
- . Only ten portable and four manual counting machines were available for use during the year. The counters requisitioned in April were not delivered
- . The classification of vehicle types was reduced from 5 to 4 by combining 2 and 3 wheel vehicles. This was done to simplify the manual counting procedures. It is anticipated that 5 classification units will be used during the 1974 counting period.

One of the difficulties involved in determining traffic volumes in the Republic of Vietnam is the number of different types of vehicles using the highways and streets. A high percentage of the vehicles are 2 wheel bicycle or motorcycle and 3 wheel pedicab or Lambretta type vehicles. This has a profound effect upon the manner in which total volumes are computed.

Based upon the four division classification, values for vehicle units were assigned as follows.

- . 0.5 2 and 3 wheel vehicles
- . 1.0 cars, jeeps and pick-ups
- . 2.0 single unit trucks
- . 3.0 semi-trailers or truck-tractor combinations

At each counting station three separate totals are listed indicating the following.

- . Total of vehicles of all types
- . Vehicle Units (VU) conversion of the values assigned to the various vehicle classification
- . Total number of 4 wheel vehicles (2 axle and over)

In addition, the volume and classification of vehicles in percentage of total vehicles is recorded for peak AM and PM hours.

(2) Road and Bridge Inventory

When the Work Program was prepared, this activity was given a high priority. Subsequently, requests were received from the Director General of Highways to give higher priority to other activities. This delayed work on the inventory until late in the year.

Planning for the road and bridge inventory began with a meeting of representatives from each of the five Districts on 13 September 1973. A review was made of the forms to be used to record the inventory data. Many problem areas were disclosed by this review and revisions were made to both the forms and the instructions to be used in the implementation of the inventory.

A training program was prepared which was to be used to indoctrinate each of the District inventory teams in the desired procedures prior to beginning the field work. The training program included a slide presentation which illustrated the various road and bridge features to be inventoried as well. Slides were also used to portray the physical condition of roads and bridges.

A team from the Saigon District was used to initiate the program. Training began 12 November 1973, and followed immediately with a field test over predetermined routes. The purpose of the test was (1) to determine the effectiveness

of the program, and (2) determine the time required to inventory various types of highways and bridges.

The inventory was continued on all highways in the Saigon District that were located in secure areas.

Funds were provided in the 1974 budget to conduct the inventory in the other four Districts. It is anticipated the first annual inventory will be completed by 1 June 1974.

### (3) Interim Program

Development of an Interim Program was given a high priority in the Work Plan. Several programs were in existence at the time the cease-fire went into effect. The objective of the Interim Program was to set forth the official DGOH position of the highway improvement needs of the Republic of Vietnam.

It was necessary to describe this as an Interim Program because the war had interrupted the planning processes which are the basis for preparing a Highway Improvement Program.

The procedures used in developing the Interim Program are described in detail in Attachment H.

#### (4) Functional Classification System

The process of functional classification is actually one of the first steps undertaken in the development of an overall highway systems plan. With this in mind, an inspection of the initial Work Plan (Figure 22) will show that this activity was undertaken earlier than originally intended. This change of schedule occurred for the reasons outlined below.

Shortly after the start of the assistance contract, many changes began taking place within the GVN organizational structure. One of these was the reorganization of DGOH.

One of the by-products of this reorganization concerned the relationship between the highway organization of the Central Government and that of the individual Provinces and Cities. Presidential Decree No. 635-TT/SL dated 11 July 1973 assigned to the Highway Administration responsibility for the "Renovation, Maintenance, and Control of QL's, LTL's and major roads being classified as Highways including bridges and ferries and securing perfectly the Highway System."

In anticipation of this Decree, the Director General requested a revision to the Work Plan that would permit an earlier start on the functional classification system.

In response to this request, a procedure was developed for conducting the classification study. This procedure was submitted to DGOH on 31 March 1973.

Work began at once on the process of classifying the system. As the field intent of the Presidential Decree of 11 July 1973 became known, the scope of the classification process changed. Since the Decree assigned responsibility of the QL and LTL Systems to the new highway organization, the classification process assumed the task of identifying those segments of the highway system that should be the responsibility of the national organization. The remaining portion would become the responsibility of the Provinces and Cities.

This change had little effect upon the composition of the QL System, but it did cause some change in policy as to the make-up of the LTL System. The original draft of the classification was modified on 5 May 1973 and work proceeded accordingly.

Prior to drafting the procedures for the classification study, much thought was given to developing a new concept for classifying the highway system in Vietnam. It soon became apparent that any attempt to deviate from the existing classification would be unacceptable to the highway department.

There were two basic reasons for this attitude. First, the present system has been in use for many years and the traditional aspect would be hard to overcome.

Second, mileposts are in place at each kilometer on the QL and LTL Systems with the letters QL and LTL inset into the concrete post. Unless these letters or the mileposts were removed, the classification would live on. In suburban areas the street which was the QL route was named QL-4 and QL-1, as the case may be, and buildings numbered accordingly. It would be difficult to make a change under these conditions.

It was determined to be in the best interest of all concerned to retain the existing classification and fit it to the usual arterial, collector and local road classification as practiced in the United States.

In this case the QL (National) System would correspond to the principal arterial classification. the LTL (Inter-Provincial) System could be similar to the minor arterial classification.

The Presidential Decree placed responsibility on the soon-to-be-created VHA for these two categories of the total highway system. The TL (Provincial) System and the HL (Local) System would be the responsibility of the local agencies.

The classification proceeded on this basis. During the week of 8 October 1973 the newly developed National and Inter-Provincial Systems were approved by the Director General.

Description of functional classification procedures is included in the "Compilation of Supporting Planning Documents."

(5) Staff Development and Training

This was a continuing activity. It involved the training of staff personnel as each new activity was started. A formal training program was never implemented. Instead, the concept of each planning function was described in a written program which outlined one or more approaches that could be used to achieve the desired results.

This program was submitted to the appropriate personnel for review and comments before preparation of the final draft. Any revisions that may have been necessary were made and the final draft prepared. Generally, this draft was translated from English to Vietnamese.

The general concept applied to staff development and training in the planning phase of this contract has been to identify and establish the objectives and procedures of the

various programs. The programs were then turned over to VIIA for implementation. The intent of the training program was to develop staff capabilities by having the staff personnel perform the actual planning operations.

During the implementation stage, periodic evaluations were made of each program. Often problems arose that necessitated additional explanation or even revisions to the program. When these situations arose, conferences were scheduled at which time the problems were resolved and the activity continued.

One major problem encountered in training and developing staff capabilities was the reassignment of key personnel within the Planning and Research Division to other positions in VIIA. For example, the engineer who performed most of the work involved in the function classification study was reassigned to another position shortly before completion of this activity. He was replaced by another employee who was not entirely familiar with the procedures and re-training was necessary.

It is anticipated this type of training and development program will be continued throughout the next two years.

As a basis for summarizing accomplishments to date in the planning phase of this project, Figure 22 shows the proposed

**FIGURE 22  
PLANNING WORK ACCOMPLISHED**

TASK	1973											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. Current Status Review		COMPLETE										
2. Develop Objectives				COMPLETE								
3. Staff Development and Training									CONTINUING			
4. Develop Data Base								CONTINUING				
5. Develop Interim Program Procedures		COMPLETE										
6. Develop Interim Program Phase I						COMPLETE						
7. Design Traffic Counting System			COMPLETE									
8. Implement Traffic Counting								CONTINUING				
9. Complete Interim Program							COMPLETE					
10. Develop Priority Plan Procedures						10%						
11. Design Road and Bridge Inventory										COMPLETE		
12. Develop Priority Plan							0%					
13. Implement Road and Bridge Inventory												20%
14. Develop Priority Program Procedures									5%			
15. Develop Priority Program											0%	
16. Develop Long Range Plan Procedures											0%	

10/17

Work Plan as originally submitted to DGOH and USAID. The estimated current percentage completion is shown for each of the work procedures depicted on this chart.

5. PRIORITY DIRECTION OF CONTINUING WORK

During 1974 further emphasis will be given to developing the highway plan and the resulting program.

Development of the highway plan will involve a continuation of data collection processes currently under way, as well as others that have not yet been implemented. We will direct our attention to such items as construction and maintenance costs and the operating costs of the various types of vehicles in use on the highway system. A principal objective will be to establish procedures for processing, storing, analyzing and distributing the collected data.

It is quite evident that the collection and processing of data will not reach the state of proficiency during 1974 that will permit replacement of the Interim Program with the Priority Program. For this reason the Interim Program will be reviewed and updated during the year. In addition, all newly acquired data or information collected by the Planning and Research Division will be used to produce the most acceptable program possible.

It is extremely important that the Planning and Research Division be reorganized and properly staffed at as early a date

as possible. This Division will assume the traffic counting program after 1 January 1974. The addition of this activity and the other new planning processes contemplated for implementation will require additional personnel. The training of these additional people will hold a high priority during 1974.

The Planning and Research Division has been directed to conduct a study of revenues received by the government from the sale of gasoline. The purpose of this report is to determine sources of revenue available to VHA for use in performing its highway responsibility.

It is proposed to expand the study to include alternate plans for consideration by the government which will offer a choice of various funding patterns which will permit the accomplishment of acceptable objectives assigned to the VHA.

## 6. RECOMMENDATIONS

There are several recommendations that will result in the improvement of performance and capabilities of the Planning and Research Division in 1974.

- . Attempt to attract qualified personnel to fill key positions in the Planning and Research Division
- . Attempt to stabilize the situation whereby the Planning and Research personnel are being transferred to other functional units within VHA

- . Prepare and distribute a management directive that will require all activities related to the planning and programming function to be cleared through the Planning and Research Division
  
- . Insist that data collected by District personnel be accurate and representative of actual conditions. Qualified people must be assigned to these data collection tasks. They must be properly trained in the techniques necessary to accomplish the task and provided sufficient supervision to assure that they are performing their duties in a satisfactory manner.

7. SCHEDULE FOR 1974

The proposed Work Plan for 1974 is shown in Figure 23 of this report.



## VI. FINANCE AND ACCOUNTING

A central recommendation of the Booz, Allen study was that an adequate, modern accounting system and associated budgetary and financial controls were essential to improved management of the highway system. A conceptual pattern for such a system was developed and illustrative examples of its use presented. It was recognized that the full achievement of such a system would require considerable time and training of personnel and should thus be developed as an evolutionary program. Although some details would vary depending upon whether or not DGOH became an autonomous agency, the fundamentals remained the same.

### 1. GUIDING CONCEPTS

The guiding concepts adopted by the RJA advisory team continued and extended the Booz, Allen proposal. In summary form, these were that

- . The overall system should provide complete and coherent integration of subsystems supporting requirements of active managers as well as providing traditional fiscal status information

- . The basic guide would be the system developed by the American Association of State Highway Officials (AASHO) with substantial modification and adaptation expected
- . The initial system would be a simplified, manual system containing all fundamental features and designed to expand its capabilities as operating experience was gained
- . The system, although designed primarily for highway management purposes, would provide the information required by external agencies such as DGBFA and the Ministry of Finance in their required formats.

Following these guides, a general schedule for system development was prepared anticipating installation about mid-year 1974.

## 2. ACCOMPLISHMENTS DURING THE YEAR 1973

The system development program anticipated the continuation of DGOH in its then current organizational status, although future conversion to an autonomous agency was given consideration in the planning. In April and May the move toward autonomy picked up speed and on 11 July the Decree establishing the autonomous Vietnam Highway Administration was promulgated with full implementation effective 1 January 1974. This shift of agency status and the time schedule imposed required substantial

redirection and modification of the financial and accounting system program.

Redirection of the program was guided by the following considerations.

- . Priority was given to development of those subsystems needed to meet the minimum requirements for financial and accounting information by 1 January 1974
- . Detail development was confined to those procedures, forms and ledgers essential to the central structural flow of the system, with documentation refinement postponed to a later opportunity
- . All subsystem development in the expedited program was assured to be consistent with the requirements of the final overall system so that unnecessary future revision was avoided
- . Maximum use was made of existing procedures, where feasible, with substitution of refined procedures to be carried out after 1 January 1974.

As a result of this redirection, the precise schedule of the original program was not followed - although the essential work was accomplished. From a practical point of view, the program must now be conceived of in two major phases - the crash

program phase prior to 1 January and the completion and refinement phase of 1974.

(1) Program Initiation

Following a detail review of the Booz, Allen proposals, the RJA advisors concurred in the general assessment of the existing situation and the finance and accounting system requirements. Discussions with DGOH management and accounting personnel confirmed certain unique requirements for the new system posed by government regulations, the structure of DGOH day-to-day operations and the necessity to maintain continuity of accounting activity during the transition period. A summary of the purpose and basic structure conceived for system development was presented to the DGOH Steering Committee in a seminar held in May. General agreement as to approach was received and specific system design was initiated.

(2) Preparation of Chart of Accounts

A draft of basic policies governing the planned budgetary, general (fiscal) and cost accounting system operation and control was prepared. The proposed chart of accounts and associated function and object class codes were included as the principal guide to system development. Also included were recommended levels and points of authorization and approval to control commitment and disbursement of funds.

This draft was completely revised and modified following the conversion of DGOH to the autonomous VHA. These revisions centered mainly on accommodating the enlarged fiscal control and reporting requirements of the autonomous agency. The draft was presented to the Director General on 30 August and approved in principle to permit detail system development to get under way. Additional modifications were made to meet specific requirements of the Decrees establishing the VHA and the final document - the basic document authorizing the new finance and accounting system - was presented to the Director General on 14 November for presentation to and approval by the VHA Administrative Council. (See Attachment J).

The chart of accounts, modeled after the AASHO system, must be considered a "master plan." While considerable detail is available in the sub-account structure, only the principal accounts will be used initially. Exploitation of the more detailed information capability of the sub-accounts should take place only after the initial installation is functioning smoothly and as the usefulness of added breakdowns is perceived and demonstrated.

(3) Budgetary Systems

The present budgetary control system places emphasis on the control of obligations and disbursement of funds as

prescribed by GVN external agencies. The new budgetary preparation and control system, while retaining the funds control, places primary emphasis on VHA internal management responsibilities for planning and controlling their activities according to the purposes of the work. Both operating management and fiscal control needs are met.

The budgetary process is composed of two phases. The first is the preparation of budgetary estimates based upon specific operating projects and programs planned for the budget period. The second is the control of expenditures against the budget as finally approved.

With the conversion of DGOH to VHA, the residual budgetary credits of DGOH for FY 1973 were transferred to VHA. In the interest of conserving time and effort, and since little useful purpose would be served, it was decided not to attempt to convert the interim 1973 budget to the new chart of accounts but to complete the year under the existing system.

The FY 1974 budget preparation cycle was well advanced at the time VHA was established. Again, in the interest of time and priority demands for general and cost accounting system development, it was decided not to retrace the budget preparation process using new procedures. However, the budget estimates, by whatever method prepared,

were broken out into a summary of the new accounts and codes format anticipating budgetary control under the new system in FY 1974 (Figure 24).

The FY 1975 budget will be the first to utilize the new budgetary preparation and control system throughout the entire budget cycle.

(4) Cost Accounting

The development and installation of the cost accounting system is a considerable task for several reasons.

- . There is no existing system which can furnish even a partial base
- . Accounting personnel are few in number and lack even rudimentary cost accounting training
- . Managers and employees outside of accounting who must generate system inputs have no procedural experience in such reporting
- . Geographical spread accentuates data transmission and communications problems
- . The required date for initial implementation has made the usual pilot tests impossible.

In order to simplify the initial installation

# FIGURE 24 1974 BUDGET REQUEST

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REPUBLIC OF VIETNAM  
MINISTRY OF PUBLIC WORKS  
AND COMMUNICATIONS  
VIETNAM HIGHWAY AGENCY

## VIETNAM HIGHWAY BUDGET

(FY 1974 EXPENDITURE ESTIMATE)

(UNIT 1,000 \* V.N.)

CODE	NATURE OF EXPEN- DISTURE  AGENCY	PERSONNEL 100			SERVICE 200						SUPPLIES 300				INVESTMENT 700					TOTAL	
		SALARIES 100	ALLOWANCES 120	INDIRECT BENEFITS 150	COMMUNICA-TIONS 210	PRINTING 220	REPAIR 240	RENT AND UTILITIES 230	MISCELLANEOUS 250	FEES AND PRO-FESSORIAL SERVICE 260	MATERIALS 310	REPAIR PARTS 330	P.O.L 350	ENGINEER AND OFFICE SUPPLIES 360	MISCELLANEOUS 390	LAND 710	BUILDING AND IMPROVEMENTS 720	OFFICE EQUIP-MENT 750	MOTORIZED EQUIPMENT 770		RIGHT OF WAY 790
900	CENTRAL HEADQUARTERS	115 473	2497	6925	4814	600	56 311	28 146	130 000	85 600	1143 000		178 800	5 500	900		30 000			50 000	1 838 556
901	BA NANG DISTRICT	144 918	2 620	6445	5 410	810	63 620	5 030	2 000	150			12 646	1 814	300		15 000				260 763
902	NHATRANG DISTRICT	94 358	2 520	5 113	3 985	130	120 876	3 505	2 000	100			14 085	2 010			75 000				323 682
903	BALAT DISTRICT	61 648	2 340	3 605	4 160	220	137 585	4 590	2 000				15 766	2 160			30 000				264 074
904	SAIGON DISTRICT	201 550	5 414	15 956	4 632	50	153 355	9 518	2 000	300			29 500	1 506			15 000				438 781
905	CANTHO DISTRICT	193 540	9 145	10 821	4 623	700	124 248	1 367	2 000	150			23 920	8 30			15 000				386 344
650	FERRY OPERATION	GN	GN	GN			113 800						140 000								253 800
700	EQUIPMENT WAREHOUSE	GN	GN	GN	5 000		330 000						730 000					1 250 000			2 315 000
826	SUPPORT TO SECONDARY ROADS						550 000														550 000
	TOTAL BUDGET FOR ORGANIZATION	<u>811 487</u>	<u>24 526</u>	<u>48 865</u>	<u>32 624</u>	<u>2 510</u>	<u>1 649 795</u>	<u>52 156</u>	<u>140 000</u>	<u>86 300</u>	<u>1 143 000</u>		<u>730 000</u>	<u>414 717</u>	<u>13 820</u>	<u>1 200</u>	<u>180 000</u>		<u>1 250 000</u>	<u>50 000</u>	<u>6 631 000</u>
390	HIGHWAY IMPROVEMENT																				2 352 000
395	UNFORESEEN EXPENSES																				502 000
	TOTAL BUDGET FOR SPECIAL PROGRAMS																				2 854 000
	<b>TOTAL</b>																				<b>9 485 000</b>

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- . Emphasis was given to data recording and compilation procedures rather than analysis procedures which can be treated later - providing the data are available
- . Aggregation of some data into gross accounts was accepted rather than the detailed accounts which will eventually be required for certain cost allocations (i.e., equipment cost as a gross figure rather than allocating to projects through a service center account)
- . Recognition was given to the current nonavailability of costs of many inventoried materials and methods were devised to circumvent the item cost input requirement for the initial phase.

The single, overriding objective has been to get some sort of a system going which will meet the minimum requirements, provide a base for on-the-job training and be capable of refinement toward the ultimate system as experience is gained.

The initial system was designed, forms prepared, simplified instructions for use prepared and preliminary charts of data flow completed by mid-December. Central Headquarters and District accounting personnel were instructed in the purpose and use of the system, in the

detail of input form completion and the compilation of cost data. The detail of forms, procedures and flow charts is included in the package prepared for the Central and District accounting personnel attending the training sessions. Initiation of the system was scheduled for 1 January 1974.

A major share of the advisors' efforts during early 1974 will be devoted to the follow up of this basic, initial installation.

(5) Fiscal Accounting

Development of the fiscal (general) accounting system was originally scheduled to begin in December. The speed up of the entire program required that initial work be undertaken earlier in order to assure compatability with the budgetary and cost accounting systems which were scheduled for initial installation by 1 January 1974.

The basic policy and regulatory document prepared for submission to the VHA Administrative Council includes the basic structure of the planned general accounting system. Fiscal accounting policy statements are presented. The chart of accounts and its application are covered. Ledger sheet formats for the general and subsidiary ledgers are included. Illustrative examples of typical journal entries also have been submitted as supporting explanation.

With this accomplished, further development was set aside to concentrate upon the cost accounting system development.

(6) Audit Procedures

Pre-audit procedures to insure verification of proper approvals, cost coding and computations on all input documents (documents of original entry) before recording have been incorporated in the procedures for preparation of the documents. Additional refinement will be necessary during the early weeks of the accounting installation.

No work was accomplished on post-audit procedures other than to provide, in system design, the features required to assure feasibility of a comprehensive post-audit procedure and program.

(7) Physical Inventory of Assets

The task of conducting the physical inventory of VHA assets and establishing valuations therefor was assigned to the VHA Accounting Division, who have not been able to adhere to the original schedule because of the conversion of DGOH to VHA plus routine workloads. Initiating the inventory program is a high priority task for 1974.

(8) Financial and Accounting Manual

The Financial and Accounting Manual is essentially an orderly compilation of the policies, procedures and associated forms and documentation originated in the design and installation of the several accounting systems. The format has been designed and development has progressed concurrently with the development of the overall integrated accounting system. Completion and issue should be accomplished on the original schedule of 1 May 1974. Certain procedural material in draft, short form will be issued during the early system installation period to guide the installation.

In summary, despite the major shift in schedule occasioned by the DGOH-VHA shift, the financial and accounting program has met the project demands.

- . The basic policy and regulatory document has been prepared and presented to the VHA Administrative Council
- . The FY 1974 Budget has been conformed to the new system and will be so reported and controlled beginning 1 January
- . The first phase cost accounting system has been designed and scheduled for implementation as of 1 January 1974

- . The overall structure of the total integrated accounting system has been designed and refinements of the initial cost accounting system planned.

Figure 25 is a bar graph showing the degree to which the individual work procedures outlined above have been completed as a percent completion in each case. This chart does not show the initially proposed progress schedule because of the basic changes caused by the shift to VIIA.

Although the race against time has required extensive simplification of initial systems and some short-term compromise, we feel that an adequate base is now in place for the work in 1974.

### 3. PRIORITIES FOR THE NEXT YEAR

The priority of work for the year 1974 is bound to the requirements to monitor, service, extend and refine the overall accounting system while it is being progressively installed under actual operating conditions.

#### (1) Cost Accounting Implementation

Top priority must be given to assistance and follow up on the cost accounting installation. This will require extensive field work and include

# FIGURE 25 ACCOUNTING WORK ACCOMPLISHED

TASK	1973											
	JAN	FER	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. Review Current Procedures					COMPLETE							
2. Develop Budget Procedures										50%		
3. Conduct Physical Inventory of Assets									CONTINUING (VHA)			
4. Develop Cost Accounting System										35%		
5. Develop Audit Procedures												50%
6. Write Financial and Accounting Manual of Procedures											10%	
7. Develop Fiscal Accounting System												30%

- . Expediting performance in source document recording, pre-audit procedure, subsidiary ledger entry and other cost accounting tasks
- . Spot, on-the-job training of accounting personnel as deficiencies are observed
- . Modification or clarification of procedures to accommodate local problems in system application
- . Identifying and assessing opportunities and requirements for near-term system refinement.

Emphasis will be given in the early days of implementation to the recording of cost data on the documents of original entry. With the assured input of this data into the system, the follow-on activities of posting, allocation and report production can be completed over a more extended period. It is probable that problems of initial application, plus the TET holiday in January, will require deferment of the first cost reports until at least the end of February and perhaps to the end of March (the first quarter). With this experience, reasonable, sequenced closing date schedules can be set for future accounting periods.

It is anticipated that this initial implementation phase will require approximately three months, following

which one month will be required to complete all final documentation for the Finance and Accounting Manual.

From about 1 April to 1 August, part-time monitoring of the initial cost accounting system should continue. Minor refinements will be undertaken as opportunities arise. The planning of the refinements of the system for introduction 1 January 1975, should commence about 1 August to give sufficient time for revision of and additions to forms and procedures as well as required personnel training.

(2) Fiscal Accounting

The general accounting ledger formats and outline procedures have been prepared. Installation of the basic system and production of the fiscal reports required by Decree will be completed by 1 April. The major requirement will be continuing on-the-job assistance and training in the Central Accounting Division. One advisor will devote the major share of his time to this task.

The ledger structure has been simplified and only those accounts required for production of the basic fiscal reports will be used in the initial installation. Nevertheless, the introduction of double-entry accounting and the requirements for reconciliation with District subsidiary ledgers will require almost constant attendance of the assigned advisor in the Accounting Division.

The principal deficiency in the first fiscal reports will be the valuation of assets. Physical inventories are incomplete and adequate valuations of inventories and other assets are not available. Methods will have to be devised to augment and extend existing data by the best estimates possible with subsequent adjustments to be undertaken as physical inventories are completed and asset valuations determined using adequate appraisal techniques.

Following production of the first quarter reports, final documentation will be prepared for inclusion in the Finance and Accounting Manual. Part-time assistance and monitoring will continue until about 1 August, at which time preparations should begin for the second phase refinements of the system to be introduced in FY 1975.

(3) Budgetary Accounting

The FY 1974 Budget Request is already in the new accounting format. Concurrently with the work in the general accounting system implementation, the budgetary ledgers and reports will be developed in detail. The reports to be produced will conform to the requirements of DGBFA and MOF and be compatible with the National Budget reporting system.

On or about 1 April the first stages of the FY 1975 budget cycle will get under way. Work sheets and procedures will be prepared and instruction given to the supervisors and managers responsible for preparation of budget estimates for their functions and projects. Budget estimates will be related directly to the approved VHA program sequenced by priority ratings. Advisor: will assist directly in this budget preparation both at Central Headquarters and in the Field Organization.

A target date of 1 July is suggested for the first draft of the FY 1975 Budget Request, with 1 August the date for submission of the Budget Request to the Director General.

(4) Finance and Accounting Manual

Cost accounting, general (fiscal) accounting and budgetary preparation and accounting procedures in finished form should be completed and the first issue of the Finance and Accounting Manual made on 1 May.

(5) Physical Inventory of Assets

The completion of an overall physical inventory of equipment, parts, materials and fixed assets and their proper valuation is essential to meeting the commercial accounting requirements of VHA. Some inventory records

exist with accuracy ranging from fair to highly conjectural. Inventory costs and fixed asset valuations are fragmentary. A substantial project is required to acquire the necessary information.

The Accounting Division has been unable to move on this assigned task. Participation of many other VHA organization units is required. It seems clear that the only way to accomplish this substantial task is to establish a special project team, perhaps augmented by contract Vietnamese personnel.

The general sequence of procedure should be as follows.

- . Review and confirm the specific requirements of the accounting system for inventory and asset valuation data
- . Identify existing inventory activities and assess their adequacy and capability to provide the necessary information, both now and on a continuing basis
- . Adapt the information outputs of adequate inventory activities to the new accounting system
- . Develop and install inventory procedures for activities having inadequate or no procedures

- . Develop a costing procedure for all inventory activities
- . Undertake complete physical inventories at all VHA activities (or confirm existing records) as a basis for original valuation
- . Inventory and value all fixed assets at current value and establish depreciation rates and procedures
- . As the inventory and asset valuation data are confirmed for an activity, enter the adjustments on a rolling basis in the accounting records
- . Establish a procedure for regular audit on a rolling schedule that covers each activity annually.

Such a complete physical inventory should be scheduled to cover all VHA activities by the end of FY 1975.

#### 4. RECOMMENDATIONS

The single major recommendation, other than to continue the program as currently planned, authorized and under implementation is to

- . Establish a VHA project group no later than 1 March 1974 to plan and undertake the physical inventory as outlined.

5. SCHEDULE

The target schedule for task accomplishment during 1974 is summarized in Figure 26 following.



ATTACHMENT A  
 CLASSIFICATION PLAN  
 LEVELS OF DIFFICULTY  
 BẢNG SẮP NGÁCH NHÂN VIÊN

LEVEL 1

Clerk I  
 Messenger  
 Helper Temporary  
 Laborer

BẬC 1

Thủ ký, cấp I  
 Tùy phai  
 Phụ thợ tạm  
 Lao công

LEVEL 2

Guard  
 Typist  
 Key Punch Operator  
 Tradesman Helper  
 Mechanic Helper

BẬC 2

Gác dạn  
 Đả tử viên,  
 Xuyên phiếu viên,  
 Phụ thợ chuyên môn  
 Phụ thợ máy

LEVEL 3

Clerk II  
 Accounting Clerk  
 Chauffeur

BẬC 3

Thủ ký, cấp II  
 Thủ ký, kế toán  
 Tài xế

LEVEL 4

Equipment Operator I  
 Printing Machine Operator

BẬC 4

Tài xế cỡ giới cấp I  
 Ấn loát viên

LEVEL 5

Senior Key Punch Operator  
 Senior Accounting Clerk  
 Senior Clerk  
 Senior Typist  
 Storekeeper  
 Technician I

BẬC 5

Trưởng xuyên, phiếu viên  
 Trưởng thủ ký, kế toán  
 Trưởng thủ ký  
 Trưởng đả tử viên  
 Thủ kho  
 Chuyên viên cấp I

LEVEL 6

Data Processing Machine Operator  
 Photographer  
 Senior Printing Machine Operator

BẬC 6

Điện, biên dữ kiện viên  
 Nhiếp ảnh viên  
 Trưởng ấn loát viên

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LEVEL 7

Tradesman  
Mechanic  
Equipment Operator II  
Technician II  
Secretary  
Senior Storekeeper  
Right of Way Trainee

LEVEL 8

Maintenance Crew Chief  
Senior Data Processing Operator

LEVEL 9

Technician III  
Data Processing Programmer  
Right of Way Negotiator

LEVEL 10

Maintenance Superintendent  
Shop Superintendent  
Engineer-In-Training  
Translator  
Senior Technician  
Personnel Officer  
Training Officer  
Administrative Officer  
Right of Way Appraiser

LEVEL 11

Accountant  
Engineer  
Systems Analyst  
Senior Data Processing Programmer  
Attorney  
Senior R/W Negotiator

BAC 7

Thợ chuyên môn  
Thợ máy  
Tài xế cơ giới, cấp II  
Chuyên viên cấp II  
Bí thư  
Trưởng kho  
Dự tập viên lộ giới

BAC 8

Trưởng toán tu, bộ  
Trưởng điện biên dự  
kiện viên

BAC 9

Chuyên viên cấp III  
Thảo chứng viên  
Thượng lượng viên lộ  
giới

BAC 10

Quản đốc tu, bộ  
Trưởng xưởng  
Kỹ sư tập sự  
Thông dịch viên  
Trưởng chuyên viên  
Chuyên viên nhân viên  
Huấn luyện viên  
Chuyên viên hành chánh  
Hộ giá viên lộ giới

BAC 11

Kê toán viên  
Kỹ sư  
Phân tích viên  
Trưởng thảo chứng viên  
Luật sư tập sự  
Trưởng thượng lượng  
viên lộ giới

LEVEL 12

Senior Engineer  
Senior Accountant  
Senior Attorney  
Senior Personnel Officer  
  
Senior Administrative Officer  
  
Senior R/W Appraiser  
  
Senior Training Officer

LEVEL 13

Division Chief

LEVEL 14

District Chief  
Director

LEVEL 15

Assistant Director General

LEVEL 16

Deputy Director General

LEVEL 17

Director General

BẠC 12

Trưởng kỹ, sử,  
Trưởng kế toán  
Luật sư  
Trưởng chuyên viên  
nhân viên  
Trưởng chuyên viên  
hành chính  
Trưởng hồ giá viên lộ  
giới  
Trưởng huấn luyện viên

BẠC 13

Chánh Sự Vụ

BẠC 14

Trưởng Khu  
Giám Đốc

BẠC 15

Phụ Tá Tổng Cục Trưởng

BẠC 16

Phó Tổng Cục Trưởng

BẠC 17

Tổng Cục Trưởng

ATTACHMENT B  
PERSONNEL PROCEDURES

POLICY AND PROCEDURE NO.: 3    DATE 1 JAN. 74    REVISION 0

ACTIVITY: ANNUAL LEAVE

POLICY

Permanent employees are entitled to annual leave with pay. Annual leave is earned according to a normal schedule and is granted at the convenience of the employee, workloads, security condition and deadlines permitting.

General Provisions are as follows:

Authorized annual leave is computed as follows:

<u>LENGTH OF SERVICE</u>	<u>HOURS PER MONTH</u>
Less than 5 years	8 hours
6 to 10 years	10 hours
11 to 15 years	12 hours
16 to 20 years	14 hours
20 years and more	16 hours

1. New employees must serve a six (6) month probationary period before being entitled to annual leave.
2. Employees will earn annual leave effective on the first date of permanent employment.
3. The maximum annual leave allowed on a continuous basis is 89 working hours.
4. All annual leave must be taken by December 31st of each year. Unused annual leave will be cancelled.

5. Upon termination of employment, all unused annual leave will be paid to the employee at the current rate of pay.

PROCEDURE

<u>Responsibility</u>	<u>Action</u>
Employee	<ol style="list-style-type: none"><li>1. Completes "Request for Leave", form _____, one week prior to effective date.<ol style="list-style-type: none"><li>a) District Personnel - original and two copies.</li><li>b) Division Personnel - original and one copy.</li></ol></li><li>2. Submits to the Direct Supervisor.</li></ol>
Direct Supervisor (District)	<ol style="list-style-type: none"><li>1. Approves or disapproves request.</li><li>2. Forwards original and two copies to the District Personnel Officer.</li></ol>
Direct Supervisor (Division)	<ol style="list-style-type: none"><li>1. Approves or disapproves request.</li><li>2. Forwards original and one copy to the Personnel Division.</li></ol>

District Personnel Officer

1. Records hours requested in the leave ledger.
2. Completes section of form reserved for "Personnel use only".
3. Returns one copy to employee.
4. Forwards original copy to the Personnel Division.
5. Files one copy.

Personnel Division

1. District Personnel:
  - a) Records hours requested in the leave ledger.
  - b) File copy.
2. Division Personnel:
  - a) Records hours requested in the leave ledger.
  - b) Completes section of form reserved for "Personnel use only".
  - c) Return one copy to employee.
  - d) File original.

# LEAVE REQUEST

EMPLOYEE NAME \_\_\_\_\_ DATE \_\_\_\_\_

DISTRICT/ DIVISION \_\_\_\_\_

REQUEST PERMISSION TO TAKE \_\_\_\_\_ HOURS

OF :



ANNUAL LEAVE



FUNERAL LEAVE



SICK LEAVE



MILITARY LEAVE (WITHOUT PAY)



LEAVE WITHOUT PAY



OTHER LEAVE (EXPLAIN)

FROM \_\_\_\_\_ TO \_\_\_\_\_ 19 \_\_\_\_\_

DATE SIGNED \_\_\_\_\_ 19 \_\_\_\_\_ BY \_\_\_\_\_

DATE APPROVED \_\_\_\_\_ 19 \_\_\_\_\_ BY \_\_\_\_\_

( PERSONNEL USE ONLY )

TOTAL HOURS UNUSED \_\_\_\_\_

TOTAL HOURS REQUESTED \_\_\_\_\_

TOTAL HOURS REMAINING \_\_\_\_\_

# LEAVE RECORD

YEAR \_\_\_\_\_

EMPLOYEE NAME : \_\_\_\_\_ ID NO. \_\_\_\_\_

DATE EMPLOYED : DAY \_\_\_\_\_ MONTH \_\_\_\_\_ YEAR \_\_\_\_\_

BALANCE CARRIED FORWARD \_\_\_\_\_ SICK LEAVE \_\_\_\_\_

DAY/MONTH		VACATION			SICK LEAVE			OTHER	
FROM	TO	EARNED	USED	BAL	EARNED	USED	BAL	TYPE OF LEAVE	DAYS/ HRS USED
<b>YEAR ENDING BALANCE</b>									

ATTACHMENT C

SECTION RESPONSIBILITIES

PROPOSED PERSONNEL FUNCTION

EMPLOYMENT

1. Develop application form
2. Establish application files
3. Recruit
  - A. Determine Labor Source
    - + Within VHA
    - + Educational Institutions
    - + Professional and technical organizations
    - + Open Market
    - + Employment agencies
  - B. Locate Qualified Personnel
    - + Internal
      - Transfer
      - Promotion
    - + External
      - Application file
      - Educational Institutions
      - Professional and Technical organizations
      - Advertisement
      - Employment agencies

4. Select Personnel
  - A. Receive employment application form
  - B. Conduct preliminary interview
  - C. Administer Employment Tests
  - D. Investigate applicants background
  - E. Arrange for physical examination
  - F. Make final selection
  
5. Perform Orientation and Indoctrination
  - A. Relate overall objectives of VHA
  - B. Relate VHA policies and procedures
  - C. Relate employees role as a member of VHA
  
6. Place Personnel
  - A. Complete personnel and payroll forms
  - B. Assign employee to the job
  - C. Establish individual file folder
  - D. Maintain Employee Records
    - + Personal History changes
    - + Educational and Training changes

## EMPLOYMENT DEVELOPMENT

1. Determine training needs by careful and continuous Research to determine where within the organization training emphasis can and should be placed.
2. Develop training programs to fit the needs.
3. Select personnel in need of training.
4. Train selected personnel.

## MANPOWER PLANNING

1. Determine manpower needs by developing manpower and performance standards for each activity and relate this to the planned workload of VHA to determine the manpower requirements.
  - + Methods improvement studies
  - + Motion and time studies
  - + Work simplification studies
2. Placement of employees to jobs they can perform most effectively.
3. Continually evaluate employee's performance.
  - + Motivation - maximize employee potential by transfers and promotions in order to utilize more effectively any skills and abilities that individual has been able to develop during the course of his training and employment.
  - + Disciplinary action - establish grievance procedures for management to correct the attitudes and behavior of employees who have violated VHA rules, have failed to maintain required standards of performance, or have acted contrary to established policy.
    - Reprimands
    - Counseling
    - Termination

## COMPENSATION

1. Work analysis - identify in detail the duties and operations of each job.
2. Job descriptions and minimum qualifications -- Develop written statements covering the duties, responsibilities, and minimum qualifications required to perform the duties and operations of each job.
3. Job Evaluation -- Determine which job is more difficult to perform in relation to another job in VHA.
4. Compensation Survey -- conduct a compensation survey annually to determine prevailing salaries and benefits paid to comparable jobs in the labor market.
5. Establish and maintain a classification and salary plan based on:
  - A. Equal pay for equal work
  - B. Increase for merit
  - C. Opportunity for advancement
  - D. Titles to fit the work
  - E. Salary plan to fit the work
  - F. Stay within budgeted funds
6. Employee Evaluation -- assign each employee a title and rate of pay based on work performance.

7. Establish policies covering benefits other than salaries.
8. Continually review the personnel system to update, modify or change the system to accomplish the objectives of VHA.

ATTACHMENT D

KNOWLEDGE AND ABILITY STATEMENTS

VIETNAM HIGHWAY ADMINISTRATION

ACTIVITY STATEMENT  
NO. 1

PREVENTIVE MAINTENANCE  
CATERPILLAR 120 MOTOR GRADER  
(Operator: 10-Hour and 50-Hour Checks)

TASK

DAILY (10 HOUR)

1. PERFORM SAFETY CHECKS
  - + ATTACH WARNING TAG TO CONTROLS WHEN SERVICING MACHINE
  - + CHECK BRAKE OPERATION
  - + LOWER OR BLOCK ALL EQUIPMENT BEFORE WORKING ON MACHINE
  - + RELIEVE PRESSURE IN HYDRAULIC SYSTEM BEFORE SERVICING
  - + BLOCK BLADE WHEN WORKING ON CUTTING EDGES
  - + MAKE SURE ENGINE IS STOPPED BEFORE MAKING ADJUSTMENTS
  - + CLEAN STEPS, GRAB IRONS AND AREAS OF MACHINE TO BE WORKED ON
  - + MAKE SURE THERE IS NO SMOKING OR OPEN FIRE WITHIN 15 METERS OF FLAMMABLES

2. PERFORM "WALK-AROUND" CHECKS
  - + CHECK ENGINE COMPARTMENT FOR LEAKS OR TRASH ACCUMULATION
  - + CHECK GEARBOXES FOR LEAKS
  - + CHECK OPERATOR'S COMPARTMENT FOR LOOSE ITEMS AND CLEANLINESS
  - + CHECK BLADE LINKAGE FOR ADJUSTMENT AND CONDITION
  - + CHECK COOLING SYSTEM FOR LEAKS AND TRASH ACCUMULATION
  - + CHECK TIRES VISUALLY FOR PROPER INFLATION, WEAR, OR CUTS
  - + CHECK BLADE, END BITS AND MOLDBOARD FOR WEAR OR DAMAGE
3. CHECK OIL LEVEL IN HYDRAULIC SYSTEM
4. CHECK AIR CLEANER PRECLEANER
5. CHECK COOLANT LEVEL IN RADIATOR
6. CHECK ENGINE OIL LEVEL
7. CHECK ELECTROLYTE LEVEL IN BATTERIES
8. CHECK AIR CLEANER CONDITION INDICATOR
9. CHECK FUEL PRESSURE GAUGE FOR INDICATION OF NEED TO CLEAN PRIMARY FUEL FILTER

10. FILL FUEL TANK AT END OF EACH DAY OF OPERATION

WEEKLY (50-HOUR)

11. LUBRICATE BLADE LIFT AND DRIVE PINION

12. LUBRICATE BLADE LINKAGE AND CENTER SHAFT

13. LUBRICATE CIRCLE SHAFT AND STEERING SHAFT

14. APPLY LUBRICANT TO CIRCLE, SHOES AND SPACER

15. LUBRICATE TIE ROD AND STEERING ARM

16. LUBRICATE LEAN PIVOT AND KNUCKLE PINS

17. LUBRICATE AXEL PIVOT AND RACK

18. LUBRICATE STEERING CYLINDER AND ARM

19. LUBRICATE DRAFT BALL, STEERING AND LEAN HOUSING  
BEARING

20. LUBRICATE STEERING TIE ROD AND BLOCK

21. LUBRICATE WHEEL LEAN SHAFT

22. LUBRICATE BEVEL PINION

PREVENTIVE MAINTENANCE  
CATERPILLAR 120 MOTOR GRADER  
(Operator: 10-Hour and 50-Hour Checks)

KNOWLEDGE

- 1 OF NOMENCLATURE AND LOCATION OF MAJOR VEHICLE COMPONENTS
- 2 OF REQUIRED SAFETY CHECKS
- 3 OF "WALK-AROUND" CHECKS
- 4 OF TYPES OF LUBRICANTS REQUIRED FOR 10 AND 50-HOUR PM
- 5 OF PROPER LUBRICATION TECHNIQUE
- 6 OF GUIDE FOR LUBRICATION AND MAINTENANCE OF THE CATERPILLAR 120 MOTOR GRADER
- 7 OF THE USE OF TOOLS ISSUED WITH THE VEHICLE FOR PM PURPOSES
- 8 OF LOCATION OF LUBRICATION POINTS
- 9 OF THE VEHICLE LOG BOOK AND POLICY CONCERNING ITS USE

10 OF THE PROCEDURE TO BE FOLLOWED FOR REPORTING  
FAULTS NOT CORRECTIBLE BY THE OPERATOR

ABILITY

- 1 TO SELECT PROPER LUBRICANT
- 2 TO FILL AND OPERATE GREASE GUN
- 3 TO ATTACH GREASE GUN TO LUBE FITTING AND INJECT  
PROPER AMOUNT OF GREASE
- 4 TO INFLATE TIRES TO CORRECT PRESSURE
- 5 TO CLEAN AIR CLEANER PRECLEANER
- 6 TO DRAIN CONDENSATE FROM FUEL TANK

## ATTACHMENT E

## LIST OF TRAINING EQUIPMENT

<u>ITEM NO.</u>	<u>DESCRIPTION &amp; SPECIFICATIONS</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
1	<p>Kodak Carousel Custom 350H Slide Projector, Model B850ZHC, Cat. No. 151-6210.</p> <ul style="list-style-type: none"> <li>- Accepts 2 x 2 inch slides in 80 and 140 slide trays</li> <li>- Automatic focussing</li> <li>- Automatic slide change</li> <li>- Remote forward &amp; reverse slide change, 5, 8, or 15 second interval</li> <li>- High-low brightness control</li> <li>- Accessory outlet</li> <li>- Elevation to 6 degrees</li> <li>- 300 Watt, 120 Volt ELH lamp</li> <li>- Ektanar Zoom Lens 4-6 inch, f 3.5</li> </ul> <p>Eastman Kodak Company Government Markets Service 343 State Street Rochester, N. Y. 14650</p>	7	EA	\$ 146.16	1023.12
2	<p>Kodak Carousel Custom H Projector carrying case, Model B 585C, Cat. No. 141-8144. (See item 1 for source).</p>	7	EA	\$ 11.14	77.98

ITEM NO.	DESCRIPTION & SPECIFICATIONS	QUANTITY	UNIT	UNIT PRICE	EXTENSION
3	Kodak Carousel Sound Synchronizer Model 2, No. B66, Cat. No. 101-8191. (See item 1 for source).	7	EA	\$ 23.23	162.61
4	Kodak Carousel 80 Slide Tray, Model B80, Cat. No. 157-2593. (See item 1 for source).	7	EA	\$ 1.91	13.37
5	Kodak Carousel 140 Slide Tray, Model B-140, Cat. No. 103-2242. (See item 1 for source).	7	EA	\$ 3.18	22.26
6	Kodak Remote Extension Cord, 25 Feet, Model 586, Cat. No. 140-1363. (See item 1 for source).	7	EA	\$ 3.50	24.50
7	Honeywell Pentax SL, f 1.8, 55mm Super Takumar, Satin Black Finish, Cat. No. 7127.  Honeywell, Inc. Photographic Products Division 5501 South Broadway Littleton, Colorado 80120	2	EA	\$ 219.50	439.00
8	Leather Case for Honeywell Pentax SL, Catalog #887. (See item 7 for source).	2	EA	\$ 17.50	35.00

ITEM NO.	DESCRIPTION & SPECIFICATIONS	QUANTITY	UNIT	UNIT PRICE	EXTENSION
9	Lens Hood for Pentax f 1.8, 55mm Super Takumar Lens, Cat. No. 784. (See item 7 for source).	2	EA	\$ 7.25	14.50
10	Pentax 85-210mm Zoom Takumar SMCT, f 4.5 Lens, Cat. No. 7261. (See item 7 for source).	2	EA	\$ 321.39	642.78
11	Pentax 20mm Super Takumar f 4.5 Lens, Cat. No. 7085. (See item 7 for source).	2	EA	\$ 171.24	342.48
12	Wollensak Record/Playback Portable with Built-in Synchronizer, Model 2550 AV.  3M Company Mincom Division 224-6E 3M Center St. Paul, Minn. 55101	7	EA	\$ 299.95	2099.65
13	Cover Speaker Model A0531 for Wollensak Record/Playback Unit Model 2550 AV. (See item 12 for source).	7	EA	\$ 49.95	349.65
14	Wollensak Cassette Duplicating System Model 2750 AV, Cassette Master, Item No. 136-18. (See item 12 for source).	1	EA	\$ 499.95	499.95

<u>ITEM NO.</u>	<u>DESCRIPTION &amp; SPECIFICATIONS</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
15	Wollensak Cassette Copier, Item 136-18. (See item 12 for source).	1	EA	\$ 299.95	299.95
16	Da-Lite Projection Screen, 70 x 70 inch, Type II, Class I, Regular Duty Tripod Mount, Item No. 6730-558-5876.  Da-Lite Screen Co. State Road 15 North Warsaw, Indiana	8	EA	\$ 23.75	190.00
17	Drafting Machine - Paragon K&E No. 600010, or Equivalent 18" Luxylite Scale No. 60-0712, Style 25.  Leslie's Art Supplies 2328 West 7th Street Los Angeles, California 90057	1	EA	\$ 200.00	200.00
18	Oravisual Magnetic All Purpose Portable Easel, Model A505. (See item 17 for source).	2	EA	\$ 59.00	118.00
19	Oravisual Grip-Quick Chart Clamp, 28" Length, Model C-124.	2	EA	\$ 9.50	19.00
	Oravisual Grip-Quick Chart Clamp, 36" Length, Model C-124. (See item 17 for source).	2	EA	\$ 12.00	24.00

ITEM NO.	DESCRIPTION & SPECIFICATIONS	QUANTITY	UNIT	UNIT PRICE	EXTENSION
20	Oravisual Carton of Four Ruled Vellum Chart Pads, 1-inch Squares, 27x34", 30 sheets per Pad, Model V-315. (See item 17 for source).	4	EA	\$ 20.00	80.00
21	Projection Lamp for Kodak Carousel Slide Projector, Cat. No. 146-5558, ELH, 300 Watts, 120 Volts. (See item 1 for source).	14	EA	\$ 7.36	103.04
22	Honeywell Deluxe Copy Stand II Cat. No. 7101. (See item 7 for source).	1	EA	\$ 65.67	55.67
23	Graflex TR-III-A Tripod or Equivalent, Cat. No. 4535.  Singer Graflex Division 3750 Monroe Ave. Rochester, New York 14603	1	EA	\$ 53.30	53.30
24	Honeywell Omnica Deluxe A Case for Pentax, Cat. No. 5110, Black Top-Grain Leather, 10 $\frac{1}{4}$ x 7 $\frac{1}{4}$ x 8 $\frac{1}{4}$ inc. (See item 7 for source).	2	EA	\$ 56.85	113.70

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<u>ITEM NO.</u>	<u>DESCRIPTION &amp; SPECIFICATIONS</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
25	Commutator Turning Tool Set At-2X-B, Snap-on Tool, or Equivalent.  Snap-On Tools Corporation International Division 6218-23 Rd Avenue Kenosha, Wisconsin 53140	1	EA	\$ 58.30	58.30
26	Armature Growler, 117 Volt, 60 CY AC Snap-On Tool, Model MT-326, or Equivalent. (See item 25 for source).	1	EA	\$ 82.50	82.50
27	Snap-On MT-615C Anal-O-Scope. (See item 25 for source).	1	EA	\$ 700.00	700.00
28	Magnasync Motor, 60 Cycle, 110 Volts, Part No. 103144 for Magnasync x 400.  S.O.S. Photo - Cine - Optics, Inc. 7051 Santa Monica Blvd. Hollywood, California 90038	1	EA	\$ 160.00	160.00
29	KRA-455 Roll CAB 48" Wide x 36 $\frac{1}{2}$ " High x 19 1/8" (Snap-On). (See item 25 for source).	1	EA	\$ 400.00	400.00
30	UC-6 Mica Undercutter (Snap-On). (See item 25 for source).	1	EA	\$ 25.00	25.00

<u>ITEM NO.</u>	<u>DESCRIPTION &amp; SPECIFICATIONS</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
31	Standard Equipment for Valve Refacer VR 304A (Snap-ON). Grit Refacing Wheel VW 60 Grit Refacing Wheel VW 80 Diamond Stone Dresser (See item 25 for source)	3 3 1	EA EA EA	\$ 10.00 \$ 10.00 \$ 80.00	30.00 30.00 80.00
32	Honeywell Auto Extension Tube Set, Cat. No. 7094, No. 1, 2, 3. (See item 7 for source).	1	EA	\$ 16.17	16.17
33	Staples for Bostitch Stapler, Model E64HFS-EF, Item No. 51-105. Bostitch SCCR 25 9/16 Inch Staples 3/8 Inch Staple	10 10	BOX BOX	\$ 4.10 \$ 3.15	41.00 31.50
	Bostitch Division Textron, Inc. Briggs Drive East Greenwich, R.I. 02818				
34	Honeywell 80B Filter for Color Correction of Kodachrome II Film with Photofloods, Cat. No. 855. (See item 7 for source).	1	EA	\$ 7.59	7.59
35	Triangle Lighting System, Senior Lite Pak.  Industrial Photographic Products, Inc. 8612 Fenton Street Silver Spring, Maryland 20910	1	EA	\$ 54.95	54.95

ITEM NO.	DESCRIPTION & SPECIFICATIONS	QUANTITY	UNIT	UNIT PRICE	EXTENSION
36	Photoflood Lamps, 1000 Watt, 28000 Candle Power, 3200° Kelvin, Mogul Base, for Use with Senior Lite Pak. (See item 35 for source).	6	EA	\$ 3.85	23.10
37	Stapler, Bostitch Special Item No. 51-104, Foot-Powered, Pedestal Type, Flat & Saddle Table for Stapling Pamphlets, Pads & Booklets, Capacity 2 Sheets to 3/8 Inch Thickness, Model E64HFS-FP, Bostitch. (See item 33 for source).	1	EA	\$ 191.00	191.00
38	General Binding Corporation Plastic Bindings, 18. 19 Ring Diameter				
	3/8 Inch	1000	100	\$ 3.66	36.60
	5/8 Inch	1000	100	\$ 6.01	60.01
	1 Inch	1000	100	\$ 11.71	117.10
	General Binding Corporation Northbrook, Illinois 60062				
39	Ednalite Sequential Editor/Transviewer. Translucent 24x24 inch Viewing Screen with 11 Removable, Adjustable, Interchangeable Metal Channels, Complete with Magnafinder. (See item 35 for source).	1	1	\$ 274.00	274.00

ATTACHMENT F  
LIST OF MILESTONES

Milestone Number	Task No.	Description	Scheduled Date
1	3	Accounting Reporting Course Implemented	2 March 74
2	2	Training Needs Determined	30 March 74
3	3	Management Seminar Implemented	30 March 74
4	3	Construction Math One Implemented	30 March 74
5	6	VHA Master Training Program for 1975 Prepared	30 March 74
6	3	Preventive Maintenance Course for Heavy Equipment (Daily/Weekly) implemented	18 May 74
7	3	Asphalt Patching, Asphalt Sealing, Premix Levelling Courses Implemented	1 June 74
8	3	PM of Heavy Equipment (Monthly-Yearly) Course Implemented	3 August 74
9	3	Sampling Course Implemented	3 August 74
10	3	Construction Management Seminar Implemented	5 October 74
11	3	Soils & Aggregates Field Testing; Excavation & Embankment Inspection Courses Implemented	16 November 74
12	3	Asphalt Field Testing, Asphalt Plant Inspection, Asphalt Paving Inspection Courses Implemented	16 November 74
13	3	Base Course Inspection Course Implemented	4 January 74

Milestone Number	Task No.	Description	Scheduled Date
14	3	Drainage Maintenance Course Implemented	18 January 74
15	3	Maintenance Management Seminar Implemented	1 February 74
16	3	Contract Plan Reading Course Implemented	15 March 75
17	2	Training Needs Determined	29 March 75
18	3	Soils & Aggregates Orientation Implemented	29 March 75
19	6	VHA Master Training Program for 1976 Prepared	29 March 75
20	3	Bridge Inspection; Portland Cement Concrete Testing Courses Implemented	19 April 75
21	3	Maintenance Math Course Implemented	2 August 75
22	3	Gravel & Dirt Road Conditioning Course Implemented	2 August 75
23	3	Construction Math Two Implemented	3 October 75
24	3	Base Repairing Course Implemented	29 November 75
25	3	Pipe Installation Course Implemented	13 December 75
26	3	Soils & Aggregates Exploration Course Implemented	3 January 76
27	1	Training Needs Determined	27 March 76

Milestone Number	Task No.	Description	Scheduled Date
28	3	Physical Testing - Central Lab; Chemical Testing - Central Lab Courses Implemented	27 March 76
29	6	VHA Master Training Program for 1977 Prepared	27 March 76

## ATTACHMENT G

### GLOSSARY OF TERMS

1. Acceptable Design Controls: These are Design Standards that are somewhat less than the desirable standards adopted by the Director of Engineering for use on all new construction projects but which have been agreed upon within DGOH as being acceptable for developing a highway improvement program that encompasses a short, intermediate and long range priority listings of projects and for the design and construction of those projects. These standards may be subject to revision based upon the development of a master plan to obtain a highway improvement program in balance with increased revenues.

2. Annual Work Program: A program which will detail the work to be performed, the specific objectives to be achieved and the resources to be used during a particular year or program period.

3. Deficiencies: Term used in Needs Analysis which describes a condition of the roadway or bridge that does not meet Acceptable Design Controls and should be improved.

4. Design Standards: Standards for design approved by the Director of Engineering and used according to the Functional Classification.

5. Function: Work or service expected from an organizational unit.

6. Functional Highway Classification: Grouping of highways into classes of systems according to the character of service they are expected to provide.

7. Goals: A statement or a set of statements that relate the primary results that are expected to be produced, the end toward which an effort is directed.

8. Highway Improvement Program: This is a program of approved projects involving such projects as major maintenance, up-grading, land acquisition and new construction which reflect a capital investment in the highway system.

9. Highway Revenues: All taxes, fees and levies collected thru the use of the highway system or from services rendered by the Department of Highways irregardless of how or where the revenues are expended within GVN.

10. Highway System: All roads and streets that are assigned to the various functional systems regardless of administrative responsibility. The DGOH Highway System includes those highways for which DGOH has been assigned administrative responsibility. The Province Highway System includes those highway which are the responsibility of each Province.

11. Interim Program: A priority program of highway improvements which will be utilized by DGOH until such time as more factual and refined data has been collected for use in developing the Priority Program.

12. Management Controls: A term used to describe the many devices used by management in assuring itself the goals and objectives of the organization are being achieved.

13. Master Plan: A long range plan developed from the collection of all pertinent planning data and statistical forecasts which indicate socio-economic trends, transportation and land use trends and which defines the program needs, costs and related benefits.

14. Objectives: A desired achievement toward which an effort is directed. Something that is essential to the accomplishment of goal.

15. Plan: A course of action resulting in a decision.

16. Priority Program: The selection of projects contained in the Master Plan on the basis of factual need to carry out the goals and objectives of DGOH thru a system of scheduling within the limits of money and manpower.

17. Program: A procedure which will implement a plan by defining the work to be done, the specific goals to be achieved and the resources to be used.

18. Travel Demands: Demands on the highway system by the users to provide for accommodating highway traffic in a safe, efficient and economical manner.

19. Vehicle Classification: The grouping together of vehicles of similar characteristics in order to establish structural and geometrical design criteria, computing expected highway user revenues, computing highway capacity and determining correction factors for machine counts.

20. Work Program Budget: The process of recommending a set of work objectives for the various types of projects required to achieve the goals of DGOH and to schedule the objectives into specific time periods based on revenue forecasts.

## ATTACHMENT H

### INTERIM PROGRAM PROCEDURES

#### I OBJECTIVE

The Planning and Research Division of DGOH will prepare a priority program of highway improvements which will be the basis for resource planning, budgeting and production scheduling for all affected Directorate units.

This program will be prepared on a year to year or interim basis until such time as more factual data has been collected that can be used to reflect a realistic program representative of the true highway improvement needs of the RVN.

#### II GENERAL

In the past several years many different plans and programs have been developed by various agencies having responsibility for highway improvements in the RVN. With the end of hostilities, priorities have changed causing some programs to be cancelled while others have been consolidated or combined.

As a result of these changing conditions, the Planning and Research Division of DGOH is faced with the responsibility of identifying the priority needs for improving the highway system to a standard that is compatible with the growth needs of the nation.

At the present time this is a most difficult task. Planning data generally required to prepare a highway improvement program is not available. Because of the prolonged armed conflict such elementary items as traffic counts and the road and bridge inventories have been neglected and now are of little value to the planning process. There is also a lack of reliable construction and maintenance cost data on file in the central office which can be used for estimating purposes.

To overcome this lack of data, and meet a pre-determined schedule for an early completion of an Interim Program, the Planning and Research Division has implemented procedures designed to collect a minimum amount of data necessary to develop a meaningful program. Whenever possible, existing programs and data will be used to the fullest possible extent.

### III EXISTING PROGRAMS

The Directorate General of Highways of the Republic of Vietnam published a Ten Year Highways Improvement Plan - 1965-1975. This plan has been amended, the most significant revision of which is the Highways portion of the Four Year (1972-1975) Plan of Infrastructure Development.

DGOH assembled a plan consisting of four parts which included all types of projects ranging from those involving a high impact program of emergency repairs to local roads, streets and bridges damaged by the war, to projects of a more permanent nature involving major maintenance of the existing facility and finally new construction projects.

In March 1973, the Ministry of Public Works published a Post War Plan for Rehabilitation and Development. The highway portion of this plan included the four appendices of the DGOH plan noted above, and can be considered the most authoritative program for post war reconstruction in the Republic of Vietnam.

One of the objectives in developing the Interim Program is to utilize as much existing information as possible. With this thought in mind a project analysis form was developed to collect certain data for use in preparing the Interim Program.

Instructions have been issued to each District Engineer to complete as fully as possible a project analysis form for each project included in Appendix C, a designated number of projects listed in Appendix D and any project not included in Appendix C or D but which in the opinion of the District Engineer should be considered for inclusion in the program.

It is the desire of the Planning and Research Division to obtain a sufficient amount of data from the project analysis form to determine a rating for each project which in turn can be used to prepare the Interim Program.

### IV ECONOMIC ANALYSIS

Highways are constructed because they provide benefits to society in general and to individuals in particular.

This is a broad statement that must be given proper analysis by relating these benefits to the corresponding costs of the many projects that are to be considered in long range highway planning.

The development of meaningful data that can be used to reliably predict the project which provides "the most profitable returns in proportion to the amount expended upon it" involves much time, effort and study. A review of existing data indicates much more information must be collected before a reliable economic analysis of highway projects proposed for the Republic of Vietnam can be accomplished.

One of the objectives of the Interim Program is to assemble a list of high priority projects within a short period of time. This time factor precludes the development of a data base of sufficient reliability to conduct an economic analysis. Therefore, this process will not be considered in the preparation of the Interim Program.

There are however, other procedures that can be used on an interim basis to meet the program objectives. These procedures are discussed in subsequent sections of this report.

It must be stressed that while the economic analysis procedure will not be considered for the Interim Program, immediate steps will be undertaken to develop such necessary data as operating costs for vehicles common to Vietnam and highway maintenance and construction costs. Such data will be used in the development of a procedure for performing an economic analysis of the projects considered for the long range plan.

## V PROJECT ANALYSIS SUMMARY

Upon receiving the project analysis form from the District Engineer, the Planning and Research Engineer will begin an evaluation of each project. A summarization will be prepared which considers the factors contained on the analysis form.

The following is a brief discussion of each item which is to be considered in the project by project summary.

- A. Route or Project. This is a description of the project for which the analysis is being made.
- B. Province. List the province within which the project is located.
- C. Location. Describe the location of the project with respect to a mile post.

- D. Type of Work. Indicate the type of work proposed by the District Engineer to affect the necessary improvement. This recommendation should have the concurrence of the Director of Operations.
- E. ADT. Annual Daily Traffic (Vehicle Units) should be checked out with the representative of the Director of Engineering who is responsible for the traffic counting operation.
- F. ADT. Annual Daily Traffic (4 wheel - 2 axle or greater) should be checked out with the representative of the Director of Engineering who is responsible for the traffic counting operation.
- G. Design Life. The number of years of life as previously determined for the various types of construction. For example: Reinforced concrete bridges have a design life of 40 years; bituminous concrete pavements have a design life of 20 years, etc.
- H. Total ADT/KM. This represents the product of the ADT and number of days in the year (365).
- I. Estimated Cost. The best current estimate of cost available from any source in DGOH or other agency.
- J. DGOH Economic Analysis (Upgrading). The average value of the project being considered taken from the Highway Inventory Computer print-out.
- K. DGOH Economic Analysis (Maintenance). Same as above.
- L. Recommended by. Place an x in the appropriate column. If recommended by "other", name agency making recommendation.
- M. Approved by District Engineer. If project has approval of District Engineer place an x in this column.
- N. Essential to National Defense. Use the appropriate symbol H, M, S, or O that represents the degree of essentiality - heavy, medium, slight or none.
- O. Essential to Economic Development. Use the appropriate symbol H, M, S, or O.
- P. Recreational Value. Use symbols.

- Q. Maintenance Costs. Use symbols. Check with Maintenance Division to verify classification.
- R. Travel Delays. Use symbols to describe degree of delays that may be caused by one-way bridges, congestion or other causes.
- S. Service between Saigon and Autonomous Cities. Use symbols to describe amount of travel.
- T. Service between Province Capitols. Use symbols to describe amount of travel.
- U. Geometric Alignment Deficiency. Use symbols to describe degree of deficiency based upon design standards. This item concerns vertical and horizontal curvature, design speed, sight distance restrictions, etc.
- V. Roadway Geometric Deficiency. Use symbols to describe extent to deficiency of roadway and shoulder widths, slopes as compared to design standards.
- W. Structural Deficiencies. Again using symbols indicate if the deficiency of the base or surface is heavy medium, slight or none.
- X. Remarks. Use this column to describe in words some of the bad deficiencies or conditions that cannot be adequately described by the symbols.

## VI PROJECT RATINGS

Upon completing the Project Analysis summary described in Section V above, each project will be rated in accordance with data compiled on the analysis form for each specific project. It is not proposed to apply numerical values to each of the categories considered. Numerical ratings have definite disadvantages. Instead an analysis will be made of each project in which the greatest consideration is given to the rating given each project in the categories of greatest importance.

For example, projects with higher ADT's should rate high, especially if there is a great amount of travel delay encountered because of one-way bridges or any other cause. A project that involves a narrow roadway without adequate shoulders and a roadway surface that is in very bad condition should rate high particularly if the ADT is high or if it is important for the movement of commercial or defense vehicles.

After the review, the project analysis reports will be placed in three or four groups. Each group will contain projects of about the same rating or importance. The projects in the most important group will have the highest priority for improvement. The projects in the second group will in the second priority, those in the third group the third priority, etc.

Each of these groups will contain a variety of projects. Some projects will be located on the QL system others will be on the LTL system. It is possible that some secondary or TL system projects may also be included. It must be recognized that each group will consist of several different types of projects. These could be bridge repair or bridge replacement projects, betterment projects, reconstruction projects, new construction projects or special maintenance projects.

## VII DEVELOPING THE PROGRAM

When the projects have been placed into groups as noted above, development of the Interim Program can begin.

To aid in the program preparation a large map showing the QL system should be available for reference. A similar map of the LTL system should also be available. It would be helpful to have available for reference a strip map that indicates the locations on the QL and LTL systems where major maintenance or construction work has been performed in recent years.

As a substitute for the road and bridge inventory, it is suggested that the Chief of the Maintenance Division and the Chief of the Planning & Research Division meet together and by using the maps of the QL and LTL systems indicate or determine the following items:

1. General condition of various segments of each system. This will be a very general type description such as excellent, good, poor, bad, needs immediate attention, because the Maintenance Division is unable to keep roadway in an acceptable condition, etc. The length of each section should be as long as possible and still describe the situation satisfactorily.
2. Using the record of maintenance and construction activities, the conditions shown on the map as described above can be verified.

3. Plot the location of the projects proposed in the several priority groups as determined by the project analysis on the maps of the QL and LTL systems.
4. Verify that the projects proposed by the project analysis review are located in areas which have been determined to be in need of improvement.

The above procedures will identify and verify the selection of individual projects that qualify for the Interim Program on the basis of needed improvements to the highway system.

One of the most difficult tasks of program development is to select those projects which will provide the "best mix" of projects which will provide for the optimum investment of money and resources.

The "best mix" method can be used to the best advantage when certain objectives have been established by top management. When these objectives are made known to the programming staff, a combination of projects can be developed that will achieve the pre-determined objectives. Some of these objectives can be defined as follows:

1. It is desired to replace all bridges destroyed by the war in a five year period ending 1979.
2. Because of the unbalanced expenditure of construction funds between the primary and secondary systems in the past several years, an objective of the MPW is to prepare a program that will bring the expenditure of funds for projects on the Secondary System in a more realistic ratio with those of the Primary System.
3. In accordance with the MPW objective stated above, and until such time as the needs of the Primary, Secondary and Rural highway systems can be more accurately determined, it will be the objective of DGOH to expend at least 20% of the annual construction budget on the Secondary System.
4. The construction funds budgeted for the Primary System will be divided on a basis of 60% for the QL and 40% for the LTL system.

5. A construction betterment program will be initiated that will utilize at least 50% of the authorized construction funds each year. Construction betterment is most generally defined as improvements to the existing facility that improve the value or life of the facility. These improvements are usually limited to the existing facility and are not so extensive as to be classified as reconstruction or construction. (See letter of 20/6/73 from Mr. L. M. Chittim to Mr. Phan Dinh Tang which transmitted Mr. Chittim's recommendations concerning maintenance programs). An example of a project of this type is the project now under construction on QL-4 between Saigon and My Tho.
6. Up to 25% of the annual construction program will be expended on reconstruction projects. A reconstruction project is defined by Mr. Chittim as one involving realignment or the use of standards well above those of the existing highway, whereby the type of highway or its geometric and structural features are significantly changed. An example of such a project is the one proposed for LTL 50 between Saigon and the My Loi Ferry.
7. Until further notice, the main construction effort of DGOH will be to improve the existing systems without consideration being given to the construction of multi-lane roadways unless directed to do so by the Director General.

Using the above stated objectives as guidelines, the Director of Planning will prepare a priority listing from the first group of projects as described in section VI. If the estimated cost of the projects in the first group does not equal the funds available for programming during the program period, the same process of evaluation will be used to analyze the projects in the second group, etc.

#### VIII DOCUMENTATION

Justification for each project selected for the Interim Program will be furnished on a form provided for this purpose. One form will be used for each project listed in the program.

The form will summarize the data that has been considered in analyzing each project and which will serve as documentation for the ranking given each project in the program.

## IX CONCLUSION

During the development of the Interim Program the Director of Planning and Research will confer as needed with other officials in DGOH to resolve any questions or problems that might arise.

When the Interim Program has been assembled it will be reviewed by the Director General of Highways and any other official of DGOH or MPW as desired by the Director General. All alterations, corrections or additions that may result from these reviews will be made by the Director of Planning and Research.

The Interim Program will then be presented to the Director General for approval. Publication and distribution of the approved Interim Program will be made in accordance with instructions issued by the Director General of Highways.

This program will then serve as the basis for planning and developing those activities associated with the highway construction program in the Republic of Vietnam.

PROJECT ANALYSIS

INTERIM PROGRAM

1. SYSTEM:
2. DISTRICT:
3. PROVINCE:
4. LOCATION:
5. LENGTH (KM):
6. TYPE OF PROJECT (Check one):  
New Construction \_\_\_\_\_  
Upgrading \_\_\_\_\_  
Major maintenance \_\_\_\_\_
7. IS PROJECT IN AN APPROVED PROGRAM?  
Yes: \_\_\_\_\_ DGOH \_\_\_\_\_ USAID \_\_\_\_\_ Other \_\_\_\_\_  
No : \_\_\_\_\_
8. HAS PROJECT BEEN RECOMMENDED BY DISTRICT ENGINEER?  
Yes \_\_\_\_\_ No \_\_\_\_\_
9. ADT \_\_\_\_\_
10. ECONOMIC ANALYSIS RATING: \_\_\_\_\_
11. BENEFIT/COST RATIO: \_\_\_\_\_
12. CONTRIBUTION TO NATION DEFENSE:  
High \_\_\_\_\_ Moderate \_\_\_\_\_ Low \_\_\_\_\_
13. FUNCTIONAL USAGE:  
Multi use \_\_\_\_\_  
Commercial \_\_\_\_\_  
Recreation \_\_\_\_\_  
Military \_\_\_\_\_  
Local \_\_\_\_\_
14. TYPE OF VEHICLES:  
All types \_\_\_\_\_  
Mostly cars & taxis \_\_\_\_\_  
Mostly trucks \_\_\_\_\_  
Light vehicles \_\_\_\_\_

15. STRUCTURAL EVALUATION (Describe):

16. GEOMETRIC EVALUATION (Describe):

17. ESTIMATED COST OF PROJECT:

18. PROJECT RANKING:



## ATTACHMENT J

### FINANCIAL AND ACCOUNTING REGULATIONS OF THE VIETNAM HIGHWAY ADMINISTRATION

The Financial and Accounting Regulations of Vietnam Highway Administration after due consideration and approval of the Administration Council are prescribed as follows:

#### CHAPTER I

##### GENERAL INFORMATION

Article 1. The Director General has overall responsibility for the accounting, auditing, and budgetary procedures of the Vietnam Highway Administration.

Article 2. The Director General of VHA will appoint a graduate qualified accountant, or an experienced cost accountant to serve as Chief of Accounting and Finance Division of the Vietnam Highway Administration.

Article 3. The Chief of Accounting and Finance Division has general charge of the auditing, accounting and cost accounting activities of the agency.

Article 4. The Chief of Accounting and Finance Division (Deputy Disbursing Officer) is responsible for compliance with all regulations governing the obligation and disbursement of public funds in accordance with procedures prescribed for autonomous agencies.

Article 5. The Chief of Accounting and Finance Division is responsible for the management of the fiscal affairs of VHA. He is responsible for the policies and procedures within the Finance & Accounting Division. He prescribes and directs the installations of necessary and appropriate accounting systems, including commercial fiscal accounting, cost accounting, budgetary accounting, and disbursement accounting. He directs and reviews the preparation of fiscal reports reflecting the entire fiscal operations of VHA.

Article 6. The Chief of Accounting is responsible for the development of a Financial and Accounting Manual of Procedures. The manual will include a section for a Chart of Accounts. The Manual of Procedures will not be restrictive in nature. It will be

the responsibility of the Chief of Accounting to amend the Procedures and Chart of Accounts to meet new technical changes in the financial and accounting field as they develop. He has the authority to recommend new procedures and delete old procedures when the change is to the best interest of VHA, providing there is no conflict with Decree Laws. All changes, additions, and deletions must have the approval of the Administration Council.

Article 7. On or before the 31st day of March each year, the Chief of Accounting and Finance Division shall cause to be prepared the Financial Statements (Budget Status Report, Balance Sheet, and Statement of Revenues and Expenditures) as of the last day of fiscal year (31 December). Copies will be submitted to the Administration Council, the Ministry of Public Works, the Directorate General of Budget and Foreign Aid, and the Ministry of Finance.

## CHAPTER II

### DISBURSING

Article 8. The Director General is the Chief Disbursing Officer of VHA.

Article 8.1. The Director General may appoint the Deputy Director General or the Assistant Director General for Administration to perform the duties of the Chief Disbursing Officer during his absence.

Article 9. The Chief of Accounting and Finance is the Deputy Disbursing Officer.

Article 9.1. The Director General may appoint the Supervisor of the Disbursing Unit of the Accounting Division to perform the duties of the Deputy Disbursing Officer during his absence.

Article 10. The Director General may appoint the Chief of District to perform the duties of the Chief Disbursing Officer in the District.

Article 10.1. The Director General may appoint the District Chief of administration to perform the duties of the Deputy Disbursing Officer in the District.

Article 11. The Deputy Disbursing Officer or his designated assistant will sign all pay orders, checks, etc. prepared to pay the employees and the other accounts of VHA.

Article 11.1. All pay orders, checks, etc. prepared for the payments of VHA obligations will be countersigned by the Chief Disbursing Officer or designated assistant.

Article 12. Salaries, wages, bonuses, allowances, etc.. payable to personnel employees, will be paid in accordance with salary schedule developed for VHA.

Article 13. Expenditures for purchase of materials, service invoices, etc. in amounts not to exceed VN\$50,000 may be paid in cash. All amount in excess of VN\$50,000 for above items must be paid by checks/orders of transfers to accounts of suppliers, except in special cases when suppliers do not accept checks and no other suppliers are available. This fact must be certified by the Liquidator in charge with request to the Accounting Division for payment in cash.

Article 14. The Director General of VHA must approve all disposal orders for assets, land and buildings, used equipment and scrap materials.

Article 14.1. All information concerning sales of assets, commodities services, etc. will be forwarded to the Accounting Division for the preparation of sales invoices and collection of the amounts due VHA.

### CHAPTER III

#### BUDGETING

Article 15. The Director General shall cause to be prepared an annual budget for each fiscal year beginning January 1, and ending December 31, and shall be attached as a separate item to the MPW budget.

Article 16. The Chief of Accounting is responsible for the compilation of the budget. He will procure the necessary information from all of the operating Divisions and Districts of VHA to carry out the fiscal activities of VHA.

### CHAPTER IV

#### BUDGET CONTROL

Article 17. The Vietnam Highway Administration incurs obligations and expends funds for specific purposes in accordance with the annual budget allocations. The following procedures will govern the control of the budget.

Article 18. To incur obligations and expend funds for operations, the Director General may delegate authority to the operating managers as he sees fit.

Article 18.1. The Director General shall recommend to the Administration Council the transfer of funds from one allotment to another, when in his opinion the transfer will result in more efficiency in the operation of the Department. The Administration Council shall have the authority to approve or disapprove the recommendation.

Article 19. All revenues will be used for payment of all expenses without discrimination.

However, certain receipts may be set aside for payment of special obligations, by decision of the Administration Council. In this case, related receipts and expenditures will be reflected in the budget and by special accounts in the Accounting Ledgers.

Article 20. Allocations for specific projects, or items of expenditures which are in process but not completed at the end of the budget year, will be carried forward to the subsequent budget year until the completion of the approved program.

Expenditures for these specific projects may be settled at the beginning of the subsequent fiscal year without waiting for the new budget.

Article 21. Construction of Roads, Bridges, Ferries, etc. Construction Activities performed by VHA personnel will be accounted for through the regular accounting procedures of VHA.

Construction activities performed by contract will be governed by the contract specifications and regulations of the Contract Administration Division of VHA.

# CHART OF ACCOUNTS

## INTRODUCTION

The Chart of Accounts has been designed to meet the requirements of statutory regulations and the organizational, administrative and operational activities of the Vietnam Highway Administration.

The Chart embraces all funds of the Administration. The information is classified into four main sections, namely, Balance Sheet Accounts, Revenue Accounts, Highway Investments and Fixed Assets and Expenditure Accounts.

The expenditure accounts cover all of the functional activities of the administration, construction and maintenance sections of the Department and is the basis of the Cost Accounting System. There must be a proper accounting for every object of expenditure by functional activity. In order to assist the Department's personnel in properly interpreting and classifying cost distribution codes, the sub-accounts in the expenditure classification are treated as a separate chapter in the manual. Detailed explanations are given directly under a majority of the sub-accounts.

The budgetary accounts have been integrated with the proprietary accounts. Direct coordination of both accounts, in one record instead of two, substantially eliminates duplicate recording and reporting which otherwise would be necessary.

The following summary reflects the balance sheet accounts classified according to their proprietary and budgetary nature:

### I BALANCE SHEET ACCOUNTS

<u>Account</u>	<u>Proprietary</u>	<u>Budgetary</u>
1000 Assets:		
Cash	x	
Investments	x	
Receivables	x	
Inventories	x	
Other Assets	x	
2000 Other Debits:		
Estimated Receipts		x

I BALANCE SHEET ACCOUNTS (CONTINUED)

<u>Account</u>	<u>Proprietary</u>	<u>Budgetary</u>
3000 Liabilities:		
Vouchers payable	x	
Due to Other Funds	x	
Contracts Payable-		
Retained Percentage	x	
Deposits of Others	x	
Amounts Withheld for		
Taxing Authorities &		
Others	x	
Other Liabilities	x	
4000 Appropriations and Reserves:		
Unallotted Appropriations		x
Allotments		x
Expenditures (Debit)	x	
Encumbrances (Debit)		x
Reserve for Encumbrances	.	x
Other Charges	x	
5000 Surplus:		
Unappropriated Surplus	x	x
6000 Revenue, Reimbursement and		
Other Credits (Balance Sheet		
Control):		
Revenue, Reimbursements and		
Other Credits (Current		
Period)	x	

The budgetary accounts reflect the estimated receipts, the appropriation allotments and encumbrances, while the proprietary accounts may be said to represent the actual assets and liabilities and actual amounts received and expended. The unappropriated surplus shows both a proprietary and budgetary designation since that part of the balance at the beginning of the fiscal year or biennial period is the result of actual transactions.

A brief summary of the principal classification of accounts (excluding subsidiary accounts) forming the other sections of the Chart may serve to give a general synopsis.

II 6000 REVENUE, REIMBURSEMENTS AND OTHER CREDITS  
(INCOME SECTION)

National Budget Appropriations  
Revenue (Taxes, etc.)  
Other Participations  
Other Credits

These accounts represent the actual amounts received or receivable, the aggregate of which equals the amount of the 6000 Account appearing in the balance sheet referred to above.

III 7000 HIGHWAY INVESTMENT AND FIXED ASSETS

Highway Investment

Roads & Bridges

Note: An account has also been provided for allowance for periodic cost or valuation adjustments.

Fixed Assets

Land  
Buildings and nonhighway improvements  
Equipment

Note: Accounts have also been provided for allowances for depreciation for buildings and improvements and for equipment.

IV 4130 EXPENDITURE ACCOUNTS

Functional Classification

Construction:

Pre-Construction Engineering  
Right-of-Way  
Construction Engineering  
Construction In Progress

Maintenance:

Physical or General  
Traffic Services  
Unusual or Disaster  
Force Account-Major Maintenance  
General Functions

**Service Centers and Clearing Accounts:**

**Administration:**

**Object or Item of Expenditure**

Personal Services  
Contractual Services  
Materials & Supplies  
Other General Expenses  
Capital Outlay

CHART OF ACCOUNTS

<u>Account No.</u>	<u>Current Assets:</u>	<u>For Future Use</u>
1100	<u>Cash:</u>	
	1111 Cash in Banks	
	1112 Cash with National Treasury	
	1115 Imprest Petty Cash	x
	1117 Cash in Transit	x
	1152 International Bank for Recon- struction and Development	x
	1153 USAID	x
	1154 Guarantee Deposits	x
1300	<u>Accounts Receivable:</u>	
	1311 Central Government	x
	1316 Other Governments	x
	1320 Individuals, Firms & Corporations	x
	1350 Deposits with Governments	x
	1360 Deposits with others	x
1500	<u>Inventories:</u>	
	1510 Road Materials & Supplies	
	1530 Equipment Parts & Supplies	
	1550 Petrol Oil & Lubricants	
	1560 Office Stationary & Supplies	
	1570 Professional & Scientific Supplies	

<u>Account No.</u>	<u>Description</u>	<u>For Future Use</u>
1700	<u>Other Assets:</u>	
	1710 Prepaid Expenses	
2000	<u>Estimated Receipts:</u>	
	2011 National Budget Appropriations	
	2012 Aid From Friendly Countries	
	2013 Proceeds from Loans	
	2014 Appropriations for Aid to Provinces	
	2015 Appropriations from Taxes	
	2016 Income from Operations	
	<u>Note:</u> Above Accounts are budgetary accounts - Actual Receipts are recorded in the 6000 series of accounts.	
3000	<u>Liabilities:</u>	
	3110 Payrolls payable	
	3111 Withholds - Employee payrolls	
	3120 Vendors payable	
	3130 Contractors Payable	
	3131 Contractors Payable - Retainage	
	3132 Contractors Payable - Other Withholds	
	3140 Loans and Notes Payable	

<u>Account No.</u>	<u>Description</u>	<u>For Future Use</u>
3170	Guarantee Deposits by Others	
3190	Other Liabilities	
4100	<u>Unallotted Appropriations:</u>	
4111	National Budget Appropriations	x
4112	Aid from Friendly Countries	x
4113	Proceeds from Loans	x
4114	Appropriations for Aid to Provinces	x
4115	Income from Operations	x
4130	<u>Allotments:</u>	
4131	Engineering	x
4133	Construction	x
4134	Maintenance	x
4137	Service Centers	x
4138	Administration	x
4140	<u>Expenditures:</u>	
4141	Engineering	x
4143	Construction	
4144	Maintenance	
4147	Service Centers	x
4148	Administration	

<u>Account No.</u>	<u>Description</u>	<u>For Future Use</u>
4150	<u>Encumbrances:</u>	
	4151 Engineering	x
	4153 Construction	x
	4154 Maintenance	x
	4157 Service Centers	x
	4158 Administration	x
4160	<u>Reserve for Encumbrances:</u> The contingent liability for unliquidated encumbrances. This account offsets account #4150.	
5000	<u>Surplus:</u>	
	5110 Unappropriated Surplus This account represents the balance of the current fund, which is the excess of assets and other debits over liabilities, appropriations and reserves.	
6000	<u>Revenues and Other Credits:</u>	
	6010 National Budget Appropriations	
	6020 Aid from Friendly Countries	
	6030 Proceeds from Loans	

<u>Account No.</u>	<u>Description</u>	<u>For Future Use</u>
6040	Appropriations for Aid to Provinces	
6050	Income from Taxes	
6100	Income from Operations:	
6101	Tolls on Roads, Bridges & Ferries	
6102	Overload permits & traffic fees	
6103	Sale of Plans & Specifi- cations	
6104	Sale of used equipment	
6105	Sale of Land & Buildings	
6106	Sale of Scrap Materials	
6107	Reimbursements for Services to Others	
6108	Other Reimbursements	
7000	<u>Investments &amp; Capital Expenditures:</u>	
7110	QL Highways	
7120	LTL Highways	
7199	Contra Account for Accounts 7100-7198	
7200	Bridges	
7299	Contra Account for Accounts 7200-7298	

<u>Account No.</u>	<u>Description</u>	<u>For Future Use</u>
7600	<u>Fixed Assets:</u>	
	7610 Land	
	7620 Buildings	
	7699 Reserve for Depreciation Buildings	
7700	<u>Equipment:</u>	
	7710 Automotive, Road & Marine	
	7720 Office Furniture & Equipment	
	7730 Laboratory & Testing Equipment	
	7740 Engineering Equipment	
	7750 Repair Shop Equipment	
	7760 Miscellaneous Equipment	
	7799 Reserve for Depreciation Equipment	
7800	<u>Equipment Acquired Prior to July 15, 1973:</u>	
	7810 Automotive, Road & Marine	
	7820 Office Furniture & Equipment	
	7830 Laboratory & Testing Equipment	
	7840 Engineering Equipment	
	7850 Repair Shop Equipment	
	7860 Miscellaneous Equipment	
	7899 Reserve for Depreciation Old Equipment	