PD-AAU-115
ISN-46664

27

Science Management Corporation

FINAL REPORT

AID/W NON-EXPENDABLE PROPERTY MANAGEMENT AND CONTROL STUDY

PREPARED UNDER
CONTRACT NO. AID/OTR-C-1691
WORK ORDER NO. 2

Submitted March, 1980

SMC-MANAGEMENT TECHNOLOGY
A Science Management Corporation Systems & Technology Company

Science Management Corporation

1120 Connecticut Avenue, N.W., Suite 200 • Washington, D.C. 20036 • (202) 293-5700

April 4, 1980

Mr. David McMakin
Office of Management Operations
Agency for International Development
Washington, D.C. 20523

Reference: AID/otr-C-1691, Work Order No. 2, PIO/T No. 2193001

Dear Mr. McMakin:

Enclosed are twenty copies of the final version of, "Final Report, AID/W Non-Expendable Property Management and Control Study". Twenty additional copies have been provided to Mr. Joseph Ellis, SER/MP under separate cover. This document is submitted in accordance with the requirements of Task 6 of the Work Plan submitted to AID by SMC on October 12, 1979.

The report provides recommendations for the implementation of an improved property management and records control system. The recommended system is based on software developed jointly by SMC and the Department of State for property management activities in U.S. embassies. This software package has been implemented in several U.S. embassies including Prague, Czechoslavakia and London, England. In addition, the Department of State is firm in its commitment to continue and expand the use of this software package. The hardware recommended is currently being used by AID to support automation of the administrative systems of overseas missions. System implementation, based on the schedule provided in Exhibit IV, is targeted for completion in approximately one-year.

We appreciate the opportunity which we enjoyed to conduct the study in a cooperative and professional manner. We are confident that we have been fully responsive to all the requirements of the Work Order and have developed findings and conclusions and have formulated practical recommendations that will be useful to AID management.

Very truly yours,

SMC-Management Technology, Inc.

By: B. K. Farris
B. K. Farris
Vice President

TABLE OF CONTENTS

		PAGE NUMBER
	LETTER OF TRANSMITTAL	
I.	SUMMARY OF A STUDY OF AID/W PROPERTY RECORDS AND INVENTORY MANAGEMENT	I-1
	1. ORIGIN, PURPOSE AND NATURE OF THE STUDY	I-1
	2. PRINCIPAL FINDINGS REGARDING PROBLEM AREAS AND SYSTEM IMPROVEMENT REQUIREMENTS	I-3
	3. SUMMARY OF REQUIREMENTS FOR IMPLEMENTATION AND OPERATION OF AN IMPROVED SYSTEM	I-5
	4. SYSTEM AND EQUIPMENT OPTIONS EVALUATED AND RECOMMENDED	I-8
	5. RECOMMENDED IMPLEMENTATION PLAN	I-12
	6. IMPLEMENTATION COSTS AND BENEFITS	I-15
II.	NATURE AND EFFECTIVENESS OF CURRENT AID/W PROPERTY MANAGEMENT ACTIVITIES	II-1
	1. BACKGROUND	II-1
	2. GENERAL APPROACH AND METHODOLOGIES USED TO CONDUCT THE MANAGEMENT REVIEW	II-2
	3. RESPONSIBILITY AND ACCOUNTABILITY FOR NON-EXPENDABLE PROPERTY	II-3
	4. ORGANIZATION OF PROPERTY MANAGEMENT ACTIVITIES CONDUCTED BY THE GENERAL SERVICES DIVISION OF THE OFFICE OF MANAGEMENT OPERATIONS	II-4
	5. PERSONAL PROPERTY MANAGEMENT FUNCTIONS AND SYSTEMS	II-5

TABLE OF CONTENTS (continued)

		PAGE NUMBER
	(1) PROCUREMENT	II-5
	(2) INVENTORY AND RECORDKEEPING	II-6
	(3) MAINTENANCE AND REPAIR	II-6
	(4) TRANSFER AND RELOCATION	II-7
	(5) DISPOSAL	II-7
6.	PRINCIPAL PROBLEM AREAS AND SYSTEM IMPROVEMENT REQUIREMENTS	II-7
7.	SUMMARY OF REQUIREMENTS FOR IMPLEMENTATION AND OPERATION OF AN IMPROVED SYSTEM	II-9
III.	IDENTIFICATION AND RECOMMENDATION OF SPECIFIC APPROACHES AND OPTIONS FOR IMPROVING FUTURE MANAGEMENT AND CONTROL OF NON-EXPENDABLE PROPERTY	III-1
1.	PROVISION FOR THE UNIQUE MARKING AND IDENTIFICATION OF NON-EXPENDABLE PROPERTY	III-1
2.	PROPERTY RECORDS MANAGEMENT SYSTEMS AND PROCEDURES OPTIONS	III-2
	(1) USE OF CURRENT AID/W PROPERTY RECORDS MANAGEMENT SYSTEMS AND PROCEDURES	III-2
	(2) EXPANSION OF THE Q-1 MICROCOMPUTER SOFTWARE PACKAGE	III-4
	(3) ADAPTATION AND UTILIZATION OF THE POST PROPERTY SYSTEM	III-5
3.	SYSTEM HARDWARE OPTIONS AND PROCUREMENT COSTS	III-7
	(1) OPTION 1 - PROCURE A COMPLETE WANG VS MINICOMPUTER SYSTEM	III-7
	(2) OPTION 2 - PROCURE WANG VS PERIPHERAL HARDWARE AND SECURE REMOTE TERMINAL ACCESS TO A CENTRAL CPU	III-8

TABLE OF CONTENTS (continued)

		PAGE NUMBER
4.	SUMMARY OF RECOMMENDED APPROACH FOR RESPONDING TO AID/W REQUIREMENTS FOR A PROPERTY RECORDS MANAGEMENT SYSTEM	III-10
5.	MANAGEMENT ROLES AND RESPONSIBILITIES	III-12
	(1) REINFORCEMENT OF ROLES AND RESPONSIBILITIES OF AID/W BUREAUS AND STAFFS	III-12
	(2) REDEFINITION OF ROLES AND RESPONSIBILITIES IN MO/GS	III-14
	(3) IMPACT ON MO/GS STAFFING	III-17
6.	BENEFITS EXPECTED TO ACCRUE FROM IMPLEMENTATION OF THE RECOMMENDED SYSTEMS	III-18
IV.	RECOMMENDED PLAN OF ACTION	IV-1
1.	IMPLEMENTATION PLAN	IV-1
	(1) PROCUREMENT OF HARDWARE AND MODIFICATION OF SYSTEM SOFTWARE NEEDS	IV-2
	(2) REVISION OF PROPERTY MANAGEMENT PROCEDURES	IV-3
	(3) CONDUCT AND RECONCILIATION OF A PHYSICAL INVENTORY	IV-4
	(4) PHASED IMPLEMENTATION OF SYSTEM MODULES AND EQUIPMENT	IV-6
2.	IMPLEMENTATION COSTS	IV-7
	(1) HARDWARE PROCUREMENT COSTS	IV-7
	(2) PHYSICAL INVENTORY AND SOFTWARE MODIFICATION COSTS	IV-8
	(3) PERSONNEL TRAINING COSTS	IV-9

TABLE OF CONTENTS (continued)

		PAGE NUMBER
3.	OPERATING COSTS	IV-11
	(1) MONTHLY HARDWARE MAINTENANCE FEE	IV-11
	(2) COMPUTER TIME	IV-12
	(3) POSITION UPGRADE REQUIREMENTS	IV-12
4.	TRAINING AND FOLLOW-UP FOR EFFECTIVE SYSTEM OPERATIONS	IV-12

LIST OF EXHIBITS

		FOLLOWING PAGE
I.	SUMMARY REVIEW OF SYSTEMS OPTIONS	I-8
II.	ESTIMATED HARDWARE ACQUISITION COSTS	I-12
III.	RECOMMENDED HARDWARE CONFIGURATION - OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS	Exhibit II
IV.	PROPERTY RECORDS AND INVENTORY MANAGEMENT SYSTEM AID/W NON-EXPENDABLE PROPERTY IMPLEMENTATION SCHEDULE	I-13
V.	REVISED GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE	I-14
VI.	CURRENT GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE	II-4
VII.	FORM AID 5-7	
VIII.	SUMMARY REVIEW OF SYSTEMS OPTIONS	III-6
IX.	RECOMMENDED HARDWARE CONFIGURATION - OPTION 1: COMPLETE WANG VS SYSTEM	III-7
X.	RECOMMENDED HARDWARE CONFIGURATION - OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS	III-8
XI.	ESTIMATED HARDWARE ACQUISITION COSTS	III-9

LIST OF EXHIBITS (continued)

		FOLLOWING PAGE
XII.	DETAILED EQUIPMENT BREAKDOWN - ESTIMATED INCREMENTAL ACQUISITION COSTS OPTION 1: COMPLETE WANG VS SYSTEM	EXHIBIT XI
XIII.	DETAILED EQUIPMENT BREAKDOWN - ESTIMATED INCREMENTAL ACQUISITION COSTS OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS	EXHIBIT XII
XIV.	REVISED GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE	III-14
XV.	PROPERTY RECORDS AND INVENTORY MANAGEMENT SYSTEM AID/W NON-EXPENDABLE PROPERTY IMPLEMENTATION SCHEDULE	IV-1
XVI.	SUMMARY OF INCREMENTAL IMPLEMENTATION COSTS ESTIMATES	IV-7

LIST OF APPENDICES

A. SELECTOR SCREENS FOR THE RECOMMENDED PROPERTY MANAGEMENT SYSTEM

B. GUIDELINES AND METHODOLOGIES FOR AN INVENTORY OF AID/W NON-EXPENDABLE PROPERTY

C. FLOWCHART OF CURRENT PROCESS FOR AID/W NON-EXPENDABLE PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES

D. SYSTEM CONCEPT SCHEMATICS

E. FLOWCHART OF RECOMMENDED PROCESS FOR AID/W NON-EXPENDABLE PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES

I. SUMMARY OF A STUDY OF AID/W PROPERTY RECORDS AND INVENTORY MANAGEMENT

I. SUMMARY OF A STUDY OF AID/W PROPERTY RECORDS AND INVENTORY MANAGEMENT

Effective utilization and control of non-expendable property is an important responsibility of AID/W. Further, the adequacy of management of non-expendable properties procured and issued to its Washington offices is a current concern of AID/W management. It is recognized that the Agency must demonstrate adequate property accountability as required by the Federal Property Management Regulations and as expected by the Congress and the public. Correspondingly, the Agency has established appropriate property management policies and initiated continuing actions toward attainment of effective property management . However, to date, these efforts have been impeded by a lack of effective support systems.

1. ORIGIN, PURPOSE AND NATURE OF THE STUDY

AID/W management of non-expendable property has been inadequate for the past several years. Due to limited staff resources and lack of adequate property records management systems, the Agency has not been able to establish and maintain desired levels of property management. Requirements of the Federal Property Management Regulations and the procedures set forth in AID Handbook 20 have been only partially implemented.

Dispite the application of considerable management attention and effort, the Office of Management Operations has not had adequate systems to fully implement its responsibilities to centralize property management activities, including the maintenance of current and accurate property records. Additionally, the organizational responsibilities for property management have become increasingly vague since the reorganization and centralization of functions in 1972. As a result, there is considerable uncertainty as to the accountability of various AID/W organizations for property issued for their use and a lack of accurate property records. Correspondingly,

AID Bureaus and individual employees have tended to adopt ad-hoc procedures which do not conform to AID Handbook 20 and which, in some instances, do not ensure adequate control over the property provided for their use.

It is estimated that AID/W presently has approximately 40,000 items of non-expendable property in use or in the warehouse inventory. Until 1974, there had not been an inventory of the property, and subsequent inventories have not been conducted and reconciled with sufficient regularity to assure the accuracy of inventory records.

Science Management Corporation was requested to conduct an independent study of the AID/W system for management of non-expendable property and related records. The study was undertaken in response to a request from the Office of Management Operations and was conducted under the joint direction of the Office of Management Planning and the Office of Management Operations.

The study requirement was generated as a consequence of criticisms by the Congress and others of the inability of AID/W to maintain accurate property inventory records and to perform timely reconciliations of property records and physical inventories. The study requirement reflects the concern of AID management relative to the integrity of the property records management system as well as a desire to improve the present system of property management. AID/W seeks to develop and implement a management system that will assure effective and efficient control of acquisition, use and disposal of non-expendable property.

The study, as conducted, included identification of property record system requirements, evaluation of the system options readily available for responding to the priority requirements, and formulation of a plan for implementation of an improved system. It also included development of recommendations for redefinition of property management roles and responsibilities in order to ensure effective implementation and use of the improved system. Conduct of the study included interviews with property users in the various AID/W Bureaus; review of the way in which each non-expendable property management function is currently performed; identification of the inadequacies in current property management practices and procedures; and assembly and evaluation of feasibility, cost and benefit information relative to available options for improving current systems and procedures. The study was initiated in August, 1979 and completed in February, 1980.

2. PRINCIPAL FINDINGS REGARDING PROBLEM AREAS AND SYSTEM IMPROVEMENT REQUIREMENTS

A review was conducted of each of the principal functions involved in management of non-expendable property by AID/W. The principal areas of inadequacies identified can be summarized as follows:

- Property Records Maintenance

  Difficulties have been encountered in reconciling past inventories, and inventories have not been performed with sufficient frequency. Property control records of non-serialized property do not provide a detailed and reliable representation of the AID/W inventory.

- Property Identification and Marking

  Current operating practices do not provide for the marking of non-serialized property for identification purposes. As a result, control records for non-serialized property must be maintained by type of item rather than by individual item. In addition, making distinctions between AID/W-owned property and leased or loaned property which may be used by AID/W is not facilitated by current methods.

- Records Management Systems

Several automated, non-integrated systems are currently in use by the General Services Division (MO/GS). This fact contributes to a fragmented approach to property records management. An integrated and well developed property management system would be extremely useful to MO/GS property management efforts and would reduce the risks associated with current inabilities to account for all non-expendable property.

- Requisition Status Tracking

In order to provide a higher level of service to users, MO/GS is seeking to provide improved information to users regarding status of requisitions. Present operating methods do not provide feedback of procurement status information to the office requisitioning property. It also does not provide a clearly defined point of contact which can be consulted regarding the status of all property management requests.

- Assignment of Accountability for Property

In order to maintain control over items of property which are in use, it is necessary that a clear understanding exist concerning individual accountability for property. In some cases, particularly where non-serialized property is concerned, confusion over accountability may exist. AID Handbook 20 places primary responsibility for physical control on the individual using the property and primary responsibility for records management on MO/GS. However, these responsibilities have not been fully and clearly implemented. This is due in part to the fact that AID/W does not have a well defined procedure for issuing property to users that assures proper accountability. Also, AID/W does not have an adequate procedure to uniquely identify items of property. This has lead to ad hoc arrangements for establishing accountability for property.

- Acquisition, Maintenance, and Disposal Planning and Management

Because automated systems in use by MO/GS are not integrated and highly developed, they do not provide information essential to long-range planning and management activities.

Activities which could be developed to a more sophisticated level include management and planning for acquisitions, maintenance, and disposals. Assignment of this type of responsibility to property management specialists would result in improved effectiveness of property acquisition and utilization.

3. SUMMARY OF REQUIREMENTS FOR IMPLEMENTATION AND OPERATION OF AN IMPROVED SYSTEM

Several requirements should be met by an improved property management system. The best option will incorporate the following attributes:

- Will allow for the maintenance of reliable property control records which can be updated in a timely manner and will be designed to facilitate efficient conduct of physical inventories
- Will support all property management activities to be performed by MO/GS
- Will provide useful data to support management decision making and planning activities
- Will provide a single source of information regarding the status of property requisitions
- Can be implemented within a relatively short period of time and at a relatively low incremental cost
- Will insure AID/W compliance with Federal Property Management Regulations.

The system must be responsive to the basic property management requirements of the Federal Property Management Regulations. Additionally, it must facilitate execution of the non-expendable property management responsibilities and accountabilities set forth in AID Handbook 20. Analysis indicates that effective property identification and control will require marking and numbering of essentially all items of non-expendable property currently in use or in the warehouse inventory. Similarly, the system must provide a means for marking and establishing accountability for property acquired in the future.

An important requirement for an effective system is that it allow for the maintenance of reliable control records for property from the time it is acquired until it is disposed. An integrated property records systems is required

which will maintain records of individual items of property and which will accomodate frequent or continuous updates of property status information and which will facilitate the performance of annual, or more frequent, physical inventories. The property records system should allow for the tracking of requisition status, as well as maintaining a record of the individual accountable for each item of property.

A well developed property management records system could provide useful data to support a variety of property management planning and decision making activities. For example, life cycle statistics compiled by such a system could be useful to support management planning and decision making regarding procurement, maintenance and disposal of property. The records system should, therefore, be developed so as to accomodate multiple access to the data to facilitate use in support of performance of several property management functions. However, the system should provide methods to control access by unauthorized persons. Since AID is working toward standardization of automated administrative support systems and equipment, the system should be implemented in a manner and on equipment compatible with other administrative support systems.

Ideally, the property records management system should be designed to allow a phased implementation that would eventually support all of the property related activities conducted by MO/GS. Optimal phasing would permit the system to be first applied to current critical property control functions and subsequently applied to other property management functions and activities. In order for this approach to be successful, an integrative approach should be taken in design and implementation of the property management system. However, pressures to quickly correct existing inadequacies in AID/W property accountability records dictate that consideration be given only to those system options which can be implemented within a relativity short period of time. Also, the improved system must be implemented with minimal or no overall increase in staffing.

Implementation and effective use of an improved and automated property management records system will require some redefinition and refocusing of management roles and responsibilities. The roles of individuals and Management Liaison Officers must be reaffirmed and more explicitly defined relative to operation of the automated property records system. AID/W staff and Management Liaison Officers must cooperate in the conduct of the initial property inventory. More importantly, they must accept accountability for assigned property and must provide inputs to the property records system to update property location and accountability information. The property management system must include the designation of a specific individual as accountable for each item of non-expendable property. The designated individual may be either the user of the item or the user's Administrative Officer depending on the preference of the bureau or office.

Implementation of the automated property records system within MO/GS must be accompanied by changes in working procedures and organizational structures in order to realize full benefit from the improved system capabilities. The property management staff should be consolidated in one location with ready access to the non-expendable property records system. The staff should be trained and upgraded so as to utilize the improved system to provide services and conduct management activities not currently feasible with existing systems. These would include establishment of a single source of information regarding the status of property requisitions. This would improve service to property users by providing faster, more reliable responses to status inquires.

Effective implementation of the system will require that MO/GS and the Office of Data Management (SER/DM) collaborate to implement the system in an effective mode that can be expanded to meet future needs of MO/GS. This will involve selection of the most appropriate equipment configuration, adaptation of system software, and implementation and maintenance of system operating and maintenance procedures.

4. SYSTEM AND EQUIPMENT OPTIONS EVALUATED AND RECOMMENDED

The study included an examination of alternative approaches or options relative to both the software and equipment which should be used to implement an improved property records management system. The following three options were examined:

- Upgrade current AID/W Property Records Management Systems and Procedures
- Expand the Q-1 Micro Computer Software Package
- Adapt the Post Property System

The first option would involve upgrading manual systems and attempting to integrate systems and procedures currently used by AID/W to maintain serialized property records and to reconcile periodic property inventories. The second option would include development of additional property records management software to be added to a micro computer system procured for use by the Administrative Purchasing Branch of the General Services Division prior to initiation of this study. The third option would involve adaptation of a totally integrated property records management software package which has been developed for and applied to non-expendable property records management at U.S. embassies. Exhibit I summarizes the extent to which each of these options respond to AID/W system requirements. The preferred option was determined to be implementation of the Post Property system.

Desirable features of the Post Property System include:

- Unique property item identification and BARCODE marking
- Modular software construction
- Compatability with future AID and State Department administrative support systems and equipment.

SUMMARY REVIEW OF

NON-EXPENDABLE PROPERTY RECORDS MANAGEMENT SYSTEMS OPTIONS

SYSTEM OPTIONS / SYSTEM EVALUATION CRITERIA	USE CURRENT AID/W SYSTEMS AND PROCEDURES	EXPAND Q-1 SYSTEM	ADAPT THE POST PROPERTY SYSTEM
1. AIDS COMPLIANCE WITH FEDERAL PROPERTY MANAGEMENT REGULATIONS	NO	POSSIBLY	YES
2. PROVIDES RELIABLE PROPERTY CONTROL RECORDS?	DOUBTFUL	POSSIBLE	YES
3. PROVIDES FOR NUMERICAL IDENTIFICATION OF EACH ITEM?	NO	POSSIBLE	YES
4. FACILITATES PERFORMANCE OF INVENTORIES AND RECORD RECONCILIATIONS?	NO	POSSIBLE	YES
5. INTEGRATED APPROACH TO SYSTEM IMPLEMENTATION?	NO	YES	YES
6. CONTROLS ON DATA ACCESS?	LIMITED	POSSIBLE	YES
7. PROVIDES DATA TO SUPPORT OTHER PROPERTY MANAGEMENT ACTIVITIES?	VERY LIMITED	POSSIBLE	YES
8. PROVIDES PROPERTY LIFE CYCLE DATA?	NO	YES	YES
9. PROVIDES REQUISITION STATUS TRACKING?	NO	YES	YES
10. IMPLEMENTATION TIME REQUIRED?	N/A	OVER ONE YEAR	APPROXIMATELY ONE YEAR
11. SYSTEM IMPLEMENTATION COSTS?	N/A	PROBABLY OVER $100,000	DEPENDS ON HARDWARE AND OTHER OPTIONS SELECTED. SEE SECTION ON IMPLEMENTATION AND OPERATING COST.
12. MAKES EFFECTIVE USE OF AVAILABLE STAFF RESOURCES	NO	YES	YES
13. COMPATIBLE WITH FUTURE AID SYSTEMS WORLDWIDE?	NO	NO	YES

The Post property system provides for the unique marking and identification of each item of property by utilizing a BARCODE labeling system. A BARCODE system of property identification and marking utilizes a sticker similar to the Universal Product Code Stickers found on grocery store items. These stickers have a series of lines with Arabic numbers below. The lines can be "read" by passing an electronic wand over them which records the information on a recording medium.

BARCODE marking has three advantages which distinguish it from other methods:

- Pre-printed labels can be affixed to property rapidly and efficiently since the BARCODE numbers can be applied in any desired sequence
- This method of marking allows easy and accurate entry of information in a property records data base. Information can be input directly to a data base by use of a converter.
- Speed and accuracy of subsequent physical inventories is enhanced with this method. The BARCODE sticker allows recording of the identifying number by merely passing a wand over the bars.

The software developed by the State Department and Science Management Corporation for the Post Property System consists of modules which are organized by management function. The software modules include:

- Property Procurement
- Property Receiving
- Property Inventory Functions
- Property Maintenance
- Property Disposal
- Perpetual inventory
- Physical Inventory
- Standard Reports
- Other Reports.

The capabilities inferred by the above listing are not exhaustive, since the system is quite flexible and can be adapted to other uses. A list of selected reports available with this software is provided as Appendix A.

The modular design of the Post Property System is an advantage for AID/W use. This design allows only portions of the software to be utilized if desired, so that the system can be implemented on an incremental basis.

Control of AID/W property would be increased through the various system safeguards provided by the Post Property System. Various codes and other barriers to data base access help protect system integrity. In addition, the system keeps records of all files accessed by each user.

The software for the Post Property System is already operational in selected U.S. embassies. This has allowed users to gain a substantial amount of experience with the system and to resolve problem areas. This debugging experience offers a significant advantage to AID/W over other system options.

The Post Property records management system can be implemented with only minor software modifications and therefore within a relatively short time frame. In addition, the Post Property System provides a flexible approach to accounting for property at various levels including:

- Bureau, office or other organizational units
- Building, room or location
- Individual to whom the property has been issued.

This capability will allow specific records to be maintained concerning the individual to which each item of property has been issued; who within the organization is responsible for property; and will allow responsibility for property care and safekeeping to revert to the organizational unit when the individual leaves the organizational unit. This particular feature will be instrumental in providing the necessary level of physical control and will insure AID/W compliance with Federal Property Management Regulations.

The Post Property System operates on a WANG VS minicomputer system. SER/DM has recently acquired a WANG VS 100 system which is located at the Universal North building. Securing remote terminal access to the SER/DM WANG system and procurement of the necessary peripheral hardware to support a property records management system for AID/W appears to be the most cost effective option and requires the smallest incremental acquisition and maintenance costs of the possible alternatives. In addition, pursuing this option would provide the following advantages:

- It is compatible with current organizational structures and responsibilities. This approach keeps as much as possible of the system maintenance and hardware under the direction of SER/DM.
- Separation of Property Management and Data Management functions, (since the alternative approaches involve maintenance of a computer by MO/GS).
- Lower incremental acquisition and maintenance costs.
- Maximization of use of CPU capacity.

Implementation of this option is possible only if it is determined that operation of the Post Property system by remote access to the SER/DM Central Processing Unit (CPU) is feasible.

It is estimated that adaptation of the Post Property System for an AID/W property records management system will require a maximum of fifty thousand bytes of WANG memory capacity for all system modules from property procurement to property disposal. This represents approximately 20 percent of the persent SER/DM WANG memory capacity. Since the AID/W property records management system will only utilize three remote workstations with Random Access Memory (RAM), no slowdown in system response time is anticipated.

If it is determined that remote terminal access is not feasible, it may be necessary for MO/GS to procure a complete WANG 100 VS system. This option, however, would involve more incremental acquisition costs. Exhibit II summarizes estimates of the acquisition costs which are associated with each of the equipment procurement options, and Exhibit III illustrates the recommended equipment configuration.

For reasons stated above, it is recommended that MO/GS adapt the Post Property system software package and the WANG 100 VS hardware for maintenance of a non-expendable property records system and to support performance of the various property management functions.

5. RECOMMENDED IMPLEMENTATION PLAN

The property records and inventory management system should be implemented in a manner that best facilitates a smooth transition from the present set of non-integrated systems and manual processes to a fully integrated automated property records management system. A phased implementation approach to achieve this objective is recommended. A phased implementation approach will allow the property inventory management module of the system to be fully implemented before implementation of the procurement module. Extension of the system to other functions such as space planning can be considered later. This approach will minimize the number of concurrent implementation activities that will require coordination, will allow phased procurement of hardware, and will allow the property inventory management module to be operational in the shortest possible time frame. An implementation performance

ESTIMATED HARDWARE ACQUISITION COSTS

HARDWARE OPTION	EQUIPMENT CONFIGURATION	ESTIMATED ACQUISITION COST	ESTIMATED INCREMENTAL ACQUISITION COST
OPTION 1 COMPLETE WANG VS SYSTEM	Central Processing Unit (128K) 75 MB Disk Drive 250 Line/Minute Band Printer 12" U/L CRT (80 x 24) Remote Workstation 12" U/L CRT (80 x 24) Parallel Workstations (2) IOP For 2246P Workstation/Printer Telecommunications Input/Output Processor 200 CPS Matrix Printer with Stand, 132 colums 250' Cable 2 Modems	$ 66,600	$66,600
OPTION 2 WANG VS WITH REMOTE TERMINAL ACCESS	PREVIOUSLY PROCURED BY SER/DM Central Drive (256K) Disk Drive (75 MB) 600 Line/Minute Printer Word Processing Printer Input/Output Processors (4) Dual Purpose Workstation	$100,000	
	TO BE PROCURED BY MO/GS 12" U/L CRT (80 x 24) Remote Workstations (2) 12" U/L CRT (80 x 24) Parallel Workstation Telecommunications Input/Output Processor 200 CPS Matrix Printer with Stand, 132 Colums 4 Port Modem Sharing Unit 250' Cable 2 Modems	$ 30,000	$30,300
		$130,000	

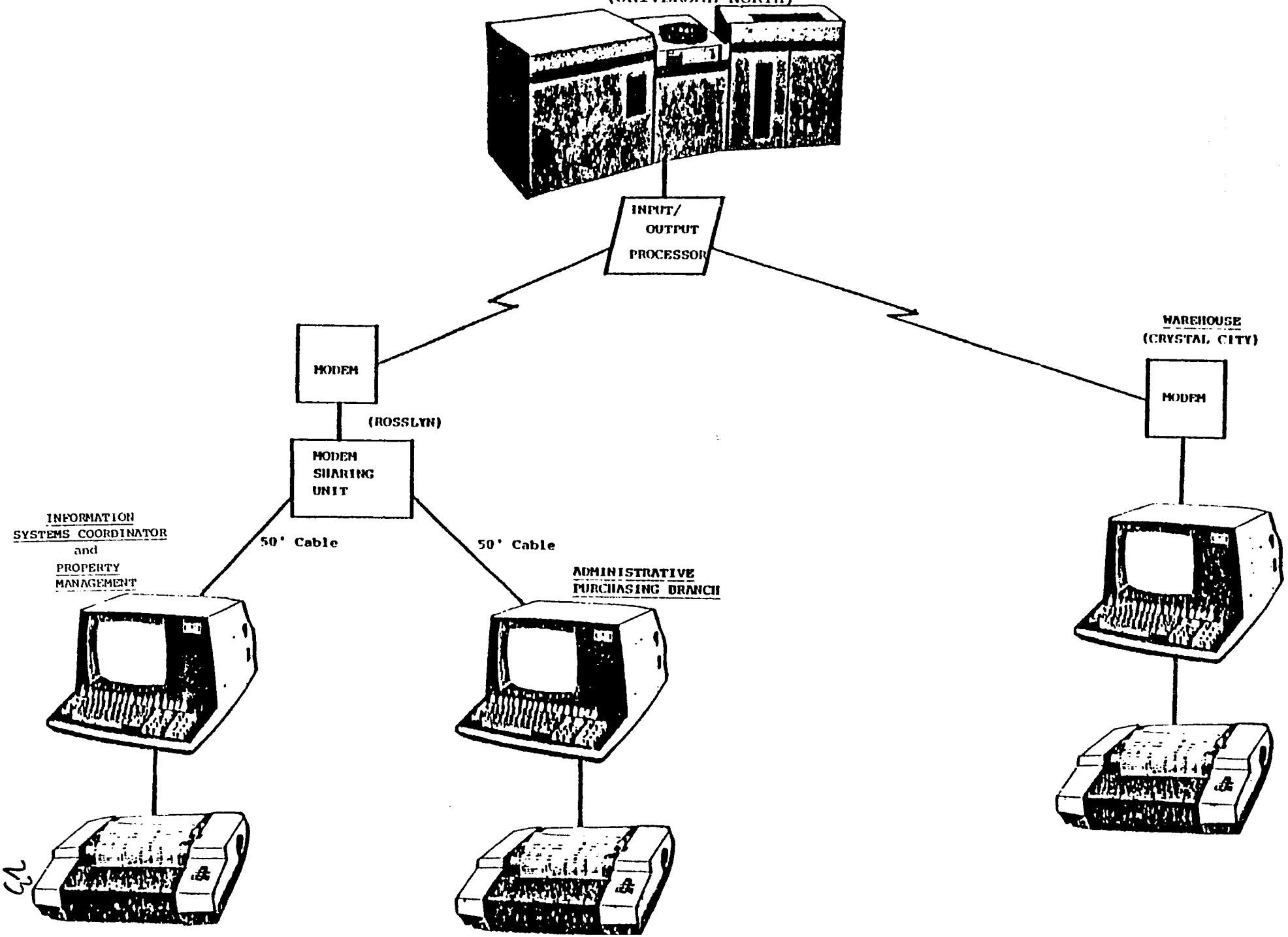
EXHIBIT II

EXHIBIT III

RECOMMENDED HARDWARE CONFIGURATION

OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS

OFFICE OF DATA MANAGEMENT
(UNIVERSAL NORTH)



schedule illustrating approximate time requirements for a phased implementation of the system is shown in Exhibit IV . The schedule is shown in terms of weeks following a decision to implement the improved system. In some instances the time required to conduct a specific step in the plan will be contingent on the approach selected by AID or the amount of resources committed. The schedule shown assumes that adequate funding will be readily available and that minimal delays will be encountered relative to equipment procurement, contracting for conduct of the physical inventory, etc. It also assumes that the AID Office of Data Management will provide technical assistance relative to acquisition of equipment, modification of system software and start-up of operations.

Principal activities involved in implementation of the system will include:

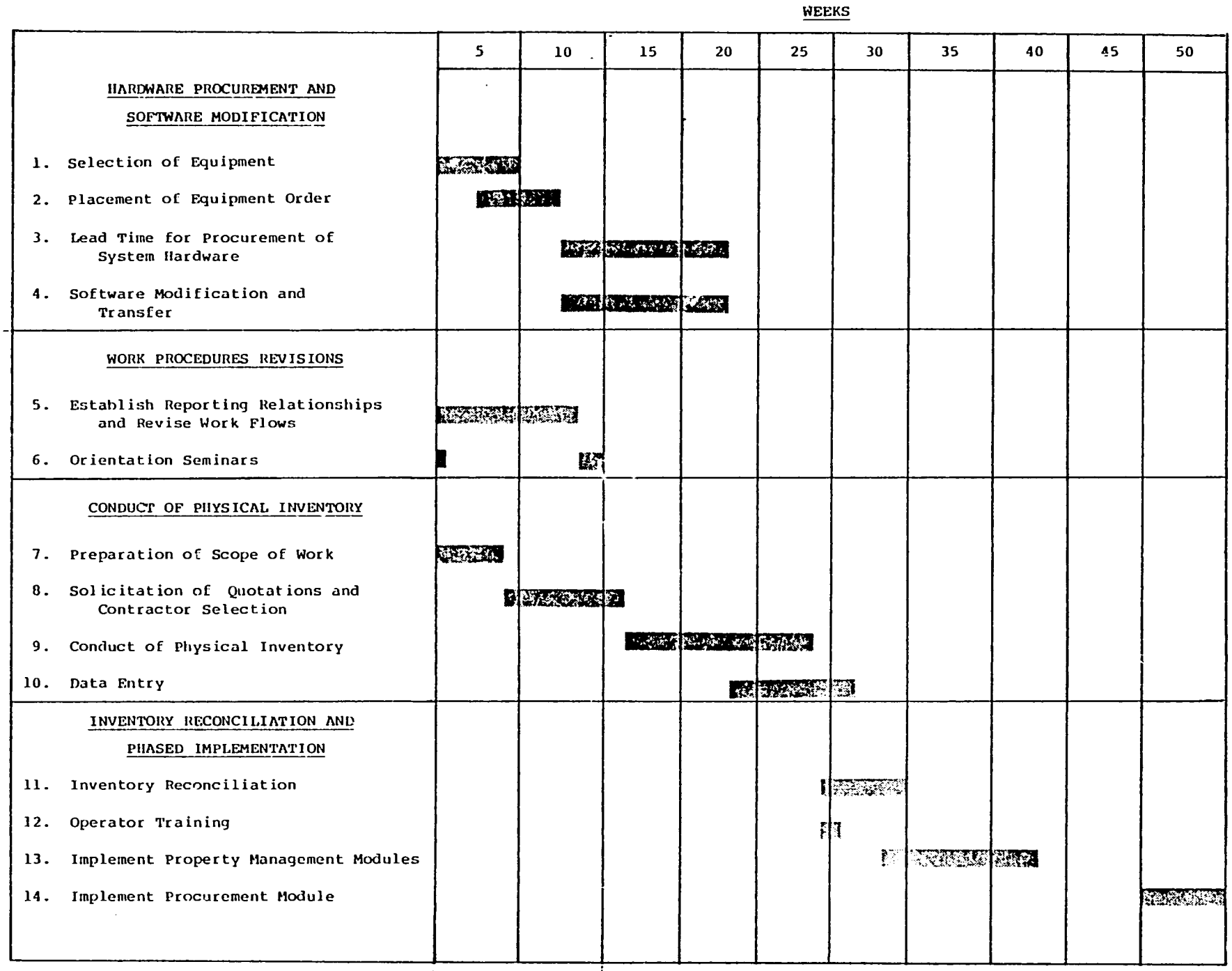
- Procurement of equipment and adaptation of system software
- Conduct and reconciliation of a physical inventory of property
- Restructuring of the organization of the General Services Division
- Training of personnel and introduction of new systems and procedures.

An important consideration relative to a timely implementation of an improved property records and inventory management system will be acquisition of the computing capabilities needed to operate the system. Representatives of the vendor estimate that approximately twelve weeks will be required from receipt of a purchase order to actual delivery and installation of the required equipment.

PROPERTY RECORDS AND INVENTORY MANAGEMENT SYSTEM

AID/N NON-EXPENDABLE PROPERTY IMPLEMENTATION SCHEDULE

(EXPRESSED IN NUMBER OF WEEKS NEEDED AFTER A DECISION TO IMPLEMENT HAS BEEN REACHED)*



* This exhibit represents the minimal amount of time necessary for Implementation of the Property Records and Inventory Management System, actual performance time may vary.

EXHIBIT IV

An accurate data base of property location and descriptive information must be developed in order to implement the recommended system. Appendix B outlines an approach for conduct of the required inventory. The implementation plan assumes that AID/W will contract for performance of this inventory and for keystroking of resultant data. It is critical that the inventory be done systematically and accurately since the resultant data will become a critical element of the property records system.

In order to maximize the effectiveness of implementation of the improved property records management system, it will be necessary to reinforce some property managment roles in AID Bureaus and to restructure some management roles and responsibilities within MO/GS. Fortunately, implementation of the recommended property records management system will not require any substantive changes in the designated roles and responsibilities of AID/W Bureaus and staffs. The responsibilities and procedures outlined in AID Handbook 20 regarding Bureau and staff roles and responsibilities in acquisition, physical control, maintenance and disposal of assigned non-expendable property are highly compatible with the recommended system. In fact, implementation of the property records management system will make it more practical for the Bureaus and individuals to be more responsive to the requirements of AID Handbook 20.

It is recommended that the General Services Division be restructured to redefine selected property management roles and responsibilities and to establish a Records Management Systems Coordination Staff. Exhibit V reflects the impact of recommended changes on the organizational structure of MO/GS. The major objectives of the recommended changes are to provide a more comprehensive and integrated approach to property management, to consolidate activities and expertise in property records management,

REVISED GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE

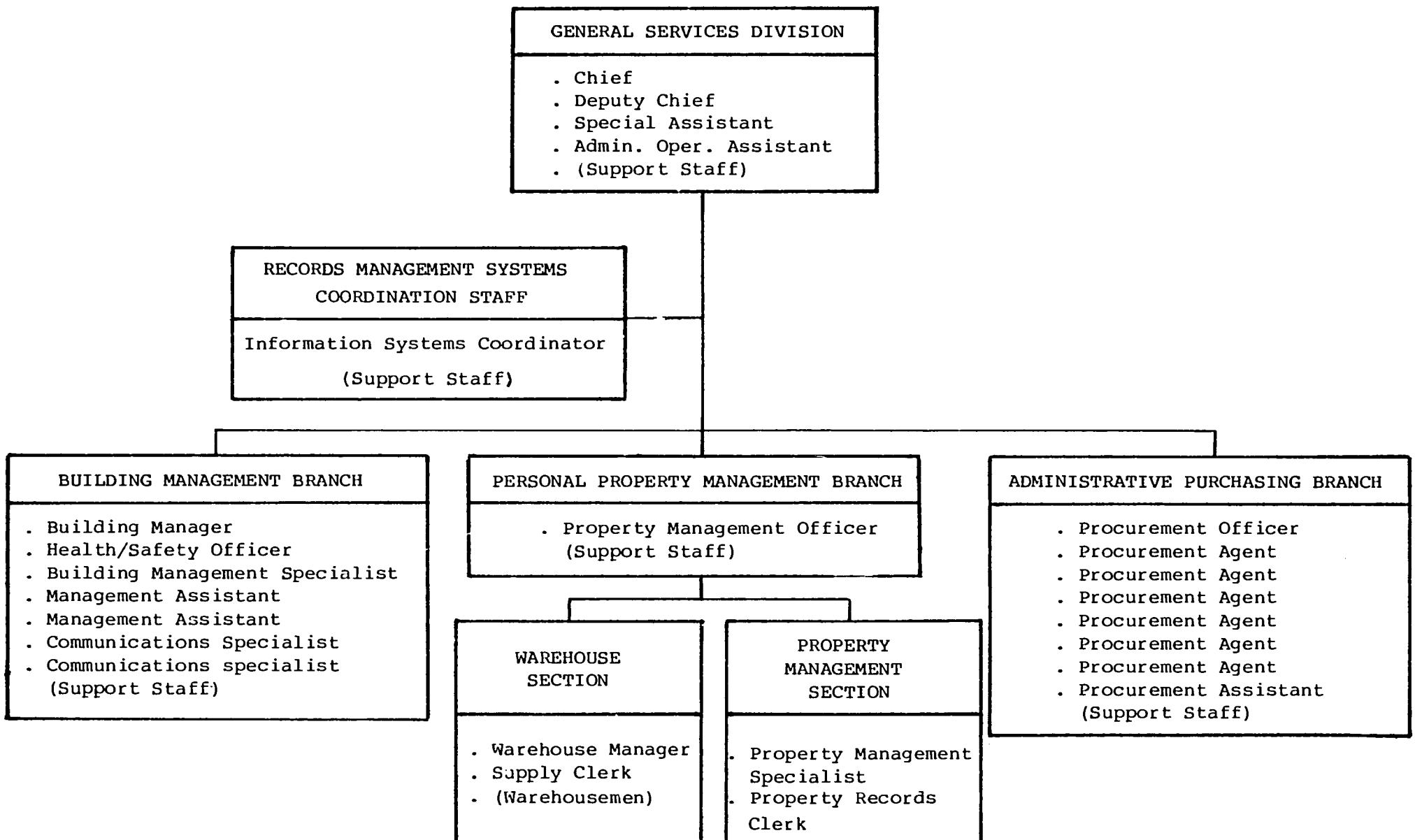


EXHIBIT V

and to improve physical control and accountability for non-expendable property.

Two types of training sessions are recommended for AID/W personnel in order to ensure the success of the implementation of an improved property records and inventory management system. Orientation seminars should be conducted for the benefit of MO/GS personnel and Management Liaison Officers from the Bureaus. Seminars conducted for the MO/GS personnel should instruct them in the changes in reporting relationships, job functions, process changes and other organizational considerations. Operator training should be provided to appropriate MO/GS personnel. These training sessions will be valuable in instructing personnel in the system capabilities and proper procedures for the requisitioning, monitoring, inventorying and management of non-expendable property. Training of operators and other personnel relative to use of the system will be simplified by the user orientation of the system software and the fact that relatively few forms and procedures need to be revised to implement the system.

6. IMPLEMENTATION COSTS AND BENEFITS

The implementation of an improved property management system will entail several, one-time, start-up costs as well as some continuing operating costs. It is anticipated that the continuing incremental costs will not be substantial and will be more than offset by savings resulting from use of the system.

The start-up costs for the recommended implementation plan are estimated to total approximately $110,000 and are comprised of the following elements:

Hardware Procurement	$31,000
Physical Inventory	72,000
Personnel Training	7,000
	$110,000

These costs could be increased by as much as $36,000 to $146,000 if SER/MO cannot utilize the WANG VS computing system previously purchased by SER/DM and has to procure a complete minicomputer. In addition, some operating costs will be incurred. A discussion of these costs is presented in Section IV-3.

Many of the benefits anticipated from implementation of the improved property management system cannot be readily quantified. However, they can be described qualitatively. The apparent benefits can be summarized as follows:

- The system outputs will provide a mechanism for increased physical control and accountability for individual items of property which will help insure AID/W compliance with Federal Property Management Regulations and with AID Handbook 20 procedures

- The system will facilitate maintenance of accurate property records and will facilitate fast and efficient conduct of annual physical inventories and reconciliation activities

- The system will provide useful information to support management decision-making and planning activities including forecasting of AID/W property procurement, maintenance and disposal needs

- The system will result in streamlining of the property requisition process and will provide a single source of current requisition status information

- The system's modular design will allow a phased implementation which, once completed, will result in an integrated approach to property management and related MO/GS support functions

- The basic software has been proven in use at overseas posts and the system is flexible and readily adaptable as new property management requirements evolve. The system can be extended to support space use planning. Also the equipment capabilities can be applied to other activities performed by MO/GS such as maintenance of the telephone directories, carpool list, etc.

- The system will be compatible with property management systems in U.S. embassies overseas and with the administrative support systems being developed by AID and the State Department using WANG VS minicomputer systems.

The proposed implementation plan will enable AID/W to realize these benefits at an early date and at minimal incremental costs since it envisions use, to a significant extent, of existing system software and hardware and requires only minor modifications in existing property management forms and procedures.

II. NATURE AND EFFECTIVENESS OF CURRENT AID/W PROPERTY MANAGEMENT ACTIVITIES

II. NATURE AND EFFECTIVENESS OF CURRENT AID/W PROPERTY MANAGEMENT ACTIVITIES

Effective utilization and control of non-expendable property is an important management responsibility of AID/W. It is essential that effective control be maintained over all non-expendable property acquired and used by AID/W. Further, the Agency must demonstrate property accountability as required by the Federal Property Management Regulations and as expected by the Congress and the public. The Agency has established appropriate property management policies and initiated continuing actions toward attainment of effective property management. However, to date, these efforts have been impeded by a lack of effective support systems and limited staffing resources.

1. BACKGROUND

The Science Management Corporation was asked to evaluate requirements and design an improved management system for non-expendable property within the Agency. This task requirement was generated in response to questions raised regarding the ability of AID/W to maintain accurate property inventory records, and the Agency's concern for the integrity of and desire to improve the present property management system.

The adequacy of the management of non-expendable properties procured and issued to its Washington offices has been a concern of AID/W management for the past several years. Previous physical inventories have not been performed with sufficient regularity to assure proper accountability. When inventories have been conducted, the records have been difficult to reconcile and some items of property were not accounted for by the inventory reconcilation. AID discovered that some high cost items, such as data processing equipment, had not always been entered in the property records and that leased property had, on occasion, been erroneously entered as AID property and then not stricken from the records when the equipment was returned to the lessors.

Efforts to improve property management activities have been impeded by limited staffing and compounded by a dependence on two essentially independent or non-integrated automated systems and manual inventory procedures for property management. Additionally, the organizational responsibilities for property management have become increasingly vague since the reorganization and centralization of functions in 1972. As a result, there is considerable uncertainty as to the accountability of various AID/W organizations for property issued for their use and a lack of adequate records on property control.

Until 1974, there had not been a reconciliation or inventory of the property on hand. In 1974, individuals who had been overseas and were awaiting domestic reassignment were used to perform an inventory of AID/W non-expendable property. Because of the constant turnover in these personnel (as they were given their new assignments) and the time required to perform the task, the inventory that was done was of limited value. Subsequently, another inventory was taken in 1975 but it was not reconciled.

In December, 1977, an inventory was taken and a System 6 Word Processor was used to facilitate the reconciliation. This reconciliation was passed to the Board of Survey which, after making some adjustments, approved it. Subsequently the reconciliation was given to the Property Records Unit in the General Services Division so that it could be posted to Agency property and financial records. The Agency has submitted a report of the reconciliation to the Senate Committee on Foreign Relations.

A third inventory was conducted at the end of 1979 and the reconciliation process is currently underway.

2. GENERAL APPROACH AND METHODOLOGIES USED TO CONDUCT THE MANAGEMENT REVIEW

The general approach and methodologies which were followed in conducting this study incorporated the following features:

- Familiarization with overall AID programs and objectives and the development of an overview of the general functions of the General Services Division, Office of Management Operations, prior to initiation of in-depth information collection and analysis

- Review and evaluation of the historical and current performance of the AID/W Property Management System including the procedures for purchasing, warehousing and distribution of property

- Soliciting and evaluating the views and opinions from a broad range of parties concerned with AID property management

- Formulating and evaluating future alternatives for AID/W property management and records maintenance systems

- Identification and evaluation of preferred approaches for utilizing the existing resources and staff in the General Services Division of the Office of Management Operations

- Selection and presentation of specific recommendations for consideration by AID management relative to making AID/W non-expendable property management a more efficient process, including a general plan for implementing these recommendations.

3. RESPONSIBILITY AND ACCOUNTABILITY FOR NON-EXPENDABLE PROPERTY

AID Handbook 20 assigns responsibilities and outlines procedures for the maintenance, control, utilization, and safekeeping of all non-expendable property within the Agency. As stated in the Handbook, the Office of Management Operations is responsible for all AID/W non-expendable property and is responsible for maintaining control records, conducting inventories, and for prescribing standards and criteria for acquisition, utilization and care of non-expendable property.

The heads of Bureaus, Offices, Staffs and other organizational units, as well as individuals, are accountable for the utilization, care and safekeeping of assigned property.

Individuals are also considered custodians for all government property issued to them and are liable for the value of the property if it is damaged, lost or destroyed as a result of employee negligence or other improper or willful acts on the part of the employee.

4. ORGANIZATION OF PROPERTY MANAGEMENT ACTIVITIES CONDUCTED BY THE GENERAL SERVICES DIVISION OF THE OFFICE OF MANAGEMENT OPERATIONS

The Office of Management Operations, General Services Division (MO/GS), has the primary responsibility for performing a variety of property management activities. Exhibit VI shows the current organizational structure and indicates the location of organizational units. The following is a brief outline of the property management activities performed by each of the major organizational units within MO/GS.

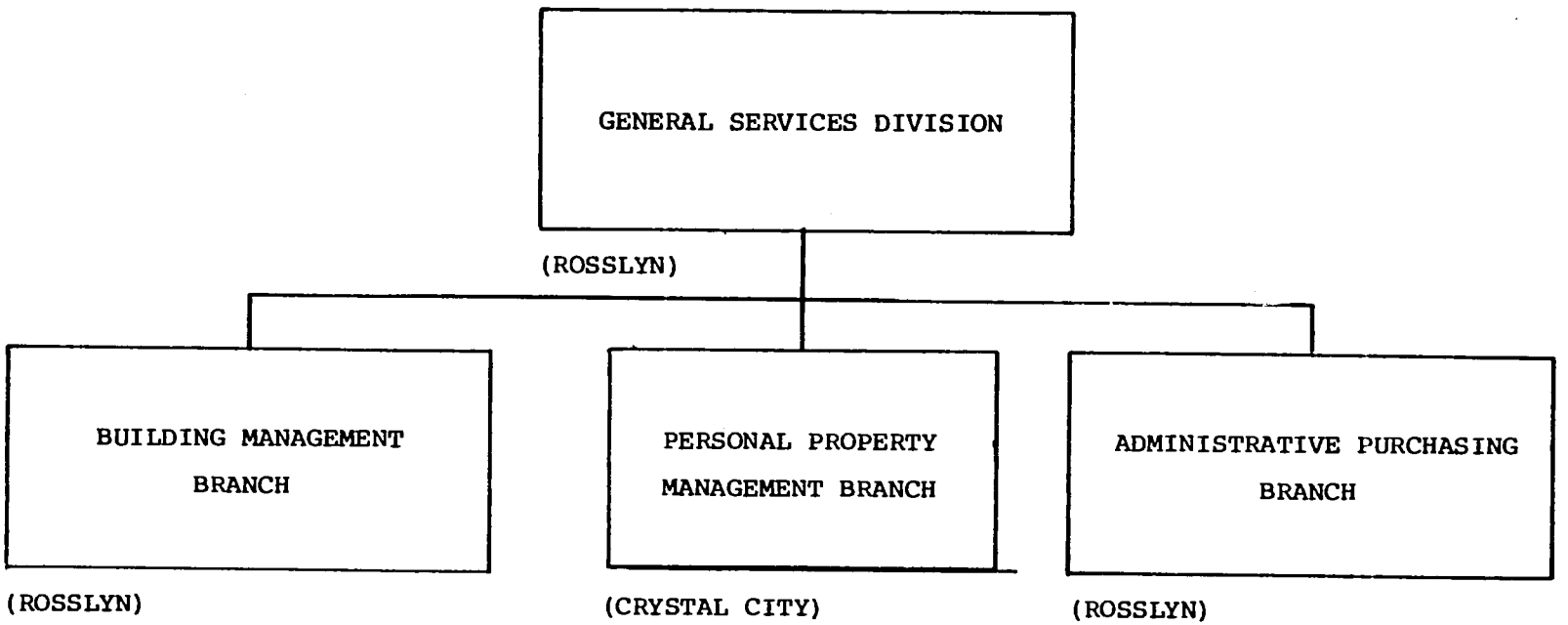
The Chief of MO/GS, or his designate, reviews and approves property requisitions (form AID 5-7), determines funds availability and is responsible for maintaining property control records and conducting inventories.

The Personal Property Management Branch is responsible for the receipt, installation, maintenance and repair, transfer, and disposal of personal property.

The Administrative Purchasing Branch is currently responsible for performance of the procurement function i.e., receives approved requisitions for property items which are not in warehouse stock, selects vendors, generates purchase orders, places orders, and performs related recordkeeping and reporting functions.

EXHIBIT VI

CURRENT GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE



The Building Management Branch is responsible for the performance of activities related to real properties including allocation of space and assistance in movement of persons or offices from one location to another.

5. PERSONAL PROPERTY MANAGEMENT FUNCTIONS AND SYSTEMS

The various property management functions administered by MO/GS are outlined in the following discussion.

(1) Procurement

Performance of the procurement function is the responsibility of the Administrative Purchasing Branch located in a Rosslyn office. This branch is also responsible for purchasing property for overseas missions. Purchasing property for overseas missions constitutes approximately 90 percent of the workload for this branch.

The Chief of MO/GS or his designate currently controls approval for property requisitions. User departments submit requests on form AID 5-7. A copy of the form AID 5-7 is shown in Exhibit VII. If rejected, the Chief of MO/GS returns the requisition form with explanations for rejection. If approved, the requisition form is forwarded to the Warehouse.

The Warehouse reviews incoming requisitions (form AID 5-7) to determine if requested items are in stock. Items in stock are delivered to the user making the request, while requisitions for items not in stock are returned to the Office of the Chief of MO/GS.

The Office of the Chief reviews requisitions for items not in stock a second time. This review is conducted in order to decide if another item should be substituted, if property should be reassigned,

EXHIBIT VII

AID 5-7 (9-76)

SUPPLIES/EQUIPMENT/SERVICES REQUISITION

FOR USE OF OFFICE OF MANAGEMENT OPERATIONS	
P.O. NUMBER	REQUISITION NUMBER

TO: (Check appropriate box. See reverse side of last copy of this form for services provided by each office and instructions for preparation.)

- [ ] GENERAL SERVICES DIVISION (MO/GS)
- [ ] COMMUNICATIONS AND RECORDS MANAGEMENT DIVISION (MO/CRM)
- [ ] DISTRIBUTION BRANCH (MO/PAV)
- [ ]
- [ ]

AUTHORIZED APPROVAL SIGNATURE AND TITLE	DATE ISSUED	DATE REQUIRED	ALLOTMENT NUMBER

ITEM NO.	DESCRIPTION OF MATERIAL OR SERVICES REQUIRED	QUANTITY	UNIT	FOR MISSION USE ONLY	
				AMT. BY AIR	AMT. BY SURFACE

A.I.D./W SER/MO USE ONLY			
	DATE OF AIR SHIPMENT	INITIALS	IDENTIFYING INFORMATION ON SHIPMENT
	DATE OF SURFACE SHIPMENT	INITIALS	IDENTIFYING INFORMATION ON SHIPMENT

DELIVER TO — NAME AND ROOM NO.	PHONE NO.	TO BE COMPLETED BY SER/MO	
		PARTIAL	COMPLETE
DIVISION AND BRANCH		FILLED BY	POSTED BY
RECEIVED BY	DATE	DELIVERED BY	

or if a procurement should be made. The Chief of MO/GS determines if sufficient funds are available for procurements. Those requisitions approved by the Chief of MO/GS are forwarded to the Purchasing Branch for procurement. A flow chart summarizing the current AID/W Non-Expendable Property Requisition and Procurement Process is provided as Appendix C.

The Purchasing Branch has acquired a Q-1 microcomputer system to assist in the performance of the procurement function. It is anticipated that this system, in addition to preparing procurement documents, will generate procurement management reports which currently must be produced manually. This system will support a variety of other useful activities, including maintenance of records and status tracking for orders.

(2) Inventory and Recordkeeping

Federal Property Management Regulations require maintenance of property records and annual conduct of physical inventories. The regulations also require maintenance of information regarding the value of the current inventory of property. Responsibility for the conduct and reconciliation of periodic inventories has been shifted from the warehouse to the Office of the Chief of MO/GS. Property records of serialized equipment are maintained on an automated system in the warehouse. There is no complete up-to-date set of centralized records for non-serialized property.

(3) Maintenance and Repair

Responsibility for the maintenance and repair of property resides with the Personal Property Management Branch of the Genernal Services Division. The Warehouse responds to requests from users by considering repair and replacement costs and selecting contractors to perform needed repairs and, in some instances, performs minor repair work in-house.

(4) Transfer and Relocation

Users request transfer and relocation of property by completing form AID 5-7 and sending it to the Warehouse. The Warehouse records the request on a Work Order Register and assigns personnel to the task. The user signs the form when the work is completed.

(5) Disposal

Property disposal is the responsibility of Warehouse personnel. Warehouse personnel also decide whether non-servicable property should be repaired or discarded. In addition, the warehouse may declare property to be excess and transfer it to GSA for disposition. The disposal of property held by users is generally initiated by the submission of form AID 5-7 from a user to the warehouse.

6. PRINCIPAL PROBLEM AREAS AND SYSTEM IMPROVEMENT REQUIREMENTS

In reviewing the various property management functions performed by AID/W, certain key problem areas and requirements have been identified. The following is a listing of those property management activities which are in need of improvement:

Property Records Maintenance

Difficulties have been encountered in reconciling past inventories, and inventories have not been performed with sufficient frequency. Property control records of non-serialized property do not provide a detailed and reliable representation of the AID/W inventory.

Property Identification and Marking

Current operating practices do not provide for the marking of non-serialized property for identification purposes. As a result, control records for non-serialized property must be maintained by type of item rather than by individual item. In addition, making distinctions between AID/W-owned property and leased or loaned property which may be used by AID/W is not facilitated by current methods.

- Records Management Systems

  Several automated, non-integrated systems are currently in use by MO/GS. This fact contributes to a fragmented approach to property records management. An integrated and well developed property management system would be extremely useful to MO/GS property management efforts and would reduce the risks associated with current inabilities to account for all non-expendable property.

- Requisition Status Tracking

  In order to provide a higher level of service to users, MO/GS is seeking to provide improved information to users regarding status of requisitions. Present operating methods do not provide feedback of procurement status information to the office requisitioning property. It also does not provide a clearly defined point of contact which can be consulted regarding the status of all property management requests.

- Assignment of Accountability for Property

  In order to maintain control over items of property which are in use, it is necessary that a clear understanding exists concerning individual accountability for property. In some cases, particularly where non-serialized property is concerned, confusion over accountability may exist. AID Handbook 20 places primary responsibility for physical control on the individual using the property and primary responsibility for records management on MO/GS. However, these responsibilities have not been fully and clearly implemented. This is due in part to the fact that AID/W does not have a well defined procedure for issuing property to users. Also, AID/W does not have an adequate procedure to uniquely identify items of property. This has lead to ad hoc arrangements for estab-ablishing accountability for property.

- Acquisition, Maintenance, and Disposal Planning and Management

  Because automated systems in use by MO/GS are not integrated and highly developed, they do not provide information essential to long-range planning and management activities.

Activities which could be developed to a more sophisticated level include management and planning for acquisitions, maintenance, and disposals. Assignment of this type of responsibility to property management specialists would result in improved effectiveness of property acquisition and utilization.

An analysis of the problem areas listed above has led to the conclusion that they are interrelated. In addition, these problems as well as other factors, infer system requirements and implementation considerations for improved non-expendable property management systems and procedures.

7. SUMMARY OF REQUIREMENTS FOR IMPLEMENTATION AND OPERATION OF AN IMPROVED SYSTEM

Several requirements should be met by an improved property management system. First, the system must be responsive to the basic property requirements of the Federal Property Management Regulations. Additionally, it must facilitate execution of the non-expendable property management responsibilities and accountabilities set forth in AID Handbook 20.

Fundamentally, the system must provide effective and efficient means to identify and maintain accountability for non-expendable property for which AID/W is responsible. Analysis indicates that effective property identification and control will require marking and numbering of essentially all items of non-expendable property currently in use or in the warehouse inventory. Similarly, the system must provide a means for marking and establishing accountability for property acquired in the future.

An important requirement for an effective system is that it allow for the maintenance of reliable control records for property from the time it is acquired until it is disposed. An integrated property records systems is required which will maintain records of individual items of property and which will accomodate frequent or continuous updates of property status information and which will facilitate the performance of annual, or more frequent, physical inventories. The property records system should allow for the tracking of requisition status, as well as maintaining a record of the individual accountable for each item of property.

A well developed property management records system could provide useful data to support a variety of property management planning and decision making activities. For example, life cycle statistics compiled by such a system could be useful to support management planning and decision making regarding procurement, maintenance and disposal of property. The records system should, therefore, be developed so as to accomodate multiple access to the data to facilitate use in support of performance of several property management functions. However, the system should provide methods to control access by unauthorized persons. Since AID is working toward standardization of automated administrative support systems and equipment, the system should be implemented in a manner and on equipment compatible with other administrative support systems.

Ideally, the property records management system should be designed to allow a phased implementation that would eventually support all of the property related activities conducted by MO/GS. Optimal phasing would permit the system to be first applied to current critical property control functions and subsequently applied to other property management functions and activities. In order for this approach to be successful, an integrative approach should be taken in design and implementation of the property management system. However, pressures to quickly correct existing inadequacies in AID/W property accountability records dictate that consideration be given only to those system options which can be implemented within a relativity short period of time. Also, the improved system must be implemented with minimal or no overall increase in staffing.

Implementation and effective use of an improved and automated property management records system will require some redefinition and refocusing of management roles and responsibilities. The roles of individuals and Management Liaison Officers must be reaffirmed and more explicitly defined relative to operation of the automated property records system. AID/W staff and

Management Liaison Officers must cooperate in the conduct of the initial property inventory. More importantly, they must accept accountability for assigned property and must provide inputs to the property records system to update property location and accountability information. The property management system must include the designation of a specific individual as accountable for each item of non-expendable property. The designated individual may be either the user of the item or the user's Administrative Officer depending on the preference of the bureau or office.

Implementation of the automated property records system within MO/GS must be accompanied by changes in working procedures and organizational structures in order to realize full benefit from the improved system capabilities. The property management staff should be consolidated in one location with ready access to the non-expendable property records system. The staff should be trained and upgraded so as to utilize the improved system to provide services and conduct management activities not currently feasible with existing systems. These would include establishment of a single source of information regarding the status of property requisitions. This would improve service to property users by providing faster, more reliable responses to status inquires.

Effective implementation of the system will require that MO/GS and SER/DM collaborate to implement the system in an effective mode that can be expanded to meet future needs of MO/GS. This will involve selection of the most appropriate equipment configuration, adaptation of system software, and implementation and maintenance of system operating and maintenance procedures.

III. IDENTIFICATION AND RECOMMENDATION OF SPECIFIC APPROACHES AND OPTIONS FOR IMPROVING FUTURE MANAGEMENT AND CONTROL OF NON-EXPENDABLE PROPERTY

III. IDENTIFICATION AND RECOMMENDATION OF SPECIFIC APPROACHES AND OPTIONS FOR IMPROVING FUTURE MANAGEMENT AND CONTROL OF NON-EXPENDABLE PROPERTY

This section identifies and examines approaches and options for improved property management records systems and procedures as well as system hardware options for implementing the improved system. These options are examined in relationship to the requirements identified in the previous section. This section also reviews the refocusing and redefinition of management roles and responsibilities deemed necessary to implement an improved property management system for AID/W. The major objectives of the recommended changes are to provide a more comprehensive and integrated approach to property management, to centralize activities and expertise in property records management, and to improve physical control and accountability for non-expendable property.

1. PROVISION FOR THE UNIQUE MARKING AND IDENTIFICATION OF NON-EXPENDABLE PROPERTY

AID/W does not currently numerically identify its non-serialized property. In order to maintain control over individual items and effectively manage property, it is recommended that a unique number be assigned to each item of property. Identification numbers are necessary in order to maintain reliable control records through an automated system.

There are a variety of methods which could be used to numerically identify and mark property. For example, a self-adhesive label with a unique number could be attached to each piece of property to be identified. Alternatively, identification numbers could be etched into all property. Based on an evaluation of various alternative methods of numerically identifying AID property, it is recommended that a BARCODE system be adopted.

A BARCODE system of property identification and marking utilizes a sticker similar to the Universal Product Code Stickers found on grocery store items. These stickers have a series of lines with Arabic numbers below. The lines can be "read" by passing an electronic wand over them which records the information on a recording medium.

BARCODE marking has three advantages which distinguish it from other methods:

- Pre-printed labels can be affixed to property rapidly and efficiently since the BARCODE numbers can be applied in any desired sequence
- This method of marking allows easy and accurate entry of information in a property records data base. Information can be input directly to a data base by use of a converter.
- Speed and accuracy of subsequent physical inventories is enhanced with this methods. The BARCODE sticker allows recording of the identifying number by merely passing a wand over the bars.

The effectiveness of use of BARCODE marking of non-expendable property has been demonstrated by its use in a property management and records control system currently being used by selected U.S. embassies.

2. PROPERTY RECORDS MANAGEMENT SYSTEMS AND PROCEDURES OPTIONS

The following discussion examines various options available for property records management systems and procedures. It examines the present systems and procedures and other options which involve using various equipment and software packages. The best option will incorporate the following attributes:

Will allow for the maintenance of reliable property control records which can be updated in a timely manner and will be designed to facilitate efficient conduct of physical inventories

- Will support all property management activities to be performed by MO/GS
- Will provide useful data to support management decision making and planning activities
- Will provide a single source of information regarding the status of property requisitions
- Can be implemented within a relatively short period of time and at a relatively low incremental cost
- Will insure AID/W compliance with Federal Property Management Regulations.

(1) Use of current AID/W Property Records Management Systems and Procedures

Current AID/W property management systems and procedures do not provide for the maintenance of reliable property control records for non-serialized property. In order to provide such records, any system that is implemented must allow for the unique numerical identification of all items of AID/W non-expendable property. Since most property records maintenance is currently manual in nature, adequate data to support management decision making and planning is not available with the present systems and procedures. As a result, forecasting property procurement, maintenance and disposal needs and costs is not possible. In addition, as currently used, the existing systems and procedures do not provide a viable mechanism for issuing non-serialized property to individuals and therefore does not provide sufficient control and accountability of property. In order to provide a system which will support the current and future property management requirements of AID/W, an improved property records system must be implemented.

(2) Expansion of the Q-1 Microcomputer Software Package

Prior to a decision to commence a management review of the property management system, a Q-1 microcomputer system was acquired to support the procurement function of MO/GS. Although discussions with representatives of the vendor indicate that development of a software package to accomodate all property management functions under consideration is theoretically possible with the Q-1, it would require at least six months of additional time to develop the necessary software. Further, additional time would be required for implementation and debugging activities. Because of the need for a system which can become operational in a short period of time, the option of expanding the Q-1 procurement software package is considered to be inappropriate.

In order to promote the type of property management efficiency and effectiveness desired by AID/W, it is desirable to implement an integrated system which is capable of supporting all property management functions. As discussed previously, the expansion of the Q-1 system procurement software to include other functions does not appear to be a practical alternative. For these reasons, the development of an integrated property management system will require the acquisition of a comprehensive software package which includes a procurement module. In the event such a system is obtained, the Q-1 system for procurement would no longer be necessary. In this event, it is suggested that the Q-1 system be phased out. The Q-1 would be useful as a back-up system for procurement while an integrated system is being implemented, and may be programmable for another purpose after the property management system has become operational. For instance, the Office of Contracts Management has expressed an interest in the Q-1 for use in performance of their contracts information maintenance function.

(3) Adaptation and Utilization of the Post Property System

SMC has investigated the feasibility and suitability of adapting the property records management system developed by the State Department for use in overseas embassies. The Post Property System runs on a WANG VS minicomputer and fulfills the many requirements for effective management of AID/W non-expendable property records.

The software developed by the State Department and Science Management Corporation consists of modules which are organized by management function. The software modules include:

- Property Procurement
- Property Receiving
- Property Inventory Functions
- Property Maintenance
- Property Disposal
- Perpetual Inventory
- Physical Inventory
- Standard Reports
- Other Reports.

The capabilities inferred by the above listing are not exhaustive, since the system is quite flexible and can be adapted to other uses. A list of selected reports available with this software is provided as Appendix A.

The modular design of the Post Property System is an advantage for AID/W use. This design allows only portions of the software to be utilized if desired, so that the system can be implemented on an incremental basis.

Control of AID/W property would be increased through the various system safeguards provided by the Post Property system. Various codes and other barriers to data base access help protect system integrity. In addition, the system keeps records of all files accessed by each user.

The software for the Post Property system is already operational in selected U.S. embassies. This has allowed users to gain a substantial amount of experience with the system and to resolve problem areas. This debugging experience offers a significant advantage to AID/W over other system options.

The Post Property records management system can be implemented with only minor software modifications and therefore within a relatively short time frame. In addition, the Post Property System provides a flexible approach to accounting for property at various levels including:

- Bureau, office or other organizational units
- Building, room or location
- Individual to whom the property has been issued.

This capability will allow specific records to be maintained concerning the individual to which each item of property has been issued; who within the organization is responsible for property; and will allow responsibility for property care and safekeeping to revert to the organizational unit when the individual leaves the organizational unit. This particular feature will be instrumental in providing the necessary level of physical control and will insure AID/W compliance with Federal Property Management Regulations.
For the reasons stated above, it is recommended that MO/GS adapt the Post Property System software package for maintenance of a non-expendable property records system and to support performance of the various property management functions. A summary review of system options is presented as Exhibit VIII following this page.

SUMMARY REVIEW OF
NON-EXPENDABLE PROPERTY RECORDS MANAGEMENT SYSTEMS OPTIONS

SYSTEM OPTIONS / SYSTEM EVALUATION CRITERIA	USE CURRENT AID/W SYSTEMS AND PROCEDURES	EXPAND Q-1 SYSTEM	ADAPT THE POST PROPERTY SYSTEM
1. AIDS COMPLIANCE WITH FEDERAL PROPERTY MANAGEMENT REGULATIONS	NO	POSSIBLY	YES
2. PROVIDES RELIABLE PROPERTY CONTROL RECORDS?	DOUBTFUL	POSSIBLE	YES
3. PROVIDES FOR NUMERICAL IDENTIFICATION OF EACH ITEM?	NO	POSSIBLE	YES
4. FACILITATES PERFORMANCE OF INVENTORIES AND RECORD RECONCILIATIONS?	NO	POSSIBLE	YES
5. INTEGRATED APPROACH TO SYSTEM IMPLEMENTATION?	NO	YES	YES
6. CONTROLS ON DATA ACCESS?	LIMITED	POSSIBLE	YES
7. PROVIDES DATA TO SUPPORT OTHER PROPERTY MANAGEMENT ACTIVITIES?	VERY LIMITED	POSSIBLE	YES
8. PROVIDES PROPERTY LIFE CYCLE DATA?	NO	YES	YES
9. PROVIDES REQUISITION STATUS TRACKING?	NO	YES	YES
10. IMPLEMENTATION TIME REQUIRED?	N/A	OVER ONE YEAR	APPROXIMATELY ONE YEAR
11. SYSTEM IMPLEMENTATION COSTS?	N/A	PROBABLY OVER $100,000	DEPENDS ON HARDWARE AND OTHER OPTIONS SELECTED. SEE SECTION ON IMPLEMENTATION AND OPERATING COST.
12. MAKES EFFECTIVE USE OF AVAILABLE STAFF RESOURCES	NO	YES	YES
13. COMPATIBLE WITH FUTURE AID SYSTEMS WORLDWIDE?	NO	NO	YES

3. SYSTEM HARDWARE OPTIONS AND PROCUREMENT COSTS

In order to utilize the Post Property software package, it will be necessary for AID to use a WANG minicomputer system. Software is available which can be used on either the WANG 2200 MVP or WANG VS 100 minicomputer systems. Although a complete MVP system would cost approximately 10 percent less than a comparable VS system, the cost savings are more than offset by the differences in the utilities of the two systems. The VS is a much more advanced hardware system which offers faster response times and has much greater data processing capacities. In order to be compatible with the most recent version of the Post Property System and maximize the utility of that software, it is recommended that AID only consider use of a WANG VS system.

The following section describes the two basic options available for procurement of WANG VS system hardware and the estimated procurement costs of each. Estimates of procurement costs are gross in nature and are based on discussions with representatives of the vendor. Final system procurement costs may vary depending on the hardware configuration selected by AID/W and contractual options available through procurement agreements with the vendor.

The two WANG VS system hardware options and their associated procurement costs are discussed in the following subsections.

(1) Option 1 - Procure a Complete WANG VS Minicomputer System

Option 1 includes procurement of a WANG VS minicomputer system complete with a Central Processing Unit (CPU), disk drive, memory storage unit, and all necessary peripheral hardware to support the property records management system. An illustration of this hardware configuration is shown in Exhibit IX. . System hardware includes three terminals, two printers, Central Processing Unit, disk drive, memory storage unit and associated communication equipment.

RECOMMENDED HARDWARE CONFIGURATION
OPTION 1: COMPLETE WANG VS SYSTEM

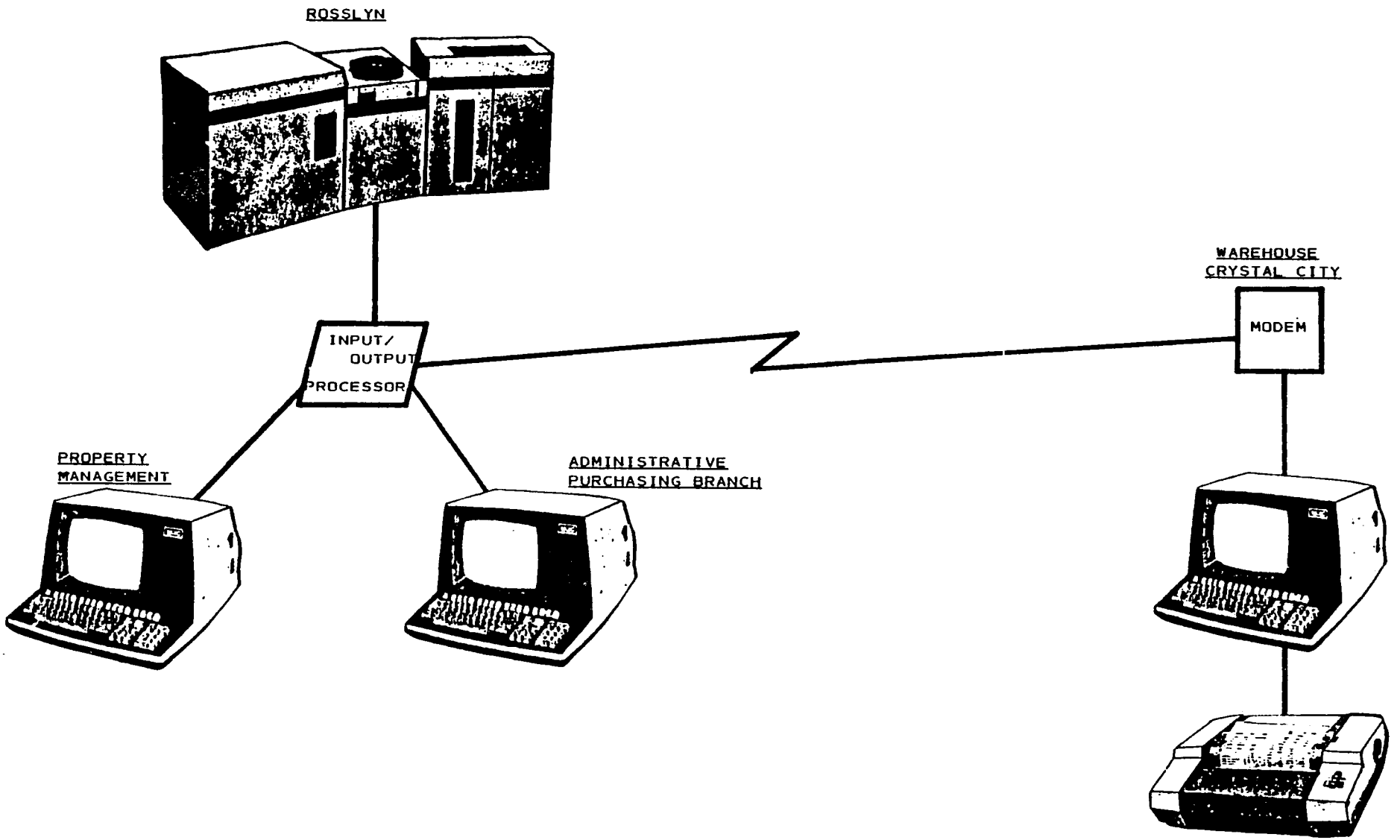


EXHIBIT IX

This option would provide a high degree of autonomy of operations, but could result in inefficient utilization of system hardware capacities and capabilities since the property records management system would only utilize a small portion of the data processing capacity of a VS system.

The acquisition cost for the WANG VS system hardware including CPU, disk drive unit, memory storage units, peripheral hardware and associated communication equipment is approximately $67,000.

Implementation of this option is recommended only if it is determined that the approach outlined in Option 2 is not feasible.

(2) Option 2 - Procure WANG VS Peripheral Hardware and Secure Remote Terminal Access to a Central CPU

Option 2 includes procurement of all necessary peripheral hardware to operate the MO/GS property records management system by remote terminal access to a SER/DM WANG VS central processing unit. An illustration of this hardware configuration is shown in Exhibit X. Peripheral hardware required includes three remote workstations, three printers, one Input-Output processor, one Modem and one modem-sharing unit and appropriate communications capabilities.

SER/DM has recently acquired a WANG VS 100 system which will be used primarily to support automation of the administrative systems of overseas missions. SER/DM and MO/GS should consider the feasibility of implementing the property records management system on the recently acquired WANG VS minicomputer system.

It is estimated that adaptation ofthe Post Property system for an AID/W property records management system will require a maximum of 50 thousand bytes of memory for all system modules from property procurement to property disposal. This represents approximately 20 percent of the present memory storage capacity of the SER/DM WANG unit. Since the AID/W property records management system will only utilize 3 remote terminal workstations with Random Access Memory (RAM), no slowdown in system response time is anticipated.

RECOMMENDED HARDWARE CONFIGURATION

OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS

OFFICE OF DATA MANAGEMENT

(UNIVERSAL NORTH)

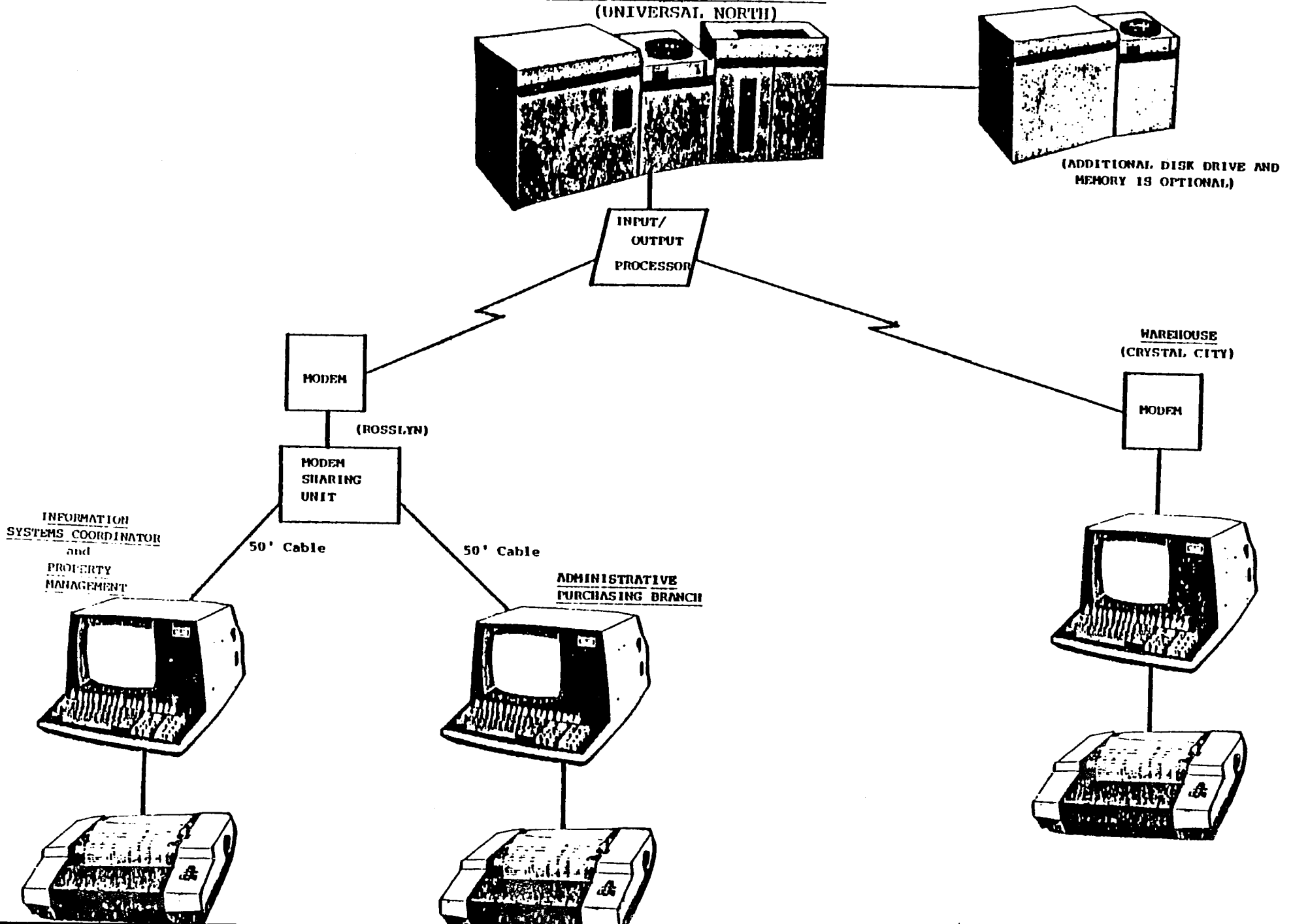


EXHIBIT X

This option would be desirable if it is determined that implementing the property records management system on the SER/DM WANG VS system is feasible. Pursuing this option would provide the following advantages:

- It is compatible with current organizational structures and responsibilities. This approach keeps as much as possible of the system maintenance and hardware under the direction of SER/DM.
- Separation of Property Management and Data Management functions, (since the alternative approaches involve maintenance of a computer by MO/GS).
- Lower incremental acquisition and maintenance costs.
- Maximization of use of CPU capacity.

Based on the advantages of securing remote terminal access to the SER/DM WANG VS system stated above, it is recommended that this option be pursued.

The incremental acquisition cost for procurement of the necessary peripheral hardware to implement the property records management system by remote terminal access to a CPU unit in SER/DM is approximately $30,000.

If implementation of the property management records system on the SER/DM CPU is possible, but will create the need for additional disk drive and memory storage units, the incremental acquisition cost would be approximately $53,000. A summary of estimated hardware acquisition costs for both WANG VS options is presented in Exhibit XI In addition, detailed equipment cost breakdowns for both hardware configuration options (Exhibits XII and XIII) are presented following Exhibit XI.

ESTIMATED HARDWARE ACQUISITION COSTS

HARDWARE OPTION	EQUIPMENT CONFIGURATION	ESTIMATED ACQUISITION COST	ESTIMATED INCREMENTAL ACQUISITION COST
OPTION 1 COMPLETE WANG VS SYSTEM	Central Processing Unit (128K) 75 MB Disk Drive 250 Line/Minute Band Printer 12" U/L CRT (80 x 24) Remote Workstation 12" U/L CRT (80 x 24) Parallel Workstations (2) IOP For 2246P Workstation/Printer Telecommunications Input/Output Processor 200 CPS Matrix Printer with Stand, 132 colums 250' Cable 2 Modems	$ 66,600	$66,600
OPTION 2 WANG VS WITH REMOTE TERMINAL ACCESS	PREVIOUSLY PROCURED BY SER/DM Central Drive (256K) Disk Drive (75 MB) 600 Line/Minuite Printer Word Processing Printer Input/Output Processors (4) Dual Purpose Workstation	$100,000	
	TO BE PROCURED BY MO/GS 12" U/L CRT (80 x 24) Remote Workstations (2) 12" U/L CRT (80 x 24) Parallel Workstation Telecommunications Input/Output Processor 200 CPS Matrix Printer with Stand, 132 Colums 4 Port Modem Sharing Unit 250' Cable 2 Modems	$ 30,000 $130,000	$30,300
	OPTIONAL HARDWARE 128K Memory for VS-B Systems 75 MB Removable Disk Drive	$ 22,300	$22,300

EXHIBIT XI

DETAILED EQUIPMENT BREAKDOWN

ESTIMATED INCREMENTAL ACQUISITION COSTS**

OPTION 1: COMPLETE WANG VS SYSTEM

WANG MODEL NUMBER	DESCRIPTION	NUMBER NEEDED	COST EACH	MONTHLY MAINTENANCE FEE
VS-4B	128 KB Main Memory, One 308 KB Diskette Drive and its input/output processor (IOP) model 22V02, a chassis capable of accomodating a total of 8 IOP's, and operating system and resource management software. Assembler and one compiler is standard.	1	$19,000	$240
2265V-1	75 MB removable disk drive without IOP.	1	17,000	390
2273V-15	250 Line/Minute Band Printer	1	9,000	75
2246R	12" U/L CRT (80 x 24) Remote Workstation	1	4,200	35
2246P	12" U/L CRT (80 x 24) Parallel Workstation	2	2,800	15
22V01	IOP for 2246P Workstation/Printer	1	2,000	10
22V06-1	Telecommunications IOP	1	2,500	40
2221V	200 CPS Matrix Printer with stand, 132 columns	2	5,000	50
120-2300-5	250' Cable	1	200	-
	SUBTOTAL		$69,500	$920
	LESS 7%*		(4,900)	
	SUBTOTAL		$64,600	
	2 Modems		2,000	
	TOTAL		$66,600	$920

* 5% discount is available under contract GS-00C-01909.
2% discount is available for prompt payment.

** This Exhibit is for general informational purposes only.
Exact hardware configurations and acquisition costs will be determined through negotiations with WANG.

EXHIBIT XII

DETAILED EQUIPMENT BREAKDOWN

ESTIMATED INCREMENTAL ACQUISITION COSTS**

OPTION 2: WANG VS WITH REMOTE TERMINAL ACCESS

WANG MODEL NUMBER	DESCRIPTION	NUMBER NEEDED	COST EACH	MONTHLY MAINTENANCE FEE
2246R	12" U/L CRT (80 x 24) remote Workstation	2	$4,200	$35
2246P	12" U/L CRT (80 x 24) Parallel Workstation	1	2,800	10
22V06-2	Telecommunications IOP	1	3,300	50
2221V	200 CPS Matrix Printer with stand, 132 columns	3	5,000	50
2247V-4	4 Port Modem Sharing Unit	1	700	20
120-2300-5	250' Cable	1	200	-
	SUBTOTAL		$30,400	$300
	LESS 7%*		(2,100)	
	ADJUSTED SUBTOTAL		$28,300	
	2 Modems		2,000	
	ADJUSTED SUBTOTAL		$30,300	
	OPTIONAL HARDWARE			
200-02VS-1	128K Memory for VS-B Systems		7,000	$100
2265V-1	75 MB Removable Disk Drive without IOP		17,000	400
	SUBTOTAL		$24,000	$500
	LESS 7%*		(1,700)	
	ADJUSTED SUBTOTAL		$22,300	
	GRAND TOTAL		$52,600	$800

* 5% discount is available under contract GS-00C-01909.
2% discount is available for prompt payment.

** This Exhibit is for general informational purposes only. Exact hardware configurations and acquisition costs will be determined through negotiations with WANG.

EXHIBIT XIII

4. SUMMARY OF RECOMMENDED APPROACH FOR RESPONDING TO AID/W REQUIREMENTS FOR A PROPERTY RECORDS MANAGEMENT SYSTEM

At an early point in reviewing potential alternatives for future AID/W property records management systems, one alternative was identified as offering high potential. Because of the desire to implement a system within a short period of time, a number of options were considered to offer less potential for effective application to the AID/W requirement. Among the options considered marginal candidates due to time constraints and other considerations was expansion of the Q-1 Procurement System to include all property management functions. In addition, development of a new software package or making major modifications to existing software would probably be too time consuming and ultimately less cost effective. The most attractive option was determined to be implementation of the Post Property system which is currently in use by U.S. embassies.

The Post Property System operates on a WANG VS minicomputer system. SER/DM has recently acquired a WANG VS 100 system which is located at the Universal North building. Securing remote terminal access to the SER/DM WANG system and procurement of the necessary peripheral hardware to support a property records management system for AID/W appears to be the most cost effective option and requires the smallest incremental acquisition and maintenance costs of the possible alternatives. In addition, this approach maintains the historical separation of data management and property management functions within SER and improves the potential for maximizing use of the capacity of the CPU at Universal North. Implementation of this option is possible only if it is determined that operation of the Post Property System by remote access to the SER/DM CPU is feasible. If it is determined that this arrangement is not feasible, it may be necessary for MO/GS to procure a complete WANG VS 100 System . This option, however, would involve more incremental acquisition costs.

The recommended software system has been constructed and can be implemented on a modular basis. The available modules and illustrations of the various module selection lists (menus) available to system operators are shown in Appendix A. It is recommended that AID/W implement the available system modules on a phased basis. Specifically, the modules related to property inventory management should be implemented initially with the procurement module phased in at a later date. The Q-1 procurement system can be used in the interim to support the activities of the Administrative Purchasing Branch. This approach will in effect create an interim, non-integrated property records management system followed by creation of a fully integrated system.

Several system schematics are provided in Appendix D to illustrate how the recommended system would operate to maintain records and otherwise support each of the principal property management functions. Schematics are shown which depict the system as it would operate in both the interim and final configurations. The schematics indicate the principal inputs and outputs from the system and show the locations from which these would originate.

The system does not require that operators be ADP specialists. The software will automatically generate module selection lists (menus) and other instructions on the terminal screen which will guide the operators as they perform input operations or generate output reports. Most inputs will be keyed directly into the system by an operator at a terminal console. This will allow the system to be implemented with only minimal changes in the forms, e.g. form AID 5-7 and form AID 5-72, currently used to initiate and control property management activities.

When fully implemented, the system will enable MO/GS to effectively and efficiently perform a full range of property management activities; some of which are now being only marginally performed because the required data are not readily available and because it would require considerable staff resources to manually compile and use such data.

The following subsections discuss the organizational and staffing implications and requirements for implementation of the recommended property records management system.

5. MANAGEMENT ROLES AND RESPONSIBILITIES

The General Services Division of the Office of Management Operations (MO/GS) is responsible for maintaining property control records, conducting physical inventories, and the performance of several property management activities. The heads of Bureaus and other organizational units are jointly responsible with individual AID employees for the utilization, care and safekeeping of assigned property.

In order to maximize the effectiveness of implementation of the improved property records management system, it will be necessary to reinforce some property management roles in AID Bureaus and to restructure some management roles and responsibilities within MO/GS. The following subsections outline the recommended refocusing and restructing of roles and responsibilities.

(1) Reinforcement of Roles and Responsibilities of AID/W Bureaus and Staff

Implementation of the recommended property records management system will not require any substantive changes in the designated roles and responsibilities of AID/W Bureaus and staffs. The responsibilities and procedures outlined in AID Handbook 20 regarding Bureau and staff roles and responsibilities in acquisition, physical control, maintenance and disposal of assigned non-expendable property are highly compatible with the recommended system. In fact, implementation of the property records management system will make it practical for the Bureaus and individuals to be more responsive to the requirements of AID Handbook 20. In the past, it was not practical for MO/GS to require compliance with all handbook requirements

because MO/GS did not operate a property records management system that would accomodate all of the inputs which Bureaus and individuals would be required to provide.

Following implementation of the recommended property records management system, AID/W Bureaus and individual employees should be informed regarding the improved system and steps should be taken to refocus attention on their roles and responsibilities relative to operation of the system. Roles and procedures relative to acquisition, transfer, maintenance and disposal of non-expendable property are outlined in chapters 7, 8 and 9 of AID Handbook 20 and will require only minor modifications. The required modifications involve procedures rather than responsibilities and can be readily made concurrent with implementation of the system. Recommended changes include amending paragraph 7G, 3, Transfer of Property, to require notification to the Management Liaison Officer of relocation of any non-expendable property. The Management Liaison Officer should be allowed the option of either reporting or not reporting to MO/GS changes in location within the jurisdictional area of the office since periodic physical inventories will account for such relocations. Similarly, Paragraph 7G, 4, Custody Receipts and Property Passes, should be revised to require preparation of a Personal Custody Property Receipt form AID 5-72 whenever non-expendable property is issued or transferred. A copy of the completed form AID 5-72 should be provided to MO/GS so that the property accountability records can be updated. In order to maintain continuity in accountability, a Personal Custody Property Receipt form AID 5-72 should be used to transfer control responsibility for specific items of property from terminating employees to the Management Liaison Officer. Similarly, the Management Liaison Officer should use the Personal Custody Property Receipt form when issuing items of non-expendable property to new employees.

(2) Redefinition of Roles and Responsibilities in MO/GS

In order to fully utilize the capabilities of the property records management system it will be desirable to restructure the Personal Property Management Branch of the General Services Division, to redefine selected property management roles and responsibilities and to establish a Records Management Systems Coordination Staff. Exhibit XIV , which was developed jointly with MO/GS, reflects the impact of recommended changes on the organizational structure of MO/GS.

The principal points of impact are in the roles and responsibilities recommended for an Information Systems Coordinator, the Property Management Officer and Property Manager Specialist, and the Warehouse Manager. Responsibilities of managers affected by recommended changes are outlined in the following paragraphs.

Information Systems Coordinator

The Information Systems Coordinator will act in a staff capacity, reporting to the Chief of MO/GS. The Information Systems Coordinator will not be responsible for the performance of day-to-day property management functions. The Information Systems Coordinator will be responsible for the following areas:

- Supervision of system implementation, including supervision of all training activities

- Future development of the system in response to MO/GS requirements, including implementation of the procurement module, development of space management system applications, and software modifications as necessary

- Supervision of the performance of property inventories. This includes the initial inventory required to establish a system data base, and all future inventories.

REVISED GENERAL SERVICES DIVISION ORGANIZATIONAL STRUCTURE

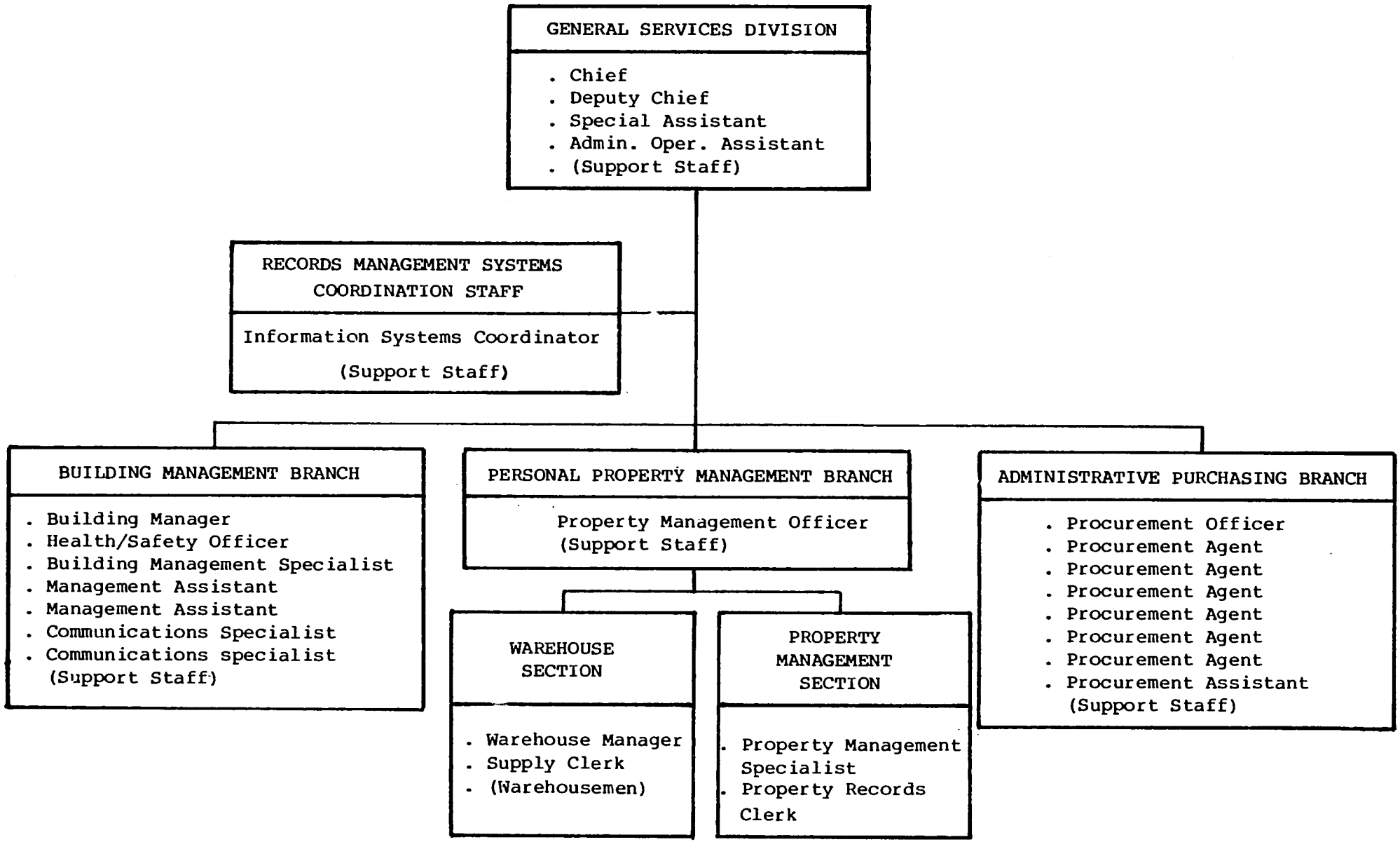


EXHIBIT XIV

- Review all activities interacting with the property records management system.

The Information Systems Coordinator is a new position which will replace the current Inventory Management Specialist position in the Office of the Chief of the Division.

Property Management Officer and Property Management Specialist (Property Managers)

In order to promote efficiency and effectiveness of property management activities, it is recommended that Property Manager positions be established. One Property Manager should be designated the Property Management Officer and the other a Property Management Specialist. These positions will encompass and expand selected responsibilities currently performed by Supply Management Officers in the warehouse. In addition, some authority currently held by the Chief of MO/GS could be delegated to Property Managers.

The Property Management Officer and Property Management Specialist will have key roles in the future effectiveness of AID/W property management activities. The responsibilities would include:

- Receipt and review of all property requisitions (form AID 5-7).

- Approval authority for all routine property requests (may be limited by dollar amount of the item requested if necessary). In reviewing requisitions, the Property managers should consider personal property guidelines, whether items are in stock (this can be determined by use of a system terminal) and budget constraints. Approved requisitions should be forwarded to the warehouse if the item is in stock, or to Purchasing if the item is not in stock.

- Provide feedback to users regarding requisition status and justification for rejection of requisitions.

- Update the data base of the property management system, i.e., receive documentation for all changes made to the system data base and supervise all data base entries.

- Forecast future procurements, disposals, and maintenance needs. This area has been neglected in the past. The new system will provide the capability to collect information which will facilitate forecasting. This type of forecasting is essential for effective property management.

- Process necessary reports related to property management activities. This includes reports concerning excess property, damaged and lost property, and inventory reporting.

- Maintain system records regarding primary physical control responsibility. This includes entry of the name of the individual who has primary control responsibility for each item of property into system records. In addition, provide updated reports of this information to the responsible persons on a regular basis.

The Property Management Officer and Property Management Specialist positions reflect a redefinition of existing job functions rather than establishment of new positions.

Warehouse Manager

Although property management functions will no longer be performed in the warehouse, physical activities related to receiving, transfer, and storage of property will remain. The supervision of these activities will be the responsibility of the Warehouse manager. The Warehouse Manager and the Supply Clerk will complete all normal documentation related to the performance of these activities and forward the documents to the Property managers. The Warehouse Manager will have responsibility for control and documentation of property received, stored, or transferred from the warehouse. He will also be responsible for supervision of physical delivery and installation of non-expendable property. The Warehouse Manager position corresponds to a currently existing Supply Management Officer position.

(3) Impact on MO/GS Staffing

In order to maximize the effectiveness of AID/W property management activities, it will be necessary to establish the redefined positions discussed above. Creation of these redefined positions is a result of necessary changes in the functional roles and responsibilities of several MO/GS positions to effectively manage and control AID/W non-expendable property. These positions are not intended to be additional positions. They are a result of revising old positions to make them more responsive to the property management needs of AID/W.

The positions established will require an increase in the level of responsibility and increased skill levels of the individuals who hold them. These increases in skill and responsibility requirements may result in some position upgrades and increased personnel costs. Therefore, although no increase in number of professional positions is anticipated, an increase in personnel costs may result due to upgrading.

Implementation of an automated property management system will require an increase in the level of property management efforts during the implementation phase. Increased attention to hardware procurement and software modifications, preparing a scope of work for and monitoring the conduct of a physical inventory and other aspects of the implementation process will be time consuming and may necessitate securing temporary increases in part-time or other short term personnel to accomplish the implementation of the system. On the other hand, it is also anticipated that once the system is up and operational, it will decrease manual workloads in some areas and increase property management effectiveness.

6. BENEFITS EXPECTED TO ACCRUE FROM IMPLEMENTATION OF THE RECOMMENDED SYSTEMS

Implementation of the Post Property system software and the WANG VS minicomputer hardware will provide the following benefits to AID/W in performance of property management activities:

- The system outputs provide a mechanism for increased physical control and accountability for individual items of property which will help insure AID/W compliance with Federal Property Management Regulations and with AID Handbook 20 procedures.

- The system facilitates maintenance of accurate property records and is designed to facilitate fast and efficient conduct of annual physical inventories and reconciliation activities.

- The basic software is available at little or no incremental cost and it may be possible to implement the system on a computer recently purchased by AID thereby reducing incremental equipment costs.

- Since the system software has already been developed, the time required for implementation will be relatively short and the incremental acquisition costs will be relatively low.

- The system will provide useful information to support management decision-making and planning activities including forecasting of property procurement, maintenance and disposal needs.

- The system will result in streamlining of the property requisition process and will provided a single source of current requisition status information.

- The system's modular design will allow a phased implementation which, once completed, will result in an integrated approach to property management and related MO/GS support functions.

- The basic software has been proven in use at overseas posts and the system is flexible and readily adaptable as new requirements evolve.

The system will be compatible with property management systems in U.S. embassies overseas and with the administrative support systems being developed by AID and the State Department using the WANG VS minicomputer system.

A recommended plan of action for implementation of the recommended property records management system is presented in the next section.

IV. RECOMMENDED PLAN OF ACTION

IV. RECOMMENDED PLAN OF ACTION

The following section summarizes recommended approaches to implementation of an improved property records and inventory management system for AID/W. This section discusses specific aspects of a proposed implementation plan as well as summaries of estimated implementation and operating costs associated with the improved system.

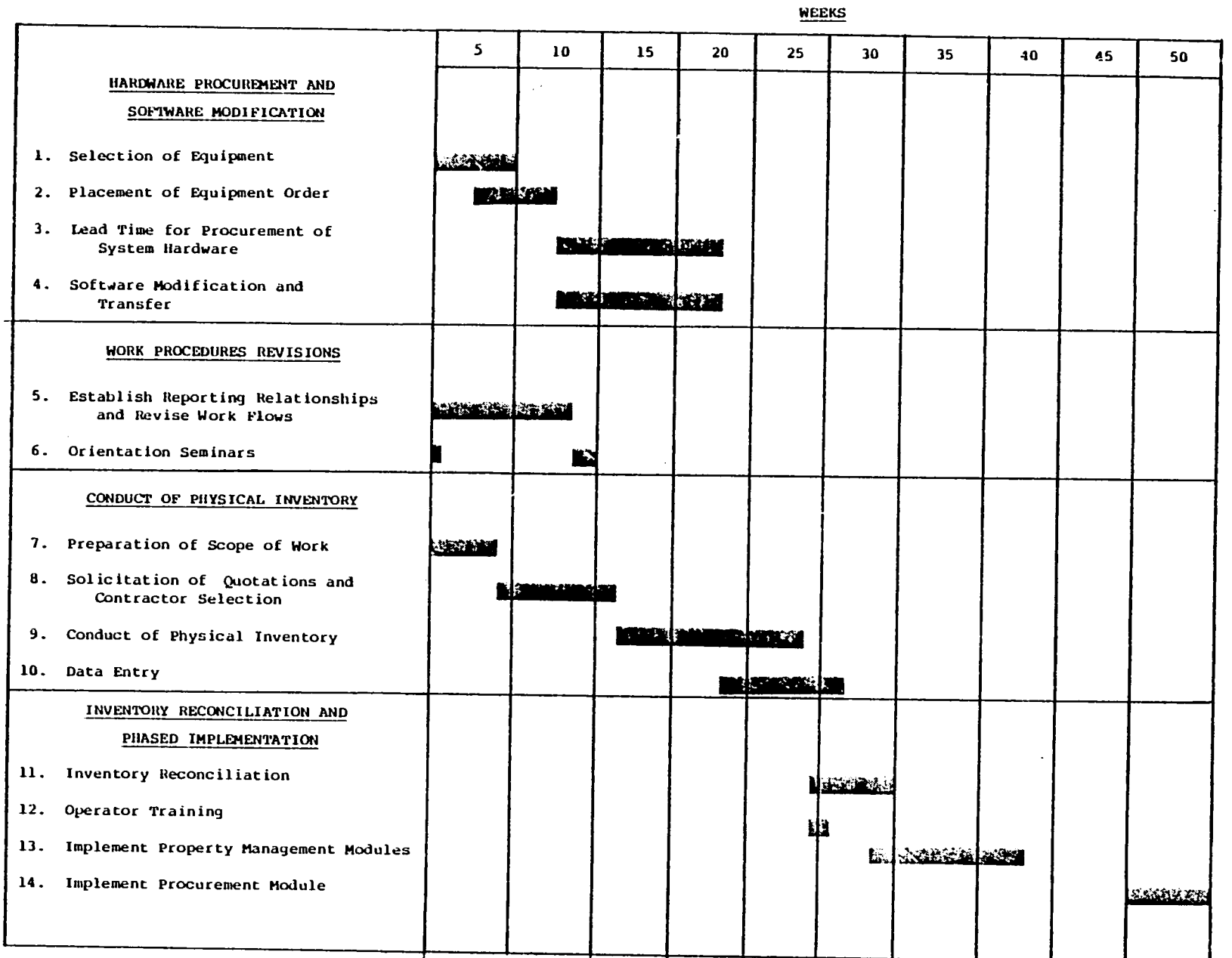
1. IMPLEMENTATION PLAN

The property records and inventory management system should be implemented in a manner that best facilitates a smooth transition from the present set of non-integrated automated systems and manual processes to a fully integrated automated property records management system. SMC recommends a phased implementation approach to achieve this objective. A phased implementation approach will allow the property inventory management module of the system to be fully implemented before implementation of the procurement module. Extension of the system to other functions such as space planning can be considered later. This approach will minimize the number of concurrent implementation activities that will require coordination, will allow phased procurement of hardware, and will allow the property inventory management module to be operational in the shortest possible time frame. The following specific implementation considerations concerning the implementation plan will be discussed in this section:

- Procurement of hardware and modification of system software
- Revision of property management procedures
- Conduct and reconciliation of a physical inventory
- Phased implementation of system modules and equipment.

In addition, an implementation performance schedule illustrating approximate time requirements for a phased implementation of the system is provided as Exhibit XV following this page. The schedule is presented

PROPERTY RECORDS AND INVENTORY MANAGEMENT SYSTEM
AID/W NON-EXPENDABLE PROPERTY IMPLEMENTATION SCHEDULE
(EXPRESSED IN NUMBER OF WEEKS NEEDED AFTER A DECISION TO IMPLEMENT HAS BEEN REACHED)*



* This exhibit represents the minimal amount of time necessary for Implementation of the Property Records and Inventory Management System, actual performance time may vary.

EXHIBIT XV

in terms of weeks following a decision to implement the improved system. In some instances the time required to conduct a specific step in the implementation plan will be contingent on the approach selected by AID or on the amount of resources committed. The schedule shown in Exhibit XV assumes that adequate funding will be readily available and that minimal delays will be encounted relative to equipment procurement, contracting for conduct of the property inventory, etc. It also assumes that the AID Office of Data Management will provide technical assistance relative to acquisition of equipment, modification of system software and start-up of system operations.

(1) Procurement of Hardware and Modification of System Software

An important consideration relative to a timely implementation of an improved property records and inventory management system is acquisition of the hardware needed to support the system. It will be necessary to begin discussions regarding the feasibility of securing remote terminal access to the SER/DM WANG VS 100 system immediately following a decision to implement the improved property management system. In addition, discussions with representatives of the equipment vendor to determine exact hardware configuration requirements should begin once SER/DM has resolved the issue regarding the feasibility and practicality of remote terminal access to the SER/DM WANG VS 100 computer system. Representatives of the equipment vendor estimate that approximately twelve weeks will be required from receipt of a purchase order to actual delivery and installation of the required system hardware. This estimate assumes that the system will be initially operated with "data processing" type remote consoles. These consoles would be procurred with an agreement that they could later be traded-in to obtain upgraded "word processing/data processing" type terminals. the proposed implementation plan assumes that the property inventory control

module of the system would be initially implemented with "data processing" type terminals. The procurement module would be implemented, at a later date, with the "word processing/data processing" type terminals.

Some minor modifications to the Post Property software package, will be necessary to bring it into conformance with AID/W property management needs. To accomplish this task, it will be necessary for AID personnel to discuss specific modification needs with State Department data management personnel and arrange for the modifications to be made. Several options are possible for obtaining the necessary modifications. Either the Department of State or AID SER/DM could make the changes or a software contractor could make the changes. Department of State personnel have estimated that required software modifications could be accomplished within two months. However, existing documentation for the system is very limited and this may make it difficult for anyone other than the original system developers to adapt the software, even though the adaptations required will be minimal.

(2) Revision of Property Management Procedures

Some revisions in work procedures and forms will be necessary to implement the revisions in management roles and responsibilities and to operate the integrated property management system. For example, the revision of management roles and responsibilities within MO/GS will dictate changes in the document flows involved in property requisition, procurement and receipt activities. A flowchart of a recommended revised process for AID/W non-expendable property requisition and procurement activities is provided as Appendix E. This flowchart accomodates the revised roles of the Property Managers and the Warehouse Manager in the property requisition process including provision for a single source of information regarding property requisition status tracking. Procedures should

be implemented to ensure use of form AID 5-72, Personal Custody Property Receipt, in connection with issuance of all non-expendable property. Also, property users should be instructed to include the BARCODE Number when completing forms.

Orientation seminars should be conducted to instruct MO/GS personnel and Bureau Management Liaison Officers and other bureau designees in the changes in reporting relationships, job functions, process changes and other organizational considerations. This orientation will be essential to insure that the property management system is implemented smoothly and that all AID/W personnel understand the ramifications involved in introducting an automated property management system into the AID/W organization.

(3) Conduct and Reconciliation of a Physical Inventory

In order to prepare for the implementation of the property inventory management module of the system, an accurate data base of property location and descriptive information, i.e., an accurate inventory, must be completed. Creation of the required data base will be a time consuming process. Based on the present staffing levels in MO/GS and considering the increased demands of time and attention that implementation of an improved property management system will entail, it is impractical to expect that the physical inventory can be conducted by MO/GS personnel within the desired time frame. It will, therefore, probably be necessary to contract for services outside of AID/W to conduct the physical inventory and collect the property information necessary to create the accurate and complete data base needed.

Therefore, preparation of a scope of work, time for solicitations of quotations, and time for conduct of the physical inventory and data entry activities must be included in the implementation schedule.

In order to facilitate smooth implementation of the system, it is recommended that inventory data be collected and reconciled on a bureau by bureau basis. This approach will allow MO/GS personnel to gradually become familiar with the automated property management system and allow debugging procedures, if needed, to be approached on a small scale basis. In addition, this method will emphasize physical accountability of property and will almost immediately place a portion of the property under the control of an Management Liaison Officer or other designated responsible individuals.

Other inventory guidelines and methodologies that will be useful for monitoring of the physical inventory process are provided as Appendix B.

Once data entry activities have begun, the inventory can be reconciled on a bureau by bureau basis. The new physical inventory records must be compared and reconciled with previous inventory records. In addition each Management Liaison Officer or other bureau designee, as well as each individual assigned property should be required to agree to the information contained in and to sign-off on a hand copy of the inventory. Files of the hard copies should be maintained by MO/GS and the appropriate information should also be maintained on an on-line basis in the automated property records system.

(4) Phased Implementation of System Modules and Equipment

In addition to phasing the implementation of data collection and entry of property location and descriptive information into the system, it is recommended that the implementation of the various modules available in the present software package be phased. Initially, the various aspects of the property inventory management module, which involves physical inventory and reconciliation, property transfer and disposal, etc., should be implemented. Once the data base has been created and all aspects of the property inventory management module have been implemented, the procurement management module for non-expendable property should be implemented. This approach allows a high degree of flexibility and allows the most pressing needs to be appropriately dealt with before other less urgent needs.

A phased implementation approach will also allow hardware procurement to be phased, thus reducing the initial outlays for hardware. Acquisition of the terminal and printer for the procurement module of the system would be delayed so that it can be utilized immediately upon delivery. This would avoid a situation where hardware that had been delivered would stand idle until the procurement module software could be implemented.

One of the final activities that will have to be accomplished prior to full implementation of the property management system is technical training of the MO/GS personnel who will be operating the WANG VS hardware. It is anticipated that this operators training will be conducted by the vendor shortly after or immediately upon delivery and installation of system hardware. These training sessions will be valuable in instructing personnel in the system capabilities. Additional training will be required to cover proper procedures for inputting data regarding the requisitioning, monitoring, inventorying and management of non-expendable property. Training will also be required relative to use of system reports and outputs.

2. IMPLEMENTATION COSTS

The implementation of an improved property management system for AID/W non-expendable property will entail several, one-time, implementation costs as well as some continuing operating costs. The following costs will be discussed in this section.:

- Hardware procurement costs
- Physical inventory and software modification costs
- Personnel training costs.

A summary of incremental implementation cost estimates is provided as Exhibit XVI following this page.

(1) Hardware Procurement Costs

This section presents a summary of hardware procurement cost estimates shown by system option. A more complete discussion of systems options and preliminary cost figures were provided in section III. the following cost estimates are preliminary and are based on discussions with the equipment vendor. Actual procurement costs may vary depending on final system configuration and other factors.

SYSTEM HARDWARE OPTIONS	INCREMENTAL PROCUREMENT COST ESTIMATE
OPTION 1	
Includes a WANG VS system complete with CPU and disk drive and memory storage units in addition to all peripheral hardware as shown in Exhibit XII This option may be desirable if SER/DM is not able to provide remote system access to the WANG VS CPU located at the Universal North Building	$66,600

EXHIBIT XVI

SUMMARY OF INCREMENTAL IMPLEMENTATION COST ESTIMATES

HARDWARE OPTIONS / IMPLEMENTATION COSTS	OPTION 1: VS-COMPLETE	OPTION 2: VS-REMOTE ACCESS	OPTION 2: REMOTE ACCESS WITH DISK DRIVE AND MEMORY UNITS
1. Hardware Procurement Costs	$ 66,600	$ 30,300	$ 52,600
2. Physical Inventory Costs	72,000	72,000	72,000
3. Personnel Training Costs	7,200	7,200	7,200
4. Total Implementation Costs	$145,800	$109,500	$131,800

SYSTEM HARDWARE OPTIONS	INCREMENTAL PROCUREMENT COST ESTIMATE
OPTION 2	
Includes a WANG VS with remote access to Office of Data Management Central Processing Unit (CPU). System Hardware includes three terminals, three printers, two modems, one modem sharing unit and one imput-output processor.	$30,300
Option 2 with optional disk drive and memory storage units	$52,600

(2) Physical Inventory and Software Modification Costs

As discussed earlier, it is recommended that a physical inventory be conducted by an outside contractor. The following estimated cost listing identifies the cost elements involved in conducting a physical inventory and provides a rough estimate of item costs.

PHYSICAL INVENTORY COSTS

ITEM	MAN-DAY REQUIREMENTS	DOLLAR REQUIREMENTS
1. Develop Scope of Work (12 Days x $25/hr.)	12	$ 2,400
2. Conduct of Physical Inventory (200 Days x $20/hr.)	200	32,000
3. Data Entry (200 Strokes x 40,000 Items x 2 (Stroke and Verify) + 8500 strokes/hr. x $9.00)	235	$17,000

ITEM	MAN-DAY REQUIREMENTS	DOLLAR REQUIREMENTS
4. BARCODE Labels (40,000 x $.06 x 3)	-	$16,000
5. Software Modification (23 Days x $25/hr.)	23	4,600
TOTAL	470	$72,000

(3) Personnel Training Costs

As discussed previously, two types of training sessions are recommended for AID/W personnel in order to insure the success of the implementation of an automated property records and inventory management system. Orientation seminars should be conducted for the benefit of MO/GS personnel to instruct them in the changes in reporting relationships, job functions, process changes and other organizational considerations. Operator training should be conducted to train the appropriate MO/GS personnel and bureau Administrative Officers or Management Liaison Officers in the use of the automated system components. These seminars will be valuable in instructing personnel in the system capabilities and proper procedures for the requisitioning, monitoring, inventorying and management of non-expendable property. The following is an estimate of costs, expressed in terms of man-days and dollars, that will be required to develop and present the recommended operator training and orientation seminars:

Science Management Corporation

MAN-DAY REQUIREMENTS FOR PERSONNEL TRAINING

	OPERATOR TRAINING		ORIENTATION SEMINARS
ORGANIZATION:	MO/GS (GENERAL SERVICES DIVISION PERSONNEL)	AID/W MANAGEMENT LIAISON OFFICERS	MO/GS (GENERAL SERVICES DIVISION PERSONNEL)
Number of Presentations	2- 1/2 Day	2-1/2 Day	2 - 1 Day
Training Development	3 Man-Days	3 Man-Days	6 Man-Days
Training Presentations	1 Man-Day	1 Man-Day	2 Man-Days
Sub Total Man-Days	4 Man-Days	4 Man-Days	8 Man-Days
AID/W Personnel Man-Days	5 Man-Days	5 Man-Days	10 Man-Days
Total Man-Days	9 Man-Days	9 Man-Days	18 Man-Days
Grand Total	36 Man-Days x $25/hr. = $7,200		

3. OPERATING COSTS

Operating costs are particularly difficult to estimate as they are dependent in large part on contractual arrangements regarding hardware procurement and associated monthly maintenance fees, agreements made with SER/DM regarding possible charges for computer time and the possibility of position upgrades within MO/GS. These issues will be addressed in the following section.

(1) Monthly Hardware Maintenance Fee

Discussions with a representative of the vendor indicates that a monthly hardware maintenance fee will be charged for the WANG computer system. Fees will be determined in part by the system configuration selected. Preliminary indications are, however, that a fee of approximately 2 percent of the original acquisition cost will be charged for monthly maintenance.

Based on the preliminary cost estimated developed for hardware procurement costs, the following estimates of hardware maintenance costs have been developed:

	MONTHLY MAINTENANCE COST
Option 1	$920
Option 2	$300
Option 2 with optional Disk Drive and memory storage parts	$800

(2) Computer time

Discussions with SER/DM indicate that a charge for computer time may or may not be charged for operation of the property management system on the SER/DM CPU located at Universal North depending on what arrangements can be worked out. There was no indication of what charge, if any, would be levied. If MO/GS decides to procure a CPU with disk drive and memory storage units for it's own use, there would not be any charge for computer time. There would, of course, be a substantial increase in hardware procurement costs.

(3) Position Upgrade Requirements

Full implementation of the property records and inventory management system will most likely require upgrading of some positions in MO/GS. Specifically, the position of Information systems Coordinator may be graded at the GS-9 or GS-11 level. Other position upgrades may also be necessary.

4. TRAINING AND FOLLOW-UP FOR EFFECTIVE SYSTEM OPERATIONS

An important consideration in the implementation of the property management system is how well the data and the system can be utilized by the personnel involved with its operation and maintenance. Administrative Officers should be trained in the use of the system to facilitate their acceptance of it and to enhance their ability to use it effectively. The Management Liaison Officers should also be supplied periodically with updated inventory reports which summarize property information and transactions. The Information Systems Coordinator should continually review the system's operation to insure the effectiveness and integrity of the system. Finally, an annual inventory reconciliation should be planned to keep property control information up to date and accurate. Using the BARCODE system of labeling and property identification will significantly decrease the amount of time required to conduct future physical inventories and reconciliation efforts.

APPENDIX A

SELECTOR SCREENS FOR THE RECOMMENDED PROPERTY MANAGEMENT SYSTEM

* THESE SCREENS ILLUSTRATE THE CONTENT AND STRUCTURE OF THE SYSTEM

PROPERTY MANAGEMENT SYSTEM MODULES

1. PROPERTY PROCUREMENT
2. PROPERTY RECEIVING
3. PROPERTY MAINTENANCE
4. PROPERTY DISPOSAL
5. PROPERTY INVENTORY FUNCTIONS
6. PERPETUAL INVENTORY FUNCTIONS
7. PHYSICAL INVENTORY UTILITIES
8. UTILITY FUNCTIONS

PROPERTY PROCUREMENT TRANSACTIONS

1. ADD NEW PROCURMENT
2. ADD ITEM TO PROCUREMENT
3. CHANGE PROCUREMENT RECORD
4. PROCUREMENT INQUIRY
5. DELETE PROCUREMENT
6. DELETE ITEM FROM PROCUREMENT
7. LIST PROCUREMENT

PROPERTY RECEIVING TRANSACTIONS

1. RECEIVING VIA PROCUREMENT
2. RECEIVING NON-PROCUREMENT

PERPETUAL INVENTORY FUNCTIONS

1. INITIALIZE REFERENCE FILE
2. GENERATE REFERENCE FILE FOR BUILDINGS
3. COPY IN DATA FROM TELXON FILE
4. LIST EXCEPTIONS FOUND
5. RE-SET EXCEPTIONS FOUND
6. UPDATE MASTER AND PRINT REGISTER
7. PHYSICAL INVENTORY REPORT

PROPERTY INVENTORY FUNCTIONS

1. PROPERTY INQUIRY/CHANGE
2. TURN-IN ALL BY OFFICER
3. TRANSFER ALL BY OFFICER
4. CHANGE ALL BY BUILDING LOCATION

PHYSICAL INVENTORY UTILITIES

1. GENERATE PHYSICAL INVENTORY REFERENCE FILE
2. PHYSICAL INVENTORY REGISTER
3. REPORT OF SHORTS AND OVERS
4. REPORT OF LOCATION DIFFERENCES
5. UNNUMBERED PROPERTY COUNTS
6. NUMBERED PROPERTY COUNTS
7. REGENERATE BASIC INVENTORY
8. UPDATE FROM TELXON FILE
9. DELETE PROPERTY AT NEW LOCATION
10. UPDATE MASTER FILE

GENERATE PHYSICAL INVENTORY REFERENCE FILE

1. GENERATE ALL RECORDS
2. GENERATE FILE BY AGENCY
3. GENERATE FILE BY BUILDING LOCATION
4. GENERATE FILE BY RESPONSIBLE OFFICER

PHYSICAL INVENTORY REGISTER

1. SELECT ALL PHYSICAL INVENTORY
2. SELECT AGENCY PHYSICAL INVENTORY
3. SELECT BUILDING PHYSICAL INVENTORY
4. SELECT RESPONSIBLE OFFICER PHYSICAL INVENTORY
5. PRINT TEST PAGE

PHYSICAL INVENTORY SHORTS AND OVERS REPORT

1. SELECT ALL SHORTS AND OVERS
2. SELECT BY AGENCY-SHORTS AND OVERS
3. SELECT BY BUILDING-SHORTS AND OVERS
4. SELECT RESPONSIBLE OFFICER-SHORT AND OVERS
5. PRINT TEST PAGE

PHYSCIAL INVENTORY REPORT OF LOCATION DIFFERENCES

1. SELECT ALL LOCATION DIFFERENCES
2. SELECT AGENCY-LOCATION DIFFERENCES
3. SELECT BUILDING-LOCATION DIFFERENCES
4. SELECT RESPONSIBLE OFFICER-LOCATION DIFFERENCES
5. PRINT TEST PAGE

UNNUMBERED PROPERTY COUNTS

1. SELECT ALL UNNUMBERED PROPERTY
2. SELECT AGENCY UNNUMBERED PROPERTY
3. SELECT BUILDING UNNUMBERED PROPERTY
4. SELECT RESPONSIBLE OFFICER UNNUMBERED
5. PRINT TEST PAGE

NUMBERED PROPERTY

1. SELECT ALL NUMBERED PROPERTY
2. SELECT AGENCY-NUMBERED PROPERTY
3. SELECT BUILDING-NUMBERED PROPERTY
4. SELECT RESPONSBILE OFFICER-NUMBERED PROPERTY
5. PRINT TEST PAGE

UTILITY FUNCTIONS

1. VALIDATION TABLES MAINTENANCE
2. LOCATOR INVENTORY MAINTENANCE
3. BASIC INVENTORY MAINTENANCE

STANDARD REPORTS

1. ITEMS NOT RECEIVED, 60/90/XXX DAYS
2. SUMMARY OF OUTSTANDING PROCUREMENTS
3. SUMMARY OF COMPLETED PROCUREMENTS
4. ITEMS DUE REPLACEMENT BY AGENCY
5. INVENTORY LISTING BY AGENCY
6. INVENTORY LISTING BY LOCATION
7. HAND RECEIPT REPORTS
8. LIST OF ITEMS DISPOSED OF

NON-STANDARD REPORTS

1. LOCATOR INVENTORY REPORTS
2. VALIDATION TABLES REPORTS

APPENDIX B

GUIDELINES AND METHODOLOGIES

FOR AN

INVENTORY OF AID/W NON-EXPENDABLE PROPERTY

TABLE OF CONTENTS

	PAGE NUMBER
I. BACKGROUND AND PURPOSE	I-1
II. INVENTORY GUIDELINES AND DATA COLLECTION METHODOLOGIES	II-1
1. STAFFING OF THE INVENTORY	II-1
2. IDENTIFICATION OF PROPERTY TO BE INVENTORIED	II-2
3. PLACEMENT OF IDENTIFICATION LABELS	II-3
4. COLLECTION OF PROPERTY INFORMATION	II-3
III. USE OF INVENTORY DATA	III-1

I. BACKGROUND AND PURPOSE

I. BACKGROUND AND PURPOSE

Implementation of an improved management system for non-expendable property will require an accurate inventory of property and the accumulation of specific data regarding the location and other attributes of the current inventory of property. AID/W has conducted inventories in the past; but due to several factors, these inventories did not produce records adequate for implementing an improved property records and inventory management system.

This report proposes the guidelines and the methodology to be employed during the conduct of an inventory which will insure the following:

- An accurate data base upon which to build and maintain a property control and records management system
- The collection of data consistent with system recommendations that have been presented to AID by SMC
- Collection of property information in a manner which will facilitate the efficient conduct of future property inventories and records reconciliations.

The guidelines and methodology for the conduct of the inventory proposed in this report are based upon observations and analysis of the present practices and interviews with key AID/W personnel.

II. INVENTORY GUIDELINES AND DATA COLLECTION METHODOLOGIES

II. INVENTORY GUIDELINES AND DATA COLLECTION METHODOLOGIES

An inventory of AID/W non-expendable property should accomplish the following goals:

- An accurate and efficient collection of data which will serve as a data base for an automated property records and inventory management system
- Identification of the location and condition of all non-expendable property to insure maximum control of regular as well as special property and equipment, to facilitate control of warehouse inventories and to identify property procurement, maintenance and replacement requirements
- Provide the ability to perform subsequent inventories and to maintain the property control and records management system with a minimum level of effort and without creating additional staffing requirements.

1. STAFFING OF THE INVENTORY

To insure that the inventory is conducted in the most efficient and effective manner possible, staffing should be in the form of several "inventory and data collection teams" that consist of two persons each and are responsible for the collection of data in all AID/W offices including the MO/GS warehouse. By utilizing the same personnel throughout the inventory, the following advantages will be realized:

- The total person-hours required to perform the inventory will be reduced due to the expertise that team members will develop
- The amount of training or instruction time required will be minimized
- Continuity of team members will assure that the data collected will be produced in the most consistent and reliable manner possible.

An orientation session should be conducted to familiarize team members with the goals and objectives of the inventory, the BARCODE system of labeling and identification, inventory forms and procedures and the anticipated performance schedule. An orientation session of this nature will clarify the roles and responsibilities of inventory team members, provided an explanation of the procedures and forms to be used in the inventory and allow for the development of an overall understanding of the purpose of the inventory. The orientation must emphasize the importance of accuracy and consistency in collection and recording of property inventory information.

2. IDENTIFICATION OF PROPERTY TO BE INVENTORIED

In conducting the inventory, it is important to establish guidelines regarding which items should be included in the inventory. In some offices, furnishings may consist of a mixture of items owned by AID, items owned by the State Department, items leased by AID and items belonging to other agencies. It is recommended that all items for which AID has control responsibility be included in the inventory (i.e. all items owned, leased or on-loan to AID should be included). The bureau Management Liaison Officers should be consulted to resolve any uncertainty regarding items located in AID offices but which may be leased, on-loan or owned by other organizations.

The inclusion of a large number of low cost items in the inventory would increase the workload for this effort substantially. For this reason, it is suggested that only items having a purchase price of $50 or above be included in the inventory. The General Services Administration Catalog provides purchase prices for most items.

In some cases, it may not be feasible to affix BARCODE or other identifying labels due to the nature or configuration of the property. In such cases, the property should still be included in the inventory.

3. PLACEMENT OF IDENTIFICATION LABELS

In performing the initial inventory, it will be necessary to place, to the extent feasible, a BARCODE label on each item of property included in the inventory. Labels should be placed in positions which allow them to be easily read in subsequent inventories, but not mar the appearance of items labeled.

The presence of a BARCODE label on an item may be considered to imply that the property is AID owned. This could result in confusion since items which are leased by AID should also have BARCODE labels. To avoid confusion, it is suggested that a label stating that property is "NOT AID OWNED" be applied adjacent to BARCODE labels on any items not owned by AID. Property owned by AID should be marked with the label currently used to designate AID owned property.

4. COLLECTION OF PROPERTY INFORMATION

In conducting the initial inventory, it will be necessary to collect certain information concerning each item included in the inventory. The collected information will be used to establish a database for an automated property management and records control system. Exhibit I indicates the information which should be collected and recorded. The format used should be custom designed to facilitate entry to the computerized data base. Exhibit II shows the inventory form used by the Post Property System; it can be readily adapted to the AID/W inventory requirement.

One data form should be completed for each item included in the inventory. Since a number of the informational items on the data form will not change as the inventory proceeds from one property item to the next, the persons performing the inventory need not record repeated information as long as the inventory forms are numbered consecutively.

INVENTORY FORM NO. _____

AID NON-EXPENDABLE PROPERTY INVENTORY AND DATA COLLECTION FORM

A.

1. INVENTORY CONDUCTED BY: _____ 2. DATE OF INVENTORY: _____

B.

3. BUREAU/OFFICE: _____ 4. BUILDING CODE: _____

5. LOCATION CODE: _____ 6. ROOM NUMBER: _____

C.

7. PROPERTY ITEM DESCRIPTION: (A) _____

(B) _____

8 BARCODE NUMBER: _____ 9. ITEM CODE: _____

10. MANUFACTURER'S SERIAL NUMBER: _____

11. PROPERTY CONDITION: _____

12. OWNERSHIP:
- ☐ AID OWNED
- ☐ LEASED
- ☐ ON-LOAN
- ☐ OTHER

13. RESPONSIBLE PERSON: _____

EXHIBIT I

LOCATOR INVENTORY RECORD DATA ELEMENTS

PROCUREMENT IDENTIFIER NUMBER	
AGENCY	
ITEM CODE	
DESCRIPTION	
ITEM STOCK NUMBER	
DATE RECEIVED	
PROPERTY NUMBER	
FBC LOCATION CODE	
ROOM CODE	
CONDITION CODE	
DATE ISSUED	
RESPONSIBLE OFFICER	
ADDRESS	
LIFE CYCLE	
SERIAL NUMBER	
UNIT COST	
DAYS AT TEMPORARY LOCATION	

The following guidance is provided for completing each informational item on the data form:

- Inventory Form Number - Each data form used should be numbered consecutively. Since the forms are numbered soley to aid maintenance of the sequence of forms completed, the number can be either a five digit Arabic number or any combination of letters and digits that will accomodate up to 99,999. By numbering each inventory form, individuals performing the inventory will not be required to enter repeated information for property items subsequently inventoried.

- Date of Inventory - The month and day on which the inventory was performed should be entered on the first data form completed each day.

- Inventory Conducted By - The name of the team leader and inventory clerk should be entered on the first data form completed each day.

- Bureau/Office - Record the organizational code of the AID office which has responsibility for the property item. The first four digits of the nine digit position number as found in the AID Staffing Pattern Report (form AID-OPM-D03) should be used. The organizational code need only be recorded for the first item inventoried in each office.

- Building Code - Record a code which uniquely identified the building in which the property is physically located. Recording "Main State","Warehouse" or the appropriate State Department Annex number is recommended.

- Location Code - Unique location codes should be developed for each building where appropriate. The code can be developed according to floor, wing, etc.

- Room Number - Unique room numbers can be designated for each location. In most instances, the last two digits of pre-existing room numbers can serve as the room numbers. The room number should be recorded on the inventory form for the first item inventoried within the room.

- Property Item Description - To the extent desired and appropriate, two levels of property description can be used. The first level, "a", should correspond to the item description as described in the Post Property System Item Code Listing. The secondary, "b", description should be adequate to clearly describe the item for maintenance management and replacement planning. A property description should be recorded for each item. A set of items may be treated as a single item if its components are noted in the description.

- BARCODE Number - Attach a BARCODE sticker to each item of property and record the Arabic number from the sticker. If a BARCODE sticker cannot be affixed to the property item, record the number 999,999 on the inventory form.

- Item Code - The item code is used to identify the property category for the item. The item code should be recorded for each item of property. The Post Property System Item Code Listing is recommended for identifying office furniture and equipment. Unutilized numbers in the item code listing can be used to code property used by AID/W but not listed in the Post Property System Item Code List.

- Manufacurer's Serial Number - Locate the manufacturer's serial number on typewriters, adding machines and other equipment and record the complete number. Office furniture and some other equipment may not have manufacturer's serial numbers.

- Property Condition - The condition of each item of property should be coded as ACC (acceptable for use), REF (needs refurbishing) or REP (should be replaced).

- Ownership - The appropriate box should be checked to indicate whether the property is owned by AID, is being leased, has been loaned to AID or is in some other ownership category. The Management Liaison Officers for each bureau should be consulted to resolve uncertainty regarding ownership. When AID ownership is ascertained, an AID sticker should be affixed to the property if one is not already in place.

Responsible Person - Record the name of the individual to whom the property has been issued. In the case of general use or unassigned property, enter the name of the Bureau Management Liaison Officer or other Bureau designee. It is essential that a responsible person be assigned for each item of property. Use the AID telephone directory as a reference for correct spelling of the name of the responsible person.

Prior to the start of the inventory process, a reference handbook should be developed so that those persons conducting the inventory will have all of the needed reference information readily accessible. It may be necessary to incorporate references and guidelines in addition to those discussed in this appendix to assure that the inventory methods and procedures are fully responsive to system implementation requirements.

III. USE OF INVENTORY DATA

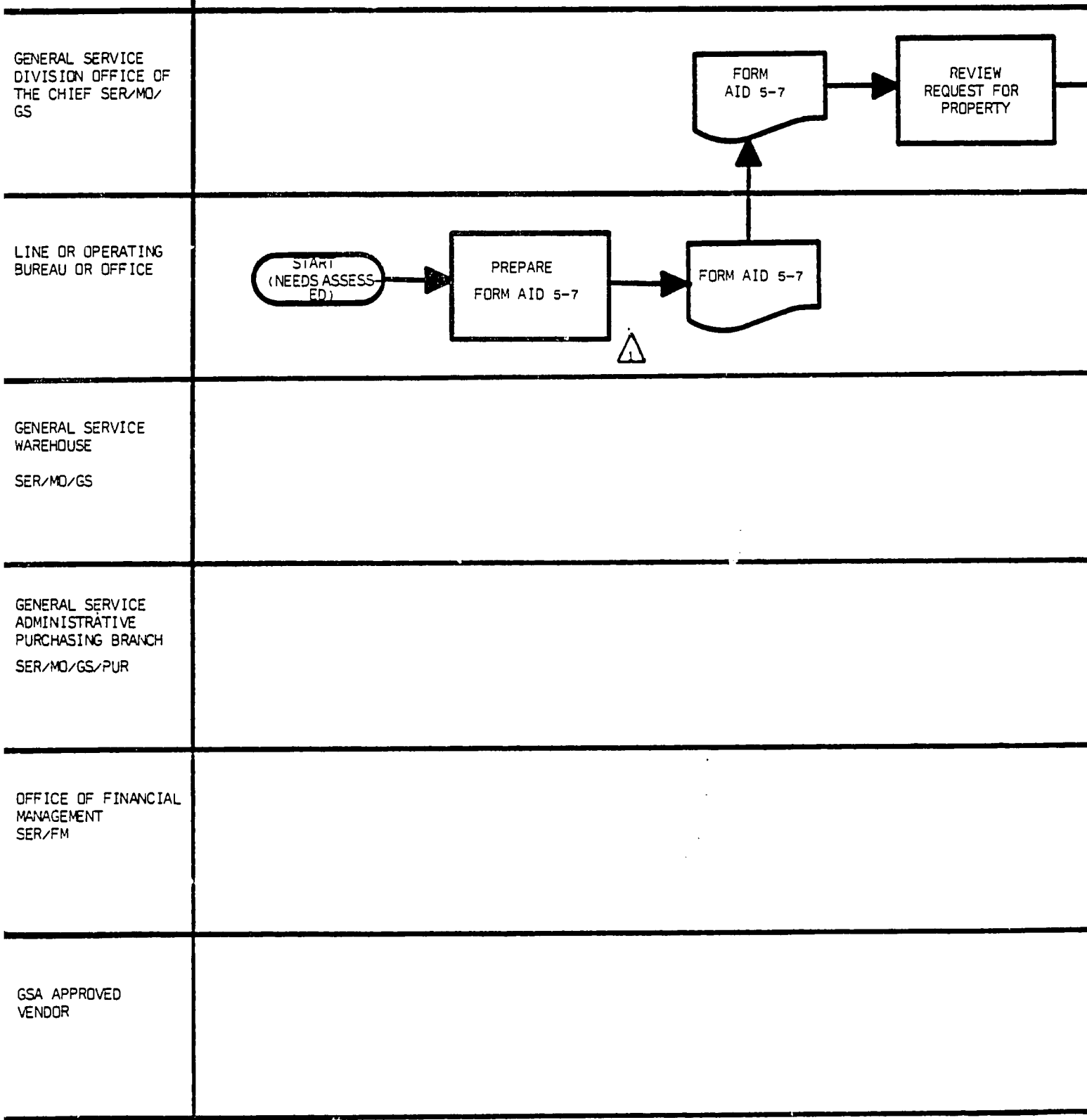
III. USE OF INVENTORY DATA

The data collected during the inventory will be subsequently combined with other data that can be independently developed and keystroked for entry into the computerized data bank. It is anticipated that selected data verification can be accomplished during the keying and subsequent data input operations. However, it will be very important that the data from the inventory be recorded in a highly accurate manner since it will be the one and only time that a physical determination will be made regarding all of the attributes of the existing inventory of property. It is anticipated that subsequent to initial input of information regarding the existing non-expendable property, updating of status information and inputs of data for newly acquired property will occur on a continuous basis. Future physical inventories will essentially consist of gathering BARCODE Numbers using an electronic wand and noting property locations. The data gathered will be compared against the centrally maintained property inventory records. Discrepancies will be reconciled and an updated and corrected inventory record will be automatically created.

APPENDIX C

FLOWCHART OF CURRENT PROCESS FOR AID/W NON-EXPENDABLE PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES

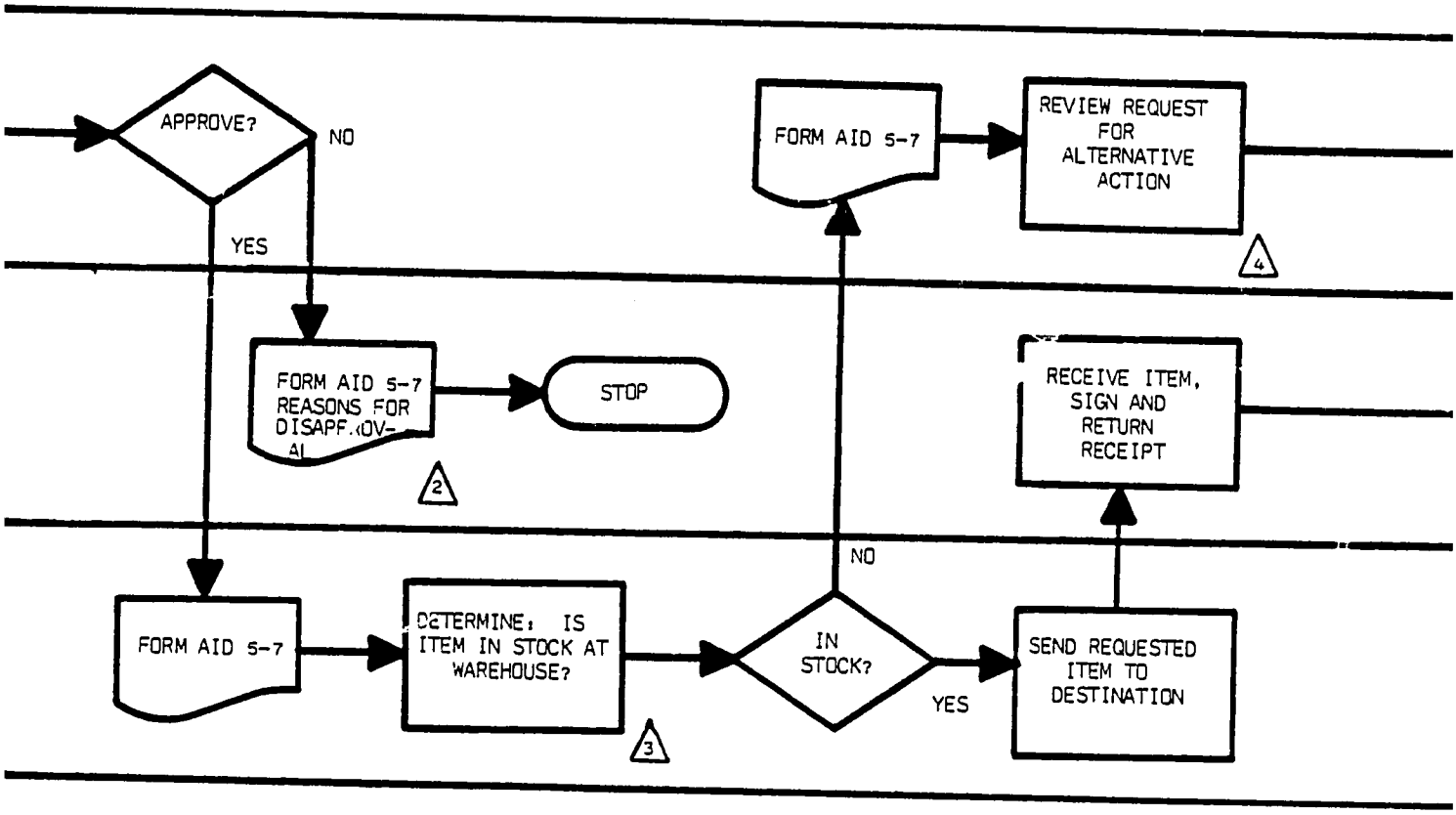
CURRENT PROCESS FOR AID/W NON-EXPENDABLE
PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES



COMMENTS

1 FORM AID 5-7 'REQUEST FOR PROPERTY' (REQUISITION).

CURRENT PROCESS FOR AID/W NON-EXPENDABLE
PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES



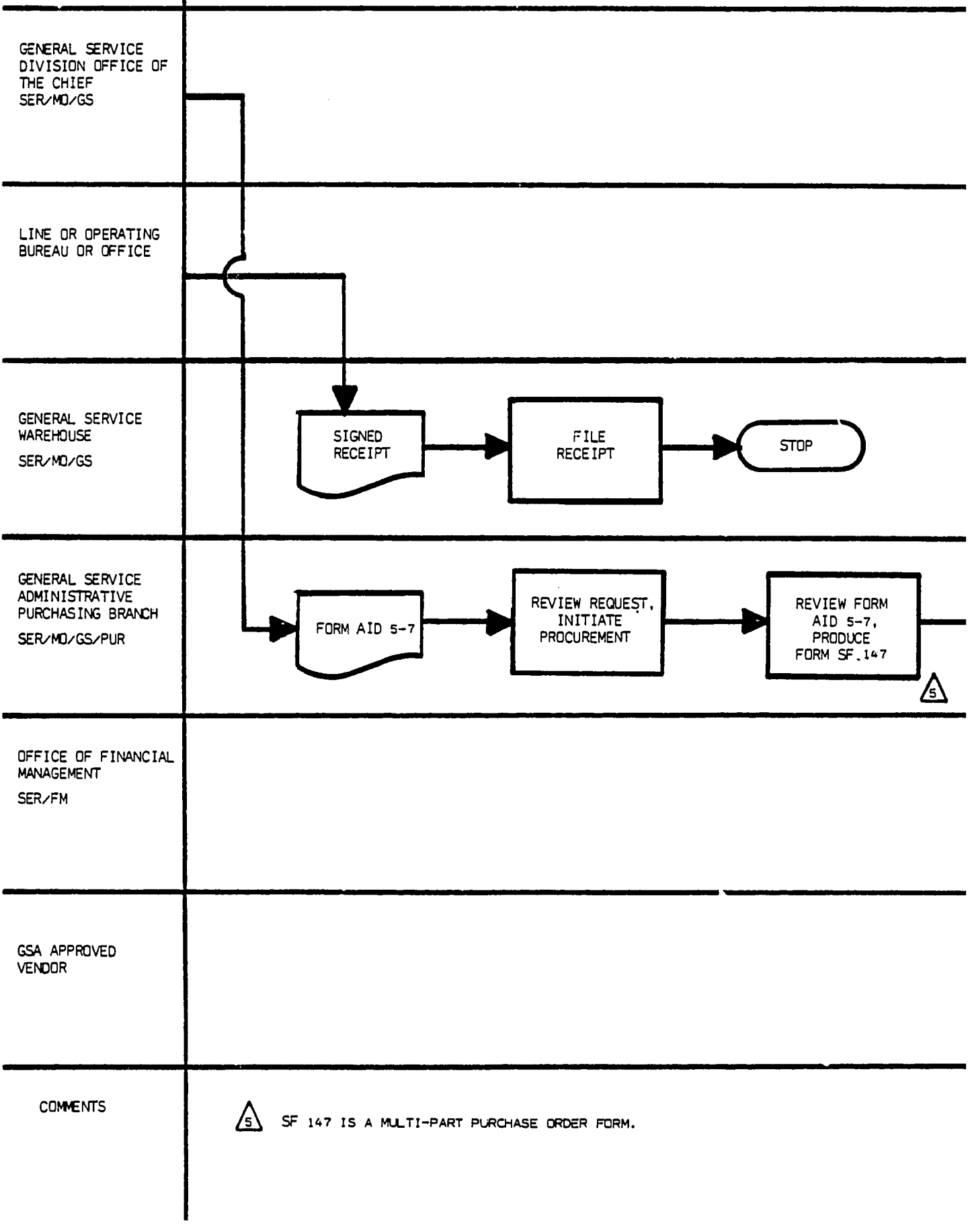
2 THIS INVOLVES CONSIDERATION OF BUDGET CONSTRAINTS, STANDARDS AND CRITERIA FOR AUTHORIZATION, AND CURRENT PROPERTY INVENTORIES. IF A REQUEST IS REJECTED, IT IS RETURNED TO THE REQUESTOR WITH REASONS FOR REJECTION.

3 PURCHASE ORDER REQUISITION NUMBER IS ASSIGNED AT THIS POINT. A NUMBER IS ASSIGNED TO ALL REQUISITIONS FOR ITEMS NOT IN STOCK.

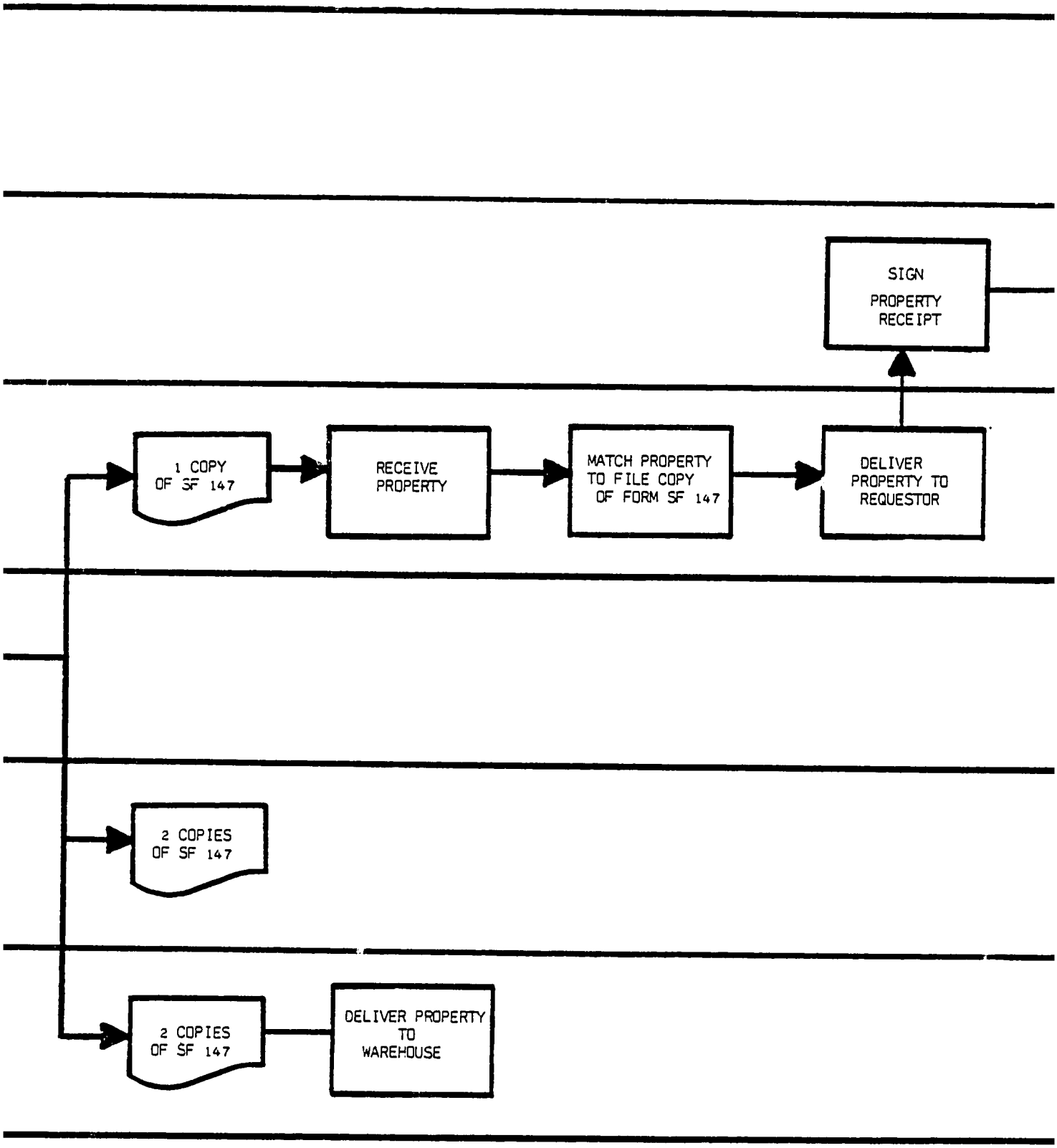
4 ALTERNATIVE ACTION MAY INCLUDE:

- SUBSTITUTION OF ANOTHER ITEM
- REASSIGNMENT OF EQUIPMENT
- PROCUREMENT

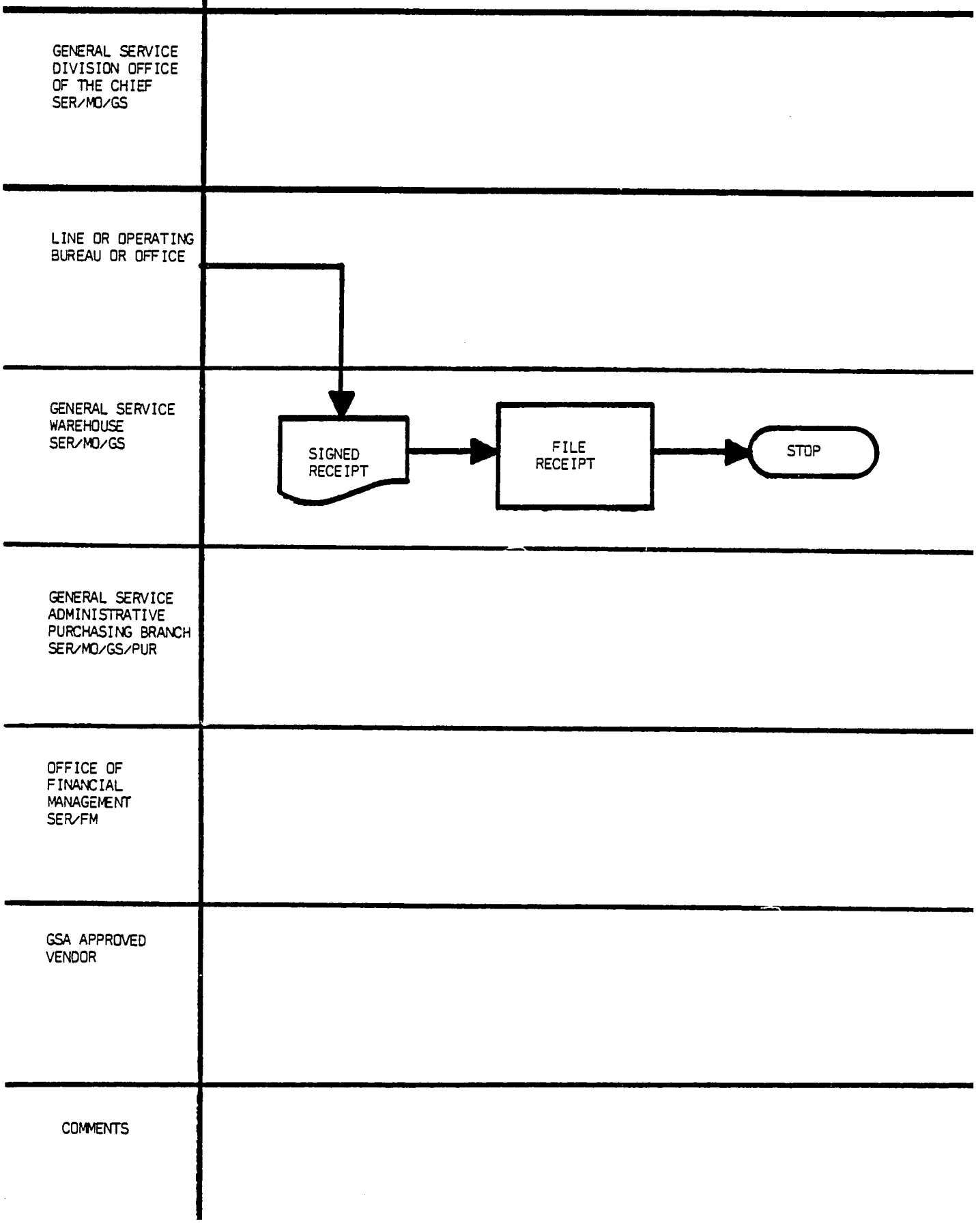
CURRENT PROCESS FOR AID/W NON-EXPENDABLE
PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES



CURRENT PROCESS FOR AID/W NON-EXPENDABLE
PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES



CURRENT PROCESS FOR AID/W NON-EXPENDABLE
PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES



APPENDIX D

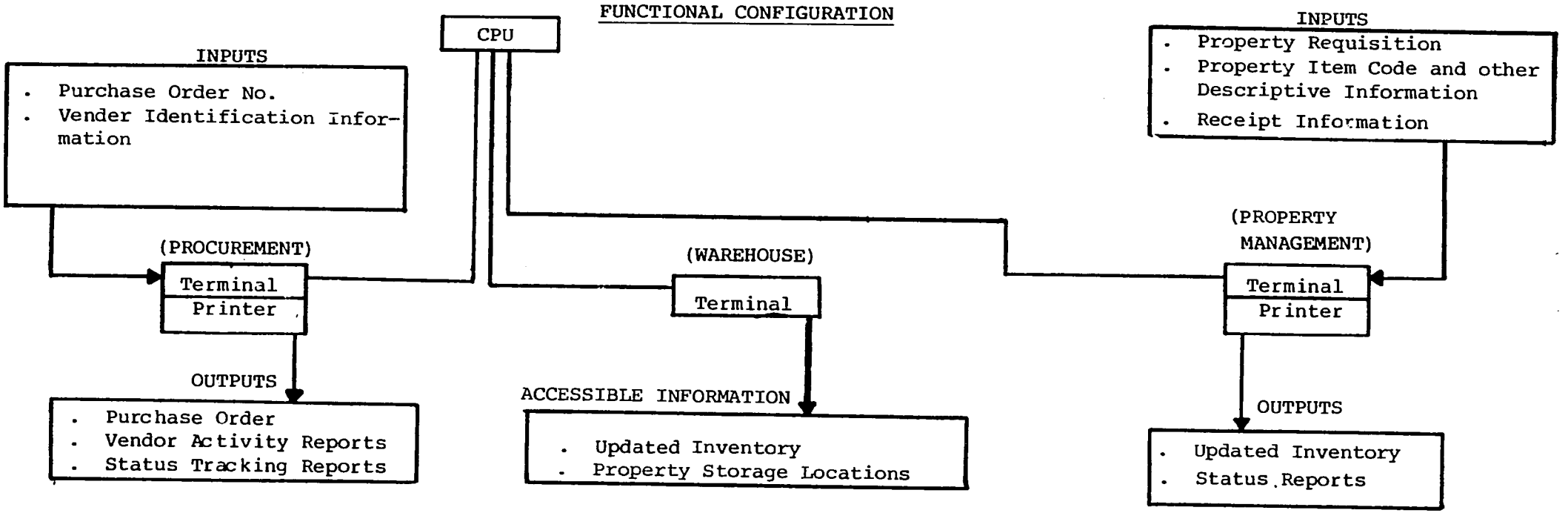
SYSTEMS CONCEPT SCHEMATICS

PROPERTY PROCUREMENT

ACTIVITIES PERFORMED OR SUPPORTED

- Procurement of New Property
- Procurement Status Reporting
- Vendor Information Reporting
- Property Receiving

FUNCTIONAL CONFIGURATION

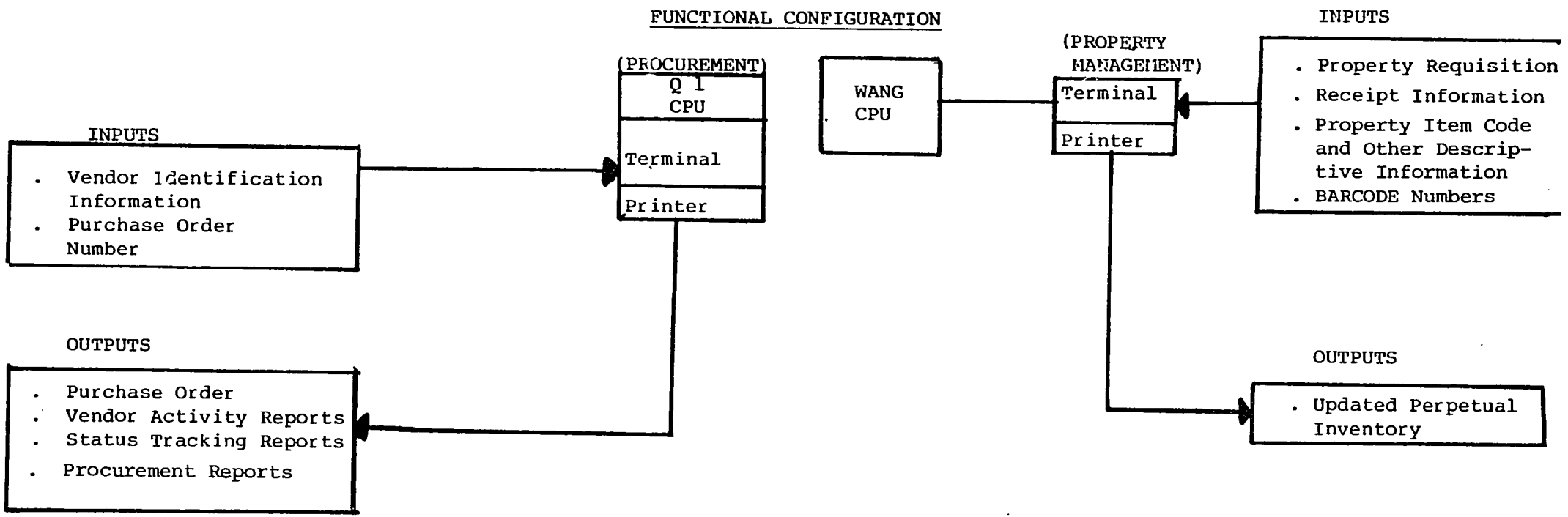


PROPERTY PROCUREMENT (INTERIM SYSTEM)*

ACTIVITIES PERFORMED OR SUPPORTED

- Procurement of New Property
- Procurement Status Reporting
- Vendor Information Reporting

FUNCTIONAL CONFIGURATION

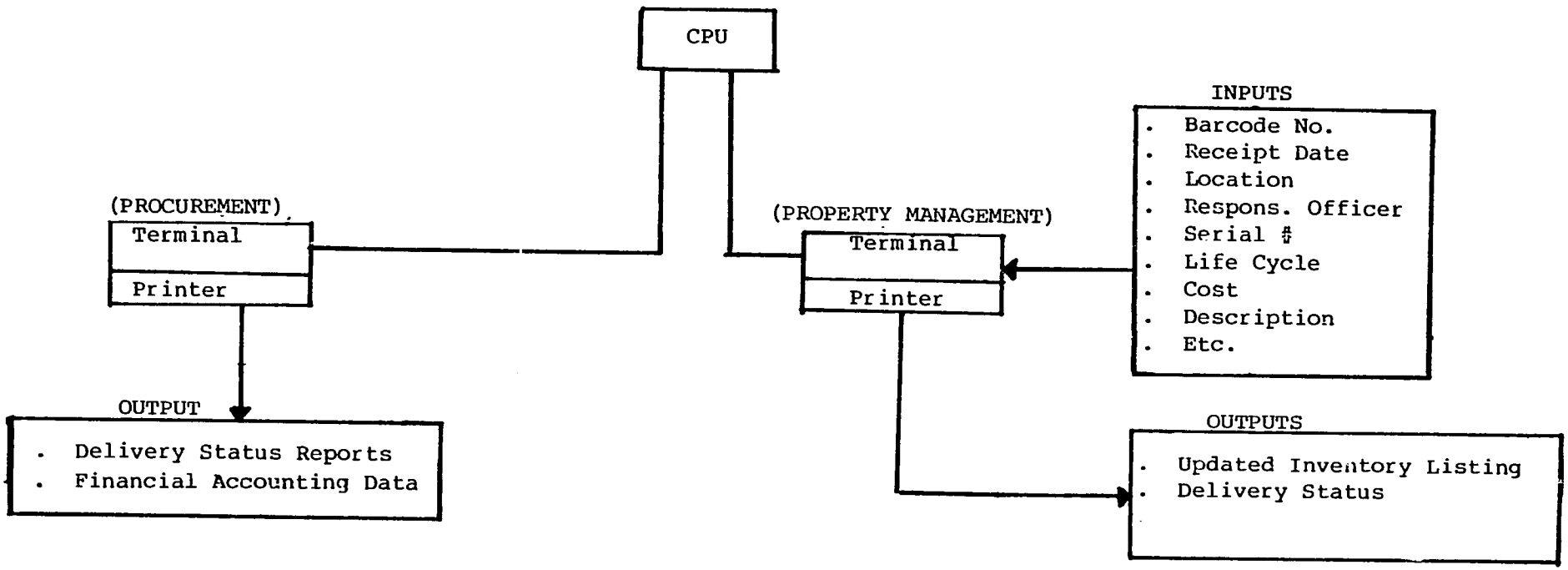


* Interim System to be operated prior to implementation of the WANG Procurement Module.

RECEIPT AND DELIVERY

Activities Performed or Supported	
. Receiving - Count - Condition - Accountability Assigned	Identification - BARCODE Labeling - Data Collection
. Delivery	Accounting

FUNCTIONAL CONFIGURATION

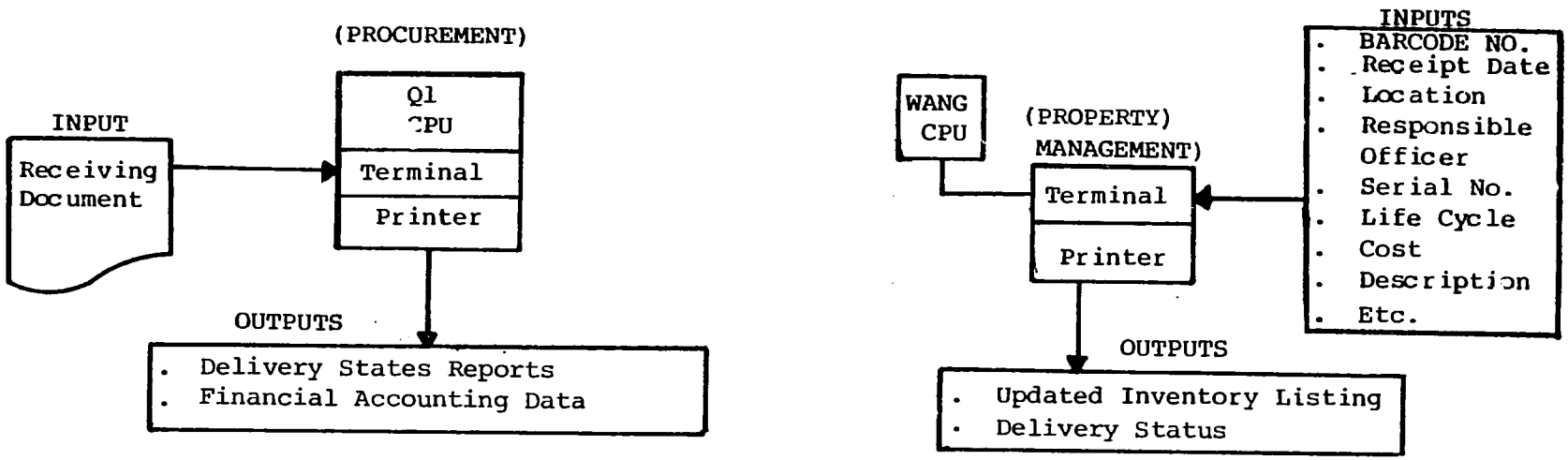


RECEIPT AND DELIVERY (INTERIM SYSTEM)*

ACTIVITIES PERFORMED OR SUPPORTED

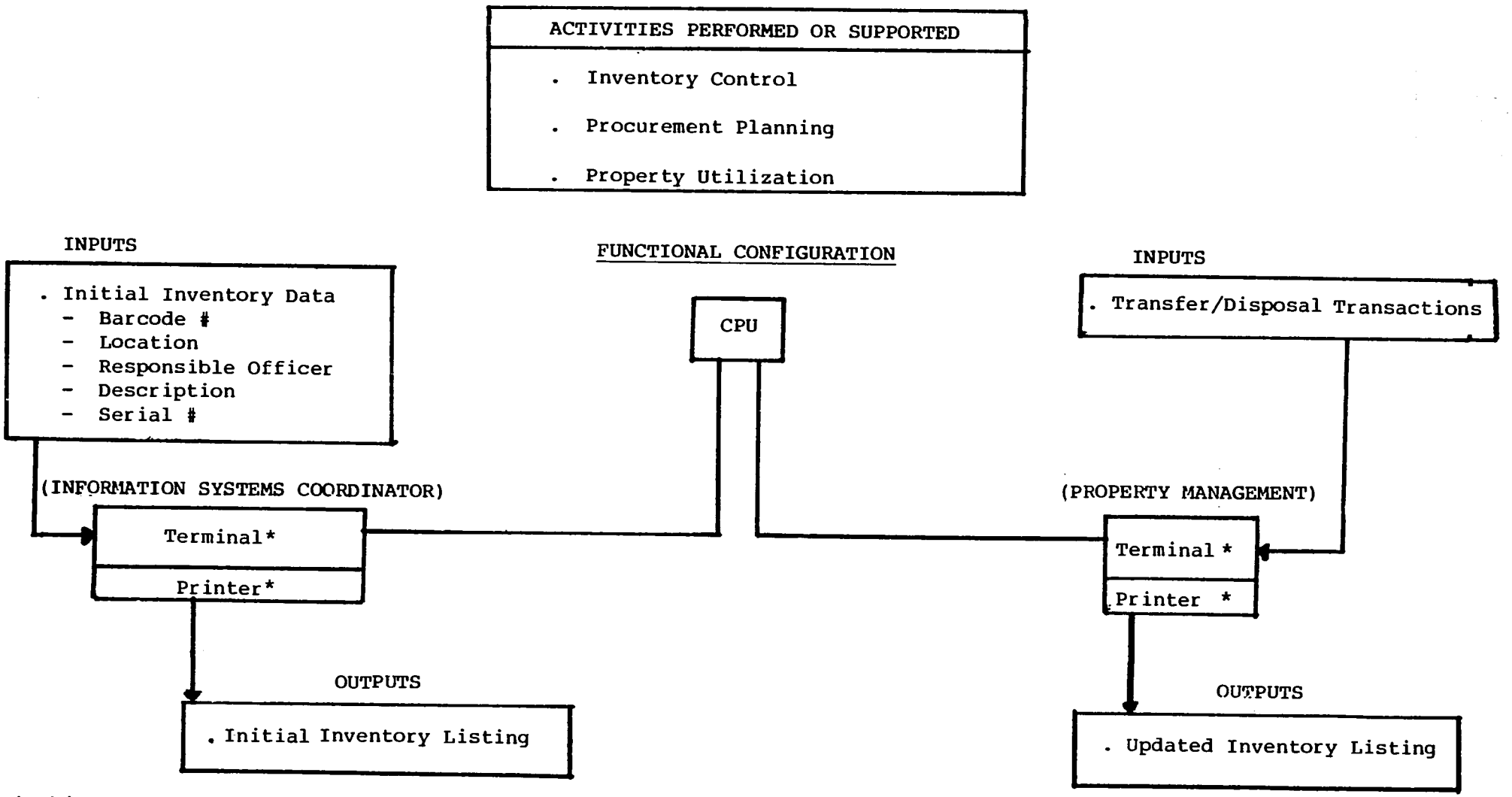
- Receiving
  - Count
  - Condition
  - Accountability Assigned
- Delivery
- Identification
  - BARCODE Labeling
  - Data Collection
- Accounting Control

FUNCTIONAL CONFIGURATION



* Interim System to be operated prior to integration of the WANG Procurement Module.

INVENTORY RECORDS DEVELOPMENT AND MAINTENANCE



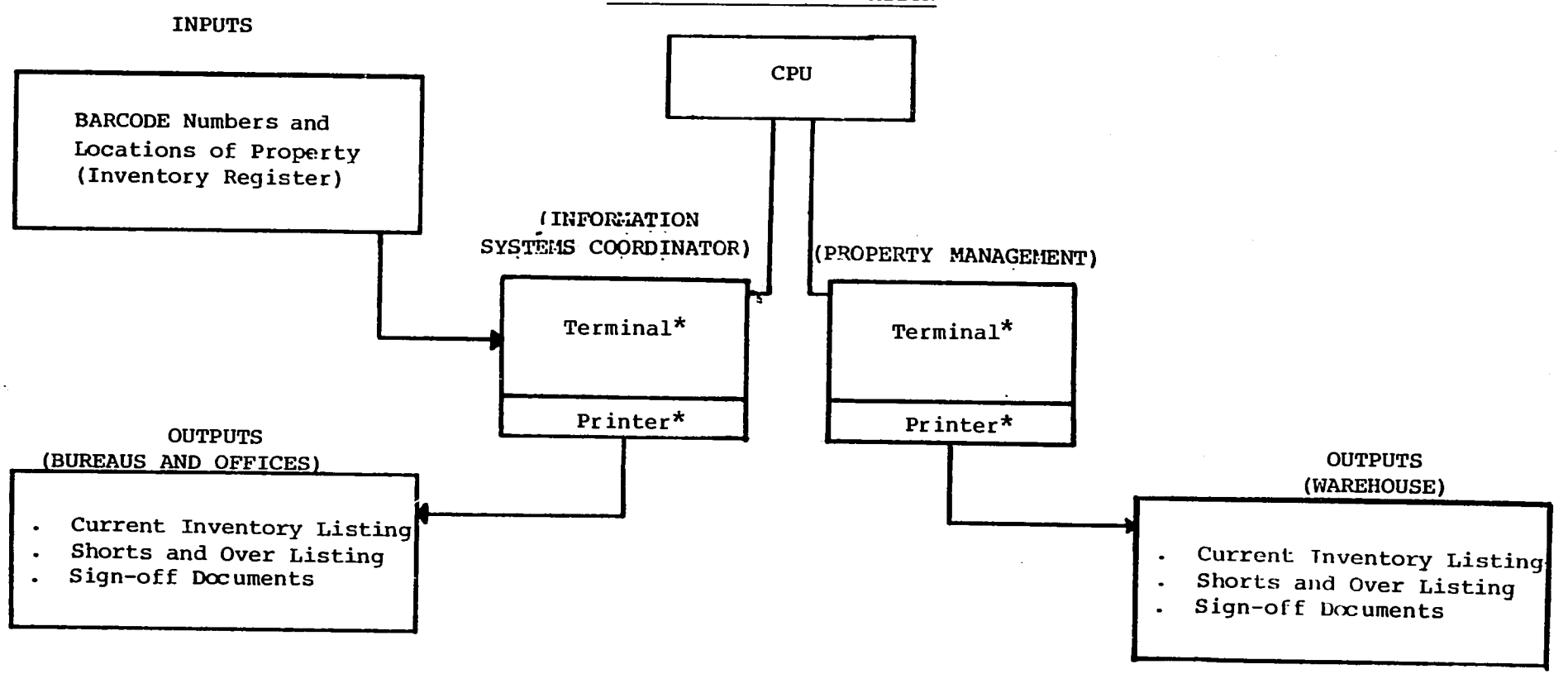
* This represents a single Terminal and Printer which is shared by the System Manager and Property Manager.

PHYSICAL INVENTORY AND RECORDS RECONCILIATION

ACTIVITIES PERFORMED OR SUPPORTED

- Physical Control of Property
- Property Management Reporting

FUNCTIONAL CONFIGURATION

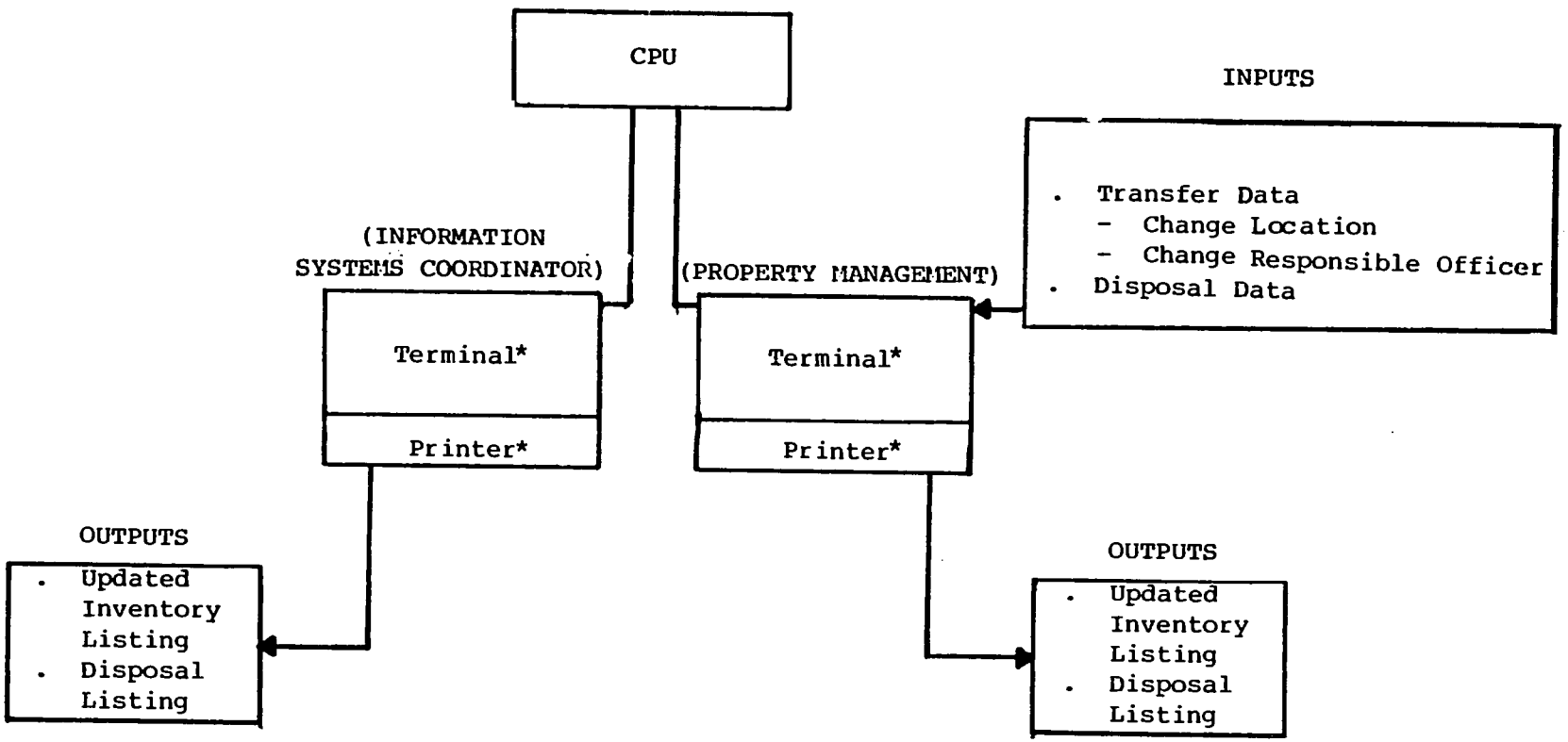


* This represents a single Terminal and Printer which is shared by the System Manager and Property Management.

TRANSFER AND DISPOSAL

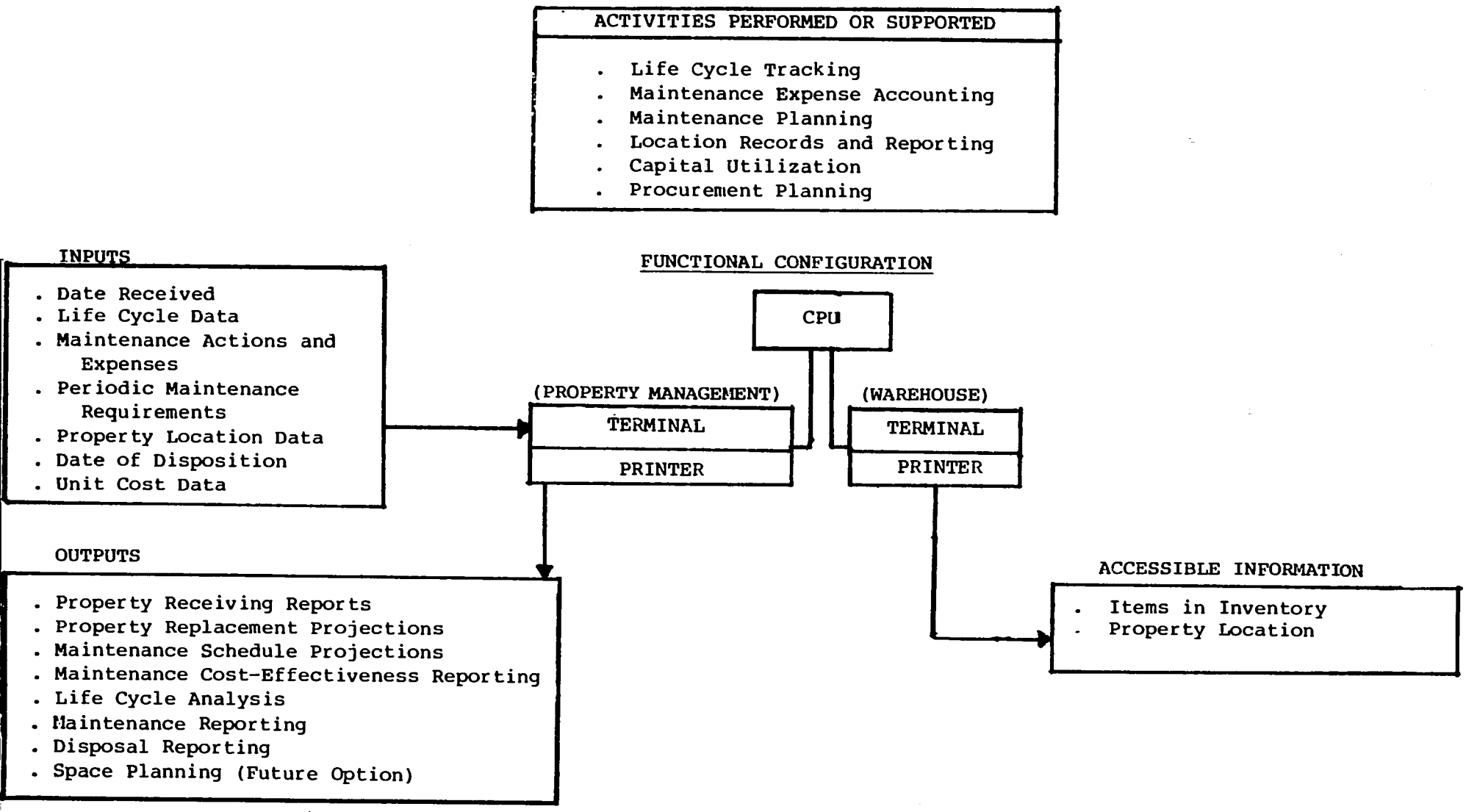
ACTIVITIES PERFORMED OR SUPPORTED
. Perpetual Inventory Accounting . Property Utilization . Life Cycle Tracking . Disposal/Replacement/Maintenance Projections

FUNCTIONAL CONFIGURATION



* This represents a single Terminal and Printer which is shared by the System Manager and Property Management.

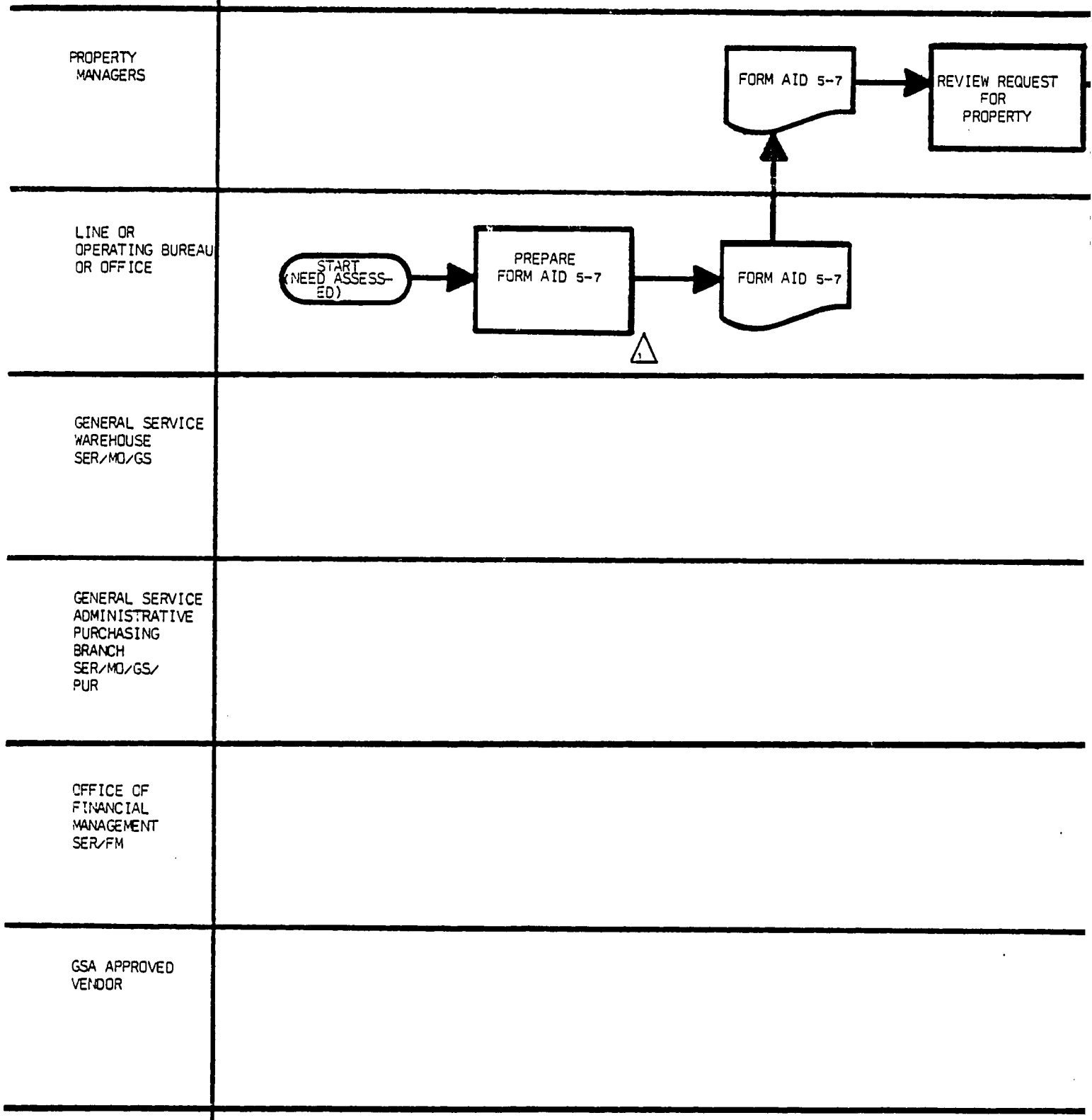
PROPERTY UTILIZATION MANAGEMENT



APPENDIX E

FLOWCHART OF RECOMMENDED PROCESS FOR AID/W NON-EXPENDABLE PROPERTY REQUISITION AND PROCUREMENT ACTIVITIES

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE PROPERTY PROCUREMENT ACTIVITIES

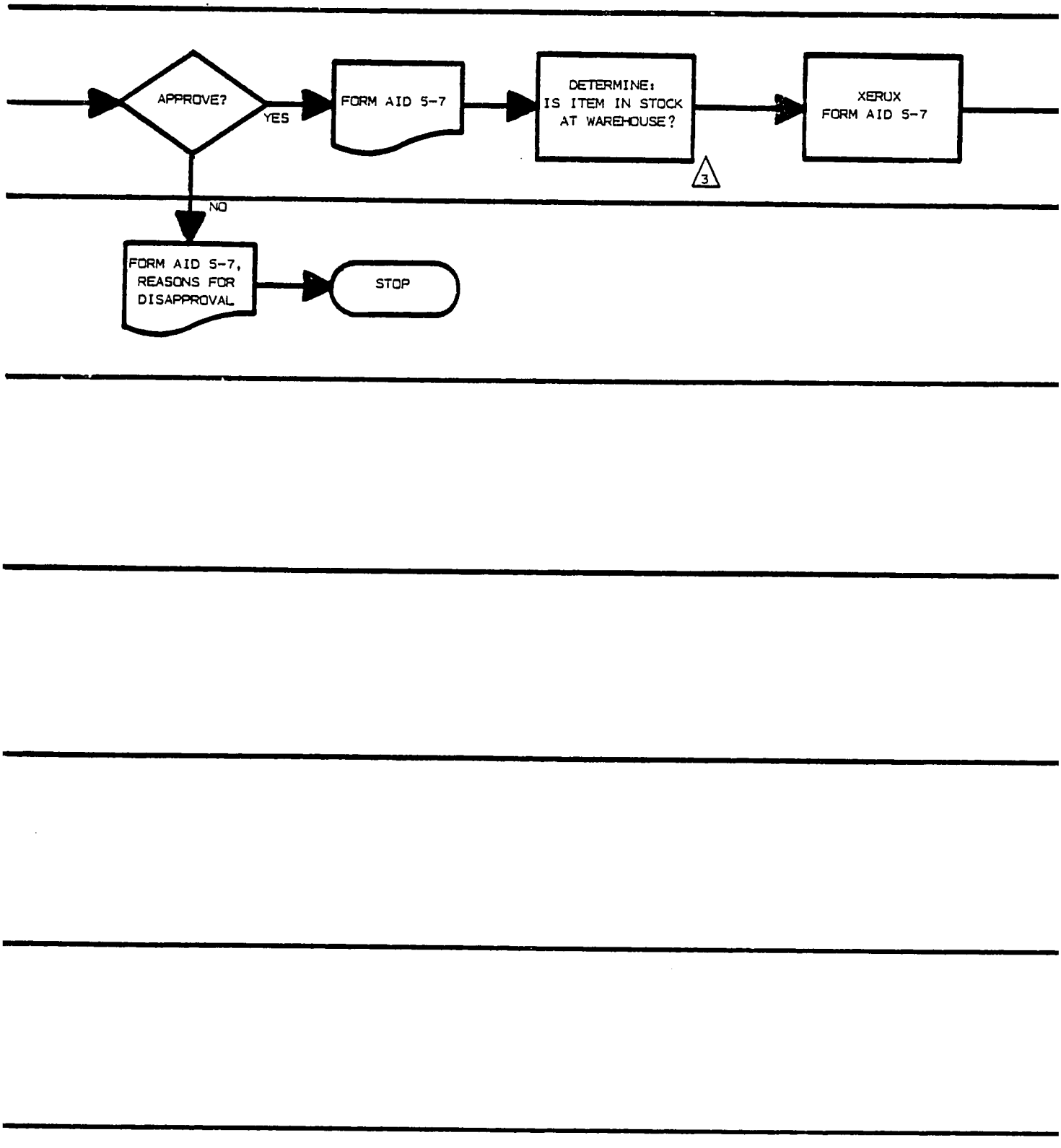


COMMENTS

1. FORM AID 5-7 'REQUEST FOR PROPERTY' (REQUISITION)

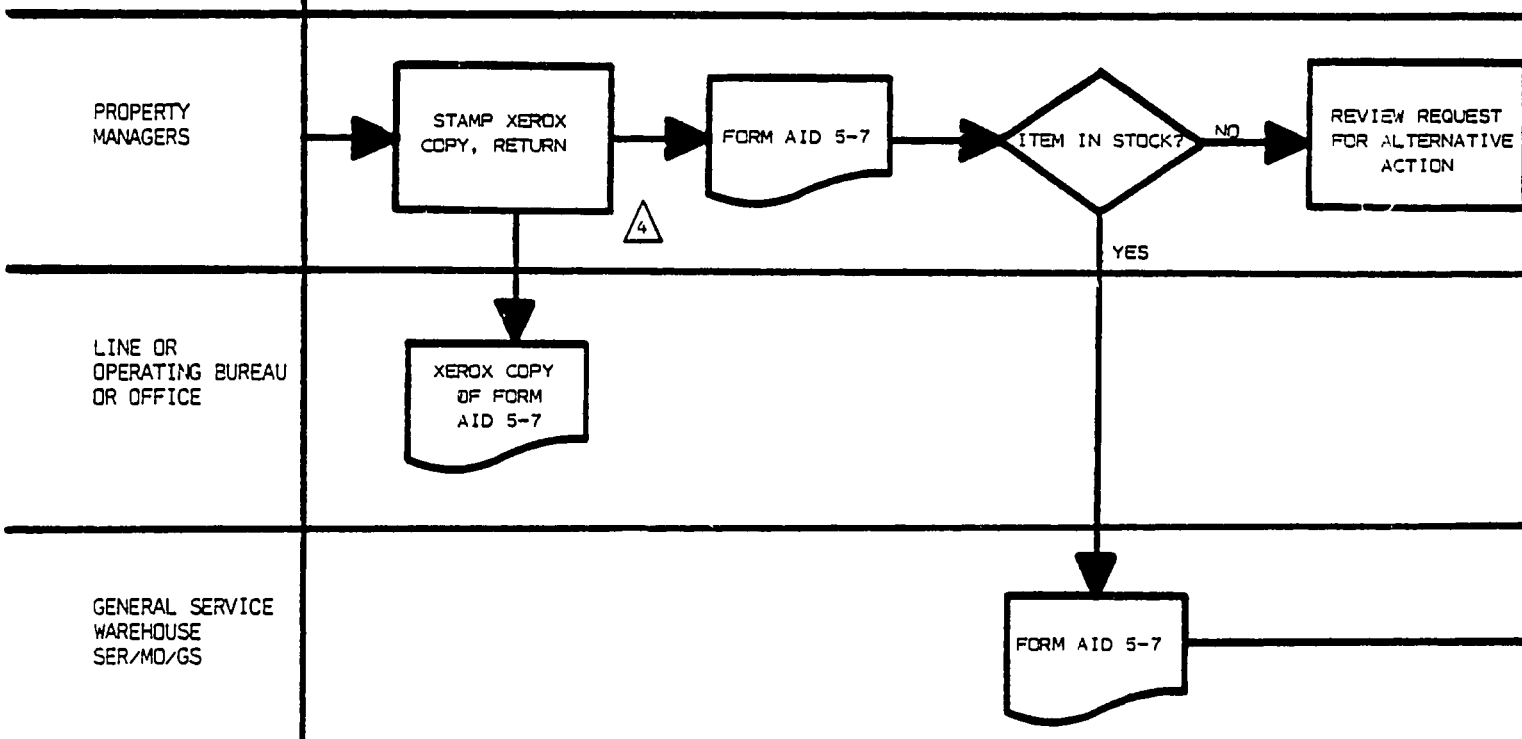
2. THIS INCLUDES CONSIDERATION OF BUDGET CONSTRAINTS, STANDARDS AND CRITERIA FOR AUTHORIZATION, AND CURRENT PROPERTY INVENTORIES. IF A REQUEST IS REJECTED, IT IS RETURNED TO THE REQUESTOR WITH REASONS FOR REJECTION.

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE
PROPERTY PROCUREMENT ACTIVITIES



3 THIS CAN BE DETERMINED BY ACCESSING PROPERTY MANAGEMENT SYSTEM RECORDS THROUGH A REMOTE TERMINAL.

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE PROPERTY PROCUREMENT ACTIVITIES



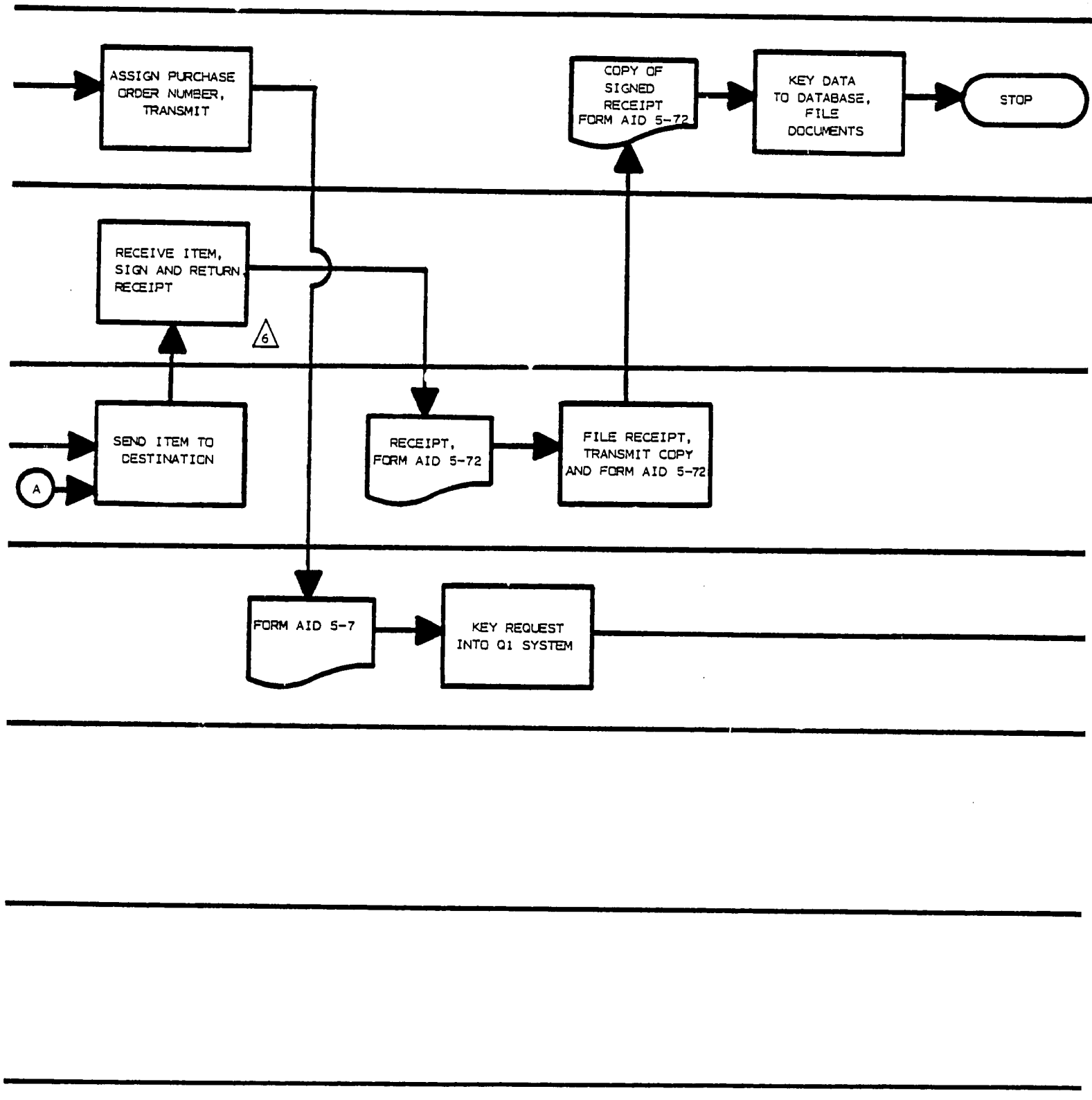
COMMENTS

4 A XEROX COPY OF FORM AID 5-7 IS MADE AND STAMPED TO INDICATE THE CURRENT STATUS OF THE REQUISITION. TWO STAMPS WILL BE NEEDED FOR THIS PURPOSE:

"THE ITEM YOU HAVE REQUESTED IS IN STOCK AND WILL BE DELIVERED AS SOON AS POSSIBLE"

" THE ITEM YOU HAVE REQUESTED IS NOT IN STOCK, BUT PROCUREMENT HAS BEEN INITIATED".

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE PROPERTY PROCUREMENT ACTIVITIES

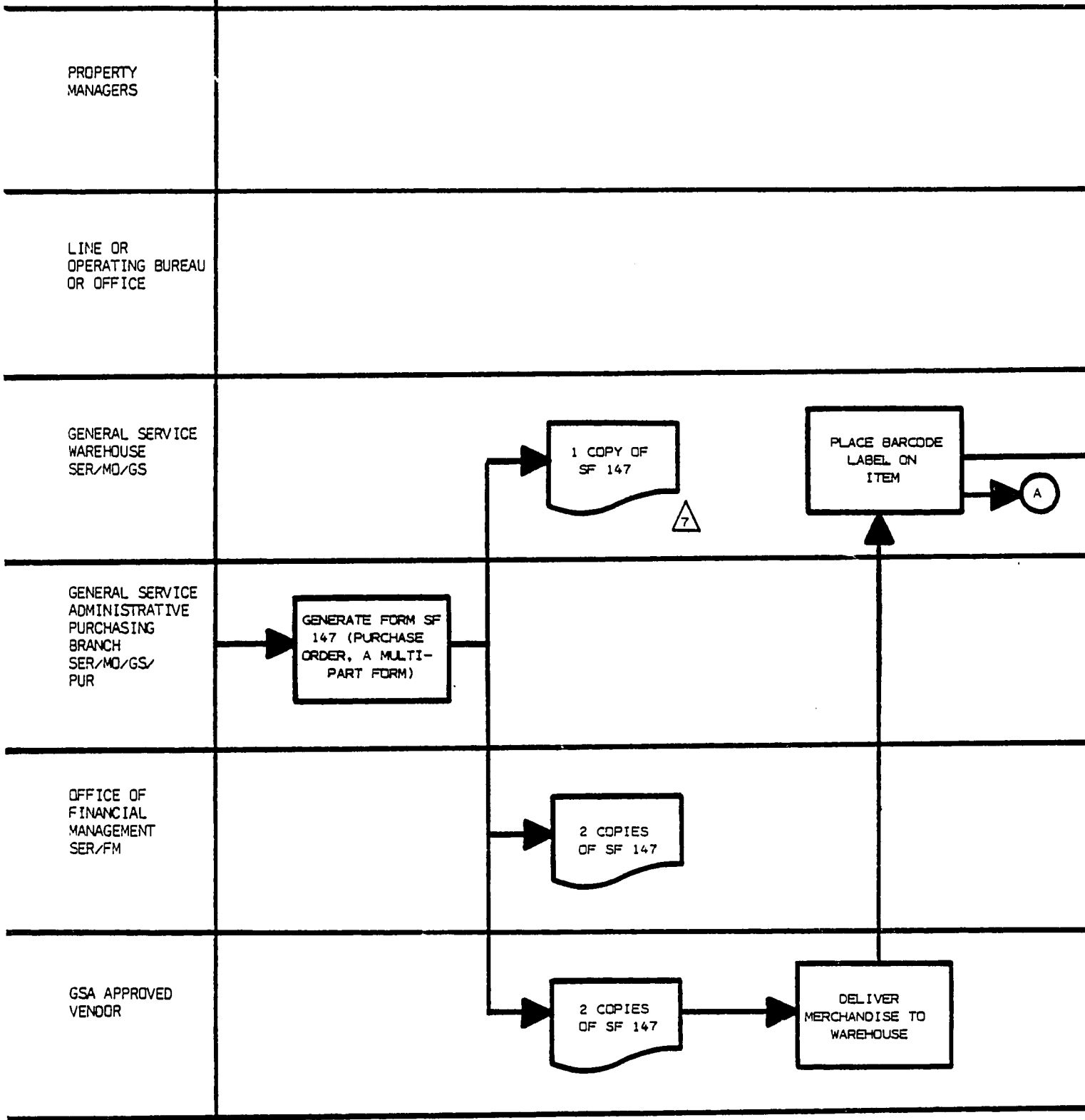


5 ALTERNATIVE ACTION MAY INCLUDE:

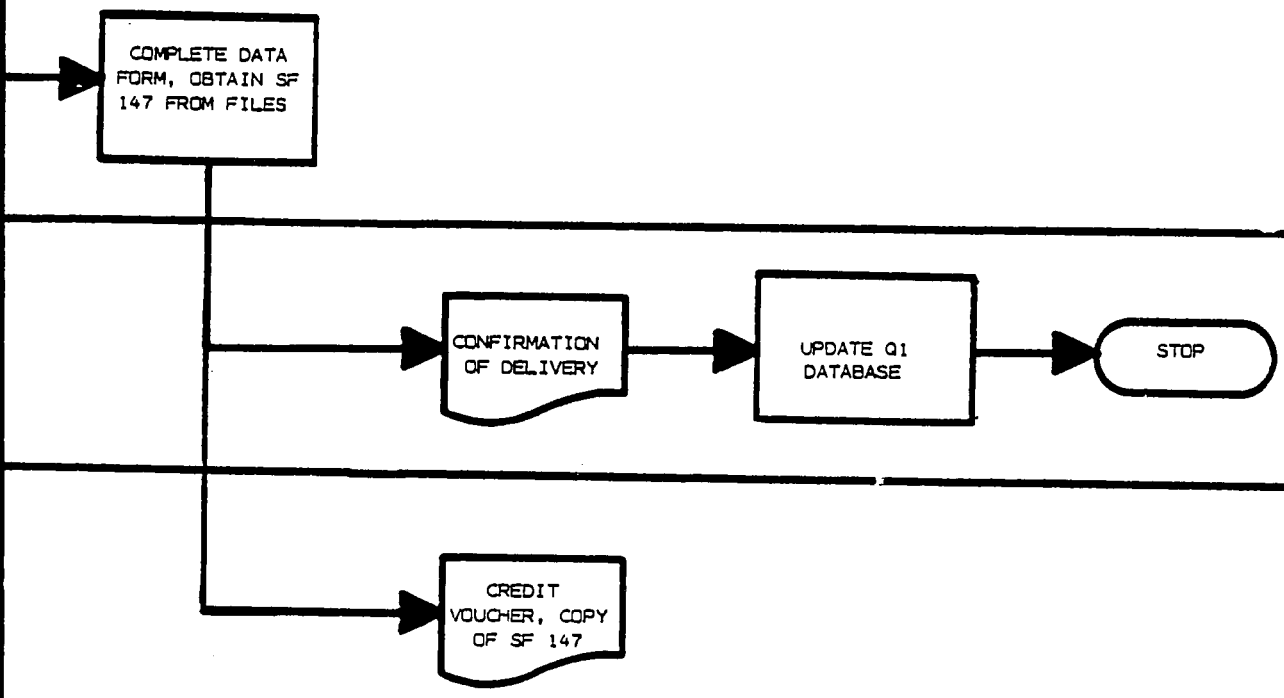
- SUBSTITUTION OF ANOTHER ITEM
- REASSIGNMENT OF EQUIPMENT
- PROCUREMENT

6 A COPY OF FORM AID 5-7 IS USED AS A RECEIPT. FORM AID 5-72 IS THE "PERSONAL CUSTODY PROPERTY RECEIPT.".

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE PROPERTY PROCUREMENT ACTIVITIES



COMMENTS

7 THIS COPY SERVES AS A RECEIVING REPORT.

RECOMMENDED PROCESS FLOW FOR AID/W NON-EXPENDABLE PROPERTY PROCUREMENT ACTIVITIES