JOINT LEGISLATIVE AUDIT & REVIEW COMMISSION

THE VIRGINIA GENERAL ASSEMBLY

OPERATIONAL REVIEW

WORKING CAPITAL FUNDS

IN VIRGINIA

February 11, 1976

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ABSTRACT

Section 2.1-196.1 of the Code of Virginia designates the Joint Legislative Audit and Review Commission responsible for authorizing the establishment of various working capital funds. As one of eight types of funds commonly used in governmental accounting, working capital funds are established to record the value of goods and services provided by one State agency to other agencies. Presently, there are seventeen working capital funds in the Commonwealth, including five administered by three State agencies, and twelve administered by four institutions of higher education. This report defines specific criteria for determining whether a service should be financed through a working capital fund, and recommends elimination of funds which do not meet these criteria. Financial and operational reviews of services appropriately financed through working capital funds comprise the major portion of the report: Central Warehouse, Central Telephone, Automated Data Processing, and Printing and Graphics. Finally, JLARC staff recommendations for improved legislative oversight and financial management of working capital funds are presented.

SUMMARY

WORKING CAPITAL FUNDS IN VIRGINIA

Working capital funds are intended to finance and account for central support services provided by one State agency to other State agencies. Today, initiation of a working capital fund involves two actions: authorization by the Joint Legislative Audit and Review Commission for the Comptroller to establish a set of accounts on his books; and, an advance of monies to the fund to finance initial personnel, material, and equipment necessary to provide fund services. The fund recovers its costs by charging customers for the cost of goods or services purchased and appropriate operating expenses. A properly administered working capital fund should recover all of its operating costs without accumulating either a profit or loss in the long run.

More than $7.9 million has been advanced to 17 working capital funds since 1950. These funds provided over $50 million in goods and services during fiscal 1975, and incurred a combined operating surplus of $300,000. Over the years, charges to State agencies greater than the cost of goods and services provided have enabled the funds to accumulate retained earnings of $2.3 million.

Three State agencies administer five funds:

- Division of Automated Data Processing (ADP)

  Automated Data Processing

- Department of Purchases and Supply (DPS)

  Central Warehouse
  Public Printing
  Printing and Graphics

- Virginia Public Telecommunications Council (VPTC)

  Central Telephone

Four institutions of higher education administer the other twelve working capital funds:

- Virginia Commonwealth University (VCU)

  Supplies
  Buildings and Grounds

- College of William and Mary (W&M)

  Supplies
  Buildings and Grounds
  Automated Data Processing

- University of Virginia (UVa.)

    Supplies
    Buildings and Grounds
    Printing
    Automated Data Processing
    Motor Pool

- Virginia Polytechnic Institute and State University (VPI&SU)

    Automated Data Processing
    Motor Pool

When Working Capital Funds Should Be Used (pp. 4-5)

A working capital fund should not be established unless two criteria are met:

- when it has been decided that responsibility for providing a support service should be centralized in a State agency; and,

- when it is both possible and desirable to identify the level of support services provided in measurable units.

Centralization of support services is intended to minimize costs through: (1) economies of scale, (2) efficient utilization of costly services, and (3) uniformity in support services used. Centralization is particularly important in an area such as automated data processing in which incompatible computers and information systems can result in unnecessarily high and duplicative costs. The second criterion is important because working capital funds must be able to establish easily understood prices for their services. While unit costs for consumable goods such as food or maintenance supplies are easily set, services such as data processing present greater difficulties in determining unit costs.

While a working capital fund is not the only means of accounting for a central support service, it is desirable from a governmental accounting perspective because it highlights aggregate expenditures for an internal support service while, at the same time, relating the cost of providing a service to the State agencies and institutions which use it.

Appropriateness of the Commonwealth's Working Capital Funds (pp. 7-11)

Funds Administered by Institutions of Higher Education. The use of working capital funds varies among Virginia's four-year colleges and universities. Four State institutions administer twelve of the seventeen working capital funds, while the remaining eleven schools have none. As none of the working capital funds administered by the colleges and universities meet the first criterion governing the use of such funds--centralization of a support service provided to other State agencies--each should be discontinued. The major purpose of the present university funds is to account for services provided to departments within the schools, not to other agencies. Working capital funds, however, appeal to administrators because any accumulated surplus available at the end of a biennium does not revert to the general fund. It is important to note that elimination of these funds would not adversely affect the ability of any university to finance needed support services through existing budgeted appropriations, or to account for internal services through recovery accounts as is done at numerous schools.

The Public Printing Fund. The Department of Purchases and Supply administers a working capital fund to finance and account for a limited number of public printing contracts which are negotiated on the basis of an estimated cost. However, most contracts involve a fixed price arrangement in which a printer bills an agency directly for each job. No indirect operating expenses are recovered by the fund. In effect, the fund serves to duplicate agency billing processes and should be discontinued.

Return of Working Capital Fund Advances. Although advances to the 12 higher education working capital funds and the Public Printing fund total $2.3 million, the varying financial conditions of the funds may prohibit the immediate return of all monies previously advanced. Net liquid assets of the 13 funds totaled $2.1 million on June 30, 1975, or about $225,000 less than total advances. If possible, the amounts advanced to each of the above funds should be returned to the general fund effective June 30, 1976. Funds having inadequate liquid assets to return the entire advance by the close of the 1974-76 biennium will require special consideration. A plan for closing out these funds has been prepared and is included in this report as an Appendix.

A working capital fund is an appropriate accounting mechanism for Central Warehouse, Central Telephone, Printing and Graphics, and Automated Data Processing services, subject to some reservations pertaining to the latter. Each of these services meets the working capital fund criteria related to centralization and the ability to identify measurable units of service.

<u>New Working Capital Funds</u> (pp. 12, 15)

A recent national survey indicated that 34 states use working capital funds to finance and account for central motor pools and prison industries. In Virginia, however, both activities, now special fund operations, meet the working capital fund criteria and are operated in every way like working capital funds. Therefore, the Central Garage motor pool and Correctional Enterprises funds should probably be classified as such by the Comptroller to maintain consistency in the State chart of accounts.

ADMINISTRATION AND LEGISLATIVE OVERSIGHT

<u>Establishment of Working Capital Funds</u> (pp. 59-62)

Authority for the establishment of working capital funds in Virginia is derived from two sections of the Code. Section 2.1-196.1 of the Code authorizes establishment of working capital funds for

> ...farms, laundries, merchandising activities, dining halls and cafeterias for which charges are made, and any other type of activity

which, if conducted privately, would be operated for profit...

Sixteen of the current seventeen working capital funds were authorized by JLARC or by its predecessor, the Joint Auditing Committee, pursuant to the above statute. One working capital fund was authorized by the Auditor of Public Accounts under Section 2.1-243.1 of the Code. In this case, the Auditor is directed to authorize the establishment of working capital funds when requested by the Director of DPS for any of three activities: (1) design, utilization, procurement, and inventory of State forms; (2) printing, duplicating, and reproduction equipment and services; and, (3) an equipment pool and central repair shop. Since the Auditor carries out his duties under the review of the Commission, Section 2.1-243.1 should be amended to require that all working capital funds, even those services enumerated above, be established in a consistent manner.

Another change recommended in the establishment of working capital funds pertains to the advance of monies to finance initial expenses of centralized support services. It is likely the advance of monies to working capital funds as carried out in the past, although in compliance with statute, is inconsistent with the appropriation authority of the General Assembly. Both Article 10, Section 7 of the Virginia Constitution and Section 2.1-224 of the Code state: "No money shall be paid out of the State Treasury except in pursuance of appropriations made by law." The key issue is whether monies advanced to working capital funds by the Comptroller are disbursed from the Treasury. Monies can be considered disbursed from the Treasury whenever the amount reflected in a working capital fund cash account is less than the amount advanced.

Supplemental advances to existing funds further illustrate the notion that working capital advances may result in disbursement of monies from the Treasury without an appropriation. For example, in recent years supplemental advances were approved by the Auditor without legislative review and authorization, including:

- $150,000 for the purchase of additional fuel oil;
- $400,000 to the Central Warehouse fund to cover additional inventories and accounts receivable; and,
- $100,000 to the Department of Purchases and Supply Public Printing fund.

Present procedures for the administration of working capital funds appear to treat the disbursement of monies from the Treasury as a long term loan. This conflict should be avoided by requiring all advances to working capital funds be made pursuant to appropriations.

<u>Working Capital Funds and the Budget Process</u> (p. 62)

The services provided by working capital funds should also be subjected to executive budget administration processes to ensure the opportunity to exercise control over agency expenditures. For example, billings to a number of State agencies for data processing services have been in excess of budgeted allocations. The Division of the Budget should subject each working capital fund to a rigorous review to ensure that expenditures of service agencies are reasonably equivalent to total budget allocations made to user agencies.

Financial Management of Working Capital Funds (pp. 23-28, 31-34, 41-47, 55-57)

A lack of intensive review of working capital funds in the past has led to numerous deficiencies in the financial management of most funds. Not only is it essential that criteria be applied to prospective services to be accounted for in this manner, but uniform standards for financial management should be developed and applied in accordance with accepted principles of governmental accounting.

Financial Condition. Both the Printing and Graphics and Central Telephone funds experienced operating deficits during fiscal 1975. As of June 30, 1975, retained earnings of the four State agency working capital funds ranged from a deficit of almost $78,000 for Printing and Graphics to more than $445,000 in surplus for the Central Warehouse.

Financial Reporting. Considerable variation exists in the format and accuracy of financial reporting among State agency working capital funds. For example, statements prepared by ADP have not properly represented the financial condition of the fund. On the other hand, Central Warehouse financial statements, while correctly prepared, have often been delayed and are of limited usefulmess for management purposes. A uniform format for financial statements is needed, as well as increased emphasis on prompt submission of monthly and annual statements to agency management.

Direct and Indirect Costs. For the most part, direct and indirect operating costs of the State agency working capital funds appear to be properly charged. Exceptions to this include some costs of the Automated Data Processing and Central Warehouse funds, neither of which prorates a share of the salaries of top management as indirect costs. In addition, the Central Telephone fund improperly recorded as an operating expense $9500 paid to the Division of Engineering and Buildings during fiscal 1975 for agency services which were not received. These practices require careful review and correction where found.

Pricing and Billing. With the exception of Automated Data Processing, pricing and billing operations appear to be adequate. Billings by ADP have been criticized since October, 1973. Undefined and erroneous charges and increases in cost of services without proper accounting of billing adjustments have characterized the billing process. Without accurate unit cost data, ADP is unable to compare data processing costs among agencies, and agencies are unable to determine whether monthly increases in their bills result from workload increases or adjustments in the rate structure. ADP must develop an accurate and understandable billing system which reflects the actual cost of all State data processing operations. If an understandable billing system cannot be developed, consideration should be given to financing ADP through means other than a working capital fund.

Accounts Receivable. Serious problems in accounts receivable have plagued all four State agency working capital funds. On December 31, 1974, accounts receivable of the Central Warehouse totaled over $1 million, of which more than $240,000 was overdue by 30 days. In some cases, delayed payments have led to the payment of vendor claims even though the cash account did not contain sufficient funds. This was done to maintain the State's credit. In another example, ADP reported accounts receivable in excess of $1 million at the close of fiscal 1975, including almost $460,000 identified as "delinquent and doubtful accounts."

In recognition of these problems, JLARC staff recommended to the Comptroller in October, 1974, that consideration be given to implementing an automatic collections system. An automatic collections system would speed the processing of agency bills, thereby maintaining highly liquid financial conditions and perhaps permitting a reduction in the total amount of monies required to be advanced to working capital funds.

It is clear that considerable variation exists in the financial administration of the four State agency working capital funds. Such disparities demonstrate a need for more comprehensive, current, financial and operational audits of working capital funds. It is necessary to ensure that managers of working capital funds:

- maintain financial records necessary to provide accurate, timely data;
- prepare financial statements consistent with generally accepted principles of governmental accounting;
- accurately charge all expenses related to the provision of fund services;
- set prices for fund services adequate to recover operating costs;
- prepare agency bills which clearly define the nature and quantity of services rendered; and,
- avoid the accumulation of excessive fund retained earnings.

Each of these problem areas has been addressed in the JLARC operational review of working capital funds and recommendations for improved management and oversight have been made and adopted by the Commission. The principal elements of the revised procedures are contained in Appendix I.

OPERATIONAL REVIEW OF STATE AGENCY WORKING CAPITAL FUNDS

Central Warehouse (pp. 16-29)

The Central Warehouse stores and distributes large quantities of approximately 800 items, including food and institutional maintenance supplies. Primary customers include State mental institutions, colleges and universities, and local school divisions. For fiscal 1975, the Central Warehouse recorded sales of $12.9 million and an operating surplus of about $132,000. Central Warehouse is important to State efforts to reduce the cost of institutional food and maintenance supplies through large volume purchasing. However, the effectiveness of this activity is limited by the need to operate two geographically separate facilities, deficiencies in materials handling, and, inadequate inventory controls.

Facilities Utilization. Central Warehouse operations are housed in two facilities: a small DPS warehouse constructed in 1966 in the Fulton section of Richmond; and, in part of the Alcoholic Beverage Control Board (ABC) warehouse made available in 1972 following floods caused by Hurricane Agnes. Floods have forced complete evacuation of the DPS warehouse four times since 1960, and the ABC Commission has recommended that DPS vacate the ABC facility. Furthermore, JLARC staff found the utilization of two geographically separate facilities contributed to reduced efficiency of materials handling and truck loading operations. DPS has submitted a $955,000 capital outlay request to purchase a 151,000 square foot warehouse which has been recommended for capital outlay in the 1976-78 budget bill.

During the course of this evaluation, improvements in housekeeping were noted at both facilities. However, materials handling could be improved further through expanded use of metal storage frames and numbered stock locations, provision of staging areas, and assignment of responsibility for checking orders at the loading dock.

Inventory Control. During fiscal 1975, gross stock adjustments (the difference between inventory records and actual stocks on hand after inventory) totaled $54,036. With an average monthly inventory of $1.6 million, the ratio of gross stock adjustments to total inventory was 3.3%. Moreover, the September, 1975, inventory disclosed that 20% of all stock levels were in error by $20 or more. JLARC staff believes both indicators of inventory control are excessively high and suggest a need for greater attention to inventory management and procedures.

Reorder points are the inventory levels at which goods must be ordered. In September, 1975, JLARC staff found that reorder points were unavailable for 75% of the warehouse items. As a result, a number of standard food items were out of stock and requisitions could not be filled completely.

The department should review several suggested alternative means for improved control. Possible alternatives include (1) maintenance of the present Kardex system with increased attention to clerical and loading dock procedures; (2) purchase of a commercial inventory management package; or, (3) development of an inventory management system using State ADP equipment.

<u>Central Telephone</u> (pp. 30-34)

The Central Telephone fund finances the Central Telephone Exchange (CENTREX) in Richmond as well as the State Controlled Administrative Telephone System (SCATS). CENTREX provides normal commercial telephone service to all State agencies in the Richmond area while SCATS provides long distance service throughout the State at lower cost than normal commercial rates. The fund was established in 1956 under what is now the Division of Engineering and Buildings but was transferred to the Virginia Public Telecommunications Council (VPTC) on July 1, 1974.

Shortly after assuming responsibility for the fund, VPTC requested JLARC authorize an additional advance of $125,000 because current billing procedures often created situations in which cash on hand was insufficient for prompt payment of the State's consolidated telephone bill. JLARC staff review of this request indicated this was not a recurring problem, but that occasional overdrafts were caused by a failure to collect overdue accounts--totalling $184,000 and extending over a three-year period. The request was denied and VPTC was requested to report on its efforts to collect the delinquent bills. In December, 1974, VPTC reported the bills had been collected and the requested advance was no longer needed.

VPTC management has since demonstrated an ability to make substantial improvements in financial management of the working capital fund, paticularly in billing and collection processes. At this time, VPTC should direct a greater portion of its attention toward development of criteria for evaluation of agency requests for telephone equipment and service.

Automated Data Processing (pp. 35-48)

In 1973, ADP developed a master plan which provided for a two-phase consolidation effort: the first phase involved consolidation and reduction in the number of agency computers; the second phase involved the development of multi-agency information systems. Unfortunately, attempts to implement the consolidation plan have been hampered by inadequate planning and administration.

Planning. ADP has been unable to meet its objectives for: reducing the number of computers in the State as planned; developing anticipated information systems; and, incorporating data processing requirements for higher education into the State plan. Although one objective of the 1973 plan was to reduce the number of State agency computers from twelve to four by September, 1974, only four computers have been eliminated but a new unit has also been added. A revised 1975 plan calls for a continuing effort to consolidate equipment but ADP is already behind schedule in implementing this plan. In addition, two of five information systems in the 1973 plan are only partially developed while the remaining three are, as yet, only concepts.

Colleges and universities account for almost half of all budgeted expenditures for data processing. Nevertheless, ADP has not incorporated higher education into its master plan. Although the 1973 plan proposed that a separate plan for higher education be developed, no such plan was ever prepared.

Administration. ADP personnel management has been inadequate. Five program coordinator positions (later called MIS directors) were established within ADP to integrate data processing programs among agencies. In addition, ADP established various program manager positions reporting to the MIS director to provide further assistance to State agencies. This arrangement appears to have resulted in some confused and duplicated responsibilities between ADP and the user agencies. While some agency requests for systems development personnel may be justified, any duplication with current ADP responsibilities must be avoided.

In a letter to the Division of Personnel, a former Director of ADP indicated salaries were not consistent with "...other sectors from which we seek professional talent." Although the Director of Personnel indicated concern as to the need for increased salaries and disagreed with the basis for the request, the Secretary of Administration approved the request. Even though the purpose of the request was to "...attract qualified persons for key positions...," six of the eight management positions were filled from existing staff, four positions only five days after the request was approved.

ADP requested JLARC authorize an additional $4 million working capital advance in 1974 for the purchase of two computers which were being leased. Following a JLARC staff review, the request was denied on several grounds including substantial questions regarding the extent of savings to be achieved. Subsequently, in May, 1975, ADP entered an agreement for the lease-purchase of the same two computers. This agreement provides both equipment flexibility and identifiable cost savings to the State.

Some of the problems encountered by ADP in recent years must undoubtedly be attributed to a lack of continuity in top management personnel. Since 1968, for example, the Division has been administered by four directors. However, the present director appears to be making a number of efforts to determine a set of realistic goals and objectives to guide the efforts of ADP in the future. Foremost among the priorities should be improved communication with user agencies, particularly with respect to ADP billings for services rendered.

Printing and Graphics (pp. 49-57)

In 1972, the General Assembly provided the Director, Department of Purchases and Supply (DPS) with authority to develop guidelines for efficient utilization of State printing equipment, as well as to centralize printing equipment and services. DPS has recently established guidelines to implement the first part of this charge. However, only limited progress has been made toward effective centralization of printing equipment and services.

Organization. Apart from present statutory responsibilities of the Director of DPS, a cabinet level printing committee was formed in 1973 to analyze State printing operations. The committee eventually recommended that three existing agency printing shops be consolidated into a central printing facility, resulting in the establishment of the DPS Printing and Graphics shop in December, 1974. The committee failed to make recommendations pertaining to the consolidation of remaining agency printing operations.

Although the DPS shop is centrally located, many agencies in the Richmond area continue to maintain small printing facilities. At least 75 persons are employed in 18 State agencies (not including DPS) to operate 52 offset presses. These agency shops perform similar printing operations: blank forms, internal reports, memoranda, and printed regulations. Several shops provide letterhead paper, while others have the capacity to publish brochures, newsletters, annual reports, and magazines.

Personnel and Equipment Utilization. The availability of so many small, agency printing facilities has led to inefficient utilization of personnel and equipment in the DPS Printing and Graphics shop. In fact, the shop was initially overstaffed for the amount of sales generated. While JLARC staff does not suggest all printing services in the Richmond area immediately be consolidated into a single shop, considerable economies could be achieved through elimination of underutilized agency presses and by greater utilization of the DPS Printing and Graphics facility. Legislative intent requires the Director of DPS undertake a comprehensive review of all State printing operations to develop a long-range plan for the consolidation of printing facilities.

Conclusion

An initial finding of this study was that working capital funds are useful to finance and account for centralized support services provided to State agencies. However, it was also found that some working capital funds used by the Commonwealth did not meet generally accepted criteria for determining the support services most appropriately financed by this type of fund. The elimination of the 12 funds administered by institutions of higher education and the Public Printing fund of the Department of Purchases and Supply would help ensure the use of working capital funds by the Commonwealth is consistent with these criteria.

JLARC staff also found that efficiency and effectiveness of the four support services appropriately financed by working capital funds--Central Warehouse, Central Telephone, Automated Data Processing, and Printing and Graphics could be improved by increased attention to various financial and operational aspects of administration. In particular, working capital funds could benefit from closer scrutiny by legislative oversight agencies and the executive budget process.

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VI. ADMINISTRATION AND LEGISLATIVE OVERSIGHT

FOREWORD

The Joint Legislative Audit and Review Commission is charged with responsibility to carry out operational and performance evaluations of State agencies and programs. Each study is designed to assess the extent to which legislative intent has been met as well as to review the effectiveness and efficiency of program activities. This review of Working Capital Funds is the third staff report prepared for the Commission.

Working capital funds are one of several ways in which governments can finance and account for certain kinds of public functions. Specifically, these funds are appropriately used when one public agency "sells" a service to other public agencies and institutions. Since JLARC was assigned statutory responsibility for working capital funds by Section 2.1-196.1, Code of Virginia, the way in which funds have been established, operated, and monitored in the past is a special concern of this review.

An important part of the report deals with an operational analysis of four centralized support services financed by working capital funds. These activities include the Central Warehouse and Printing and Graphics service of the Department of Purchases and Supply; the Central Telephone System of the Virginia Public Telecommunications Council; and, the Service Organization of the Division of Automated Data Processing. Recommendations have been made to improve some financial and administrative management practices in each of these organizations. Several of the suggested changes were made by the administrative agencies during the course of the review; and, others are reported as planned for implementation as soon as feasible.

On February 11, 1976, the Commission also adopted a series of procedural steps felt necessary to fulfill its obligations concerning the establishment and oversight of working capital funds. The Commission action was based on suggested steps reported in Appendix I. Part of the proposal calls for legislation which has been introduced to the 1976 General Assembly to bring about improved legislative supervision and to insure that monies advanced for working capital funds become a part of the appropriations process.

On behalf of the Commission staff, I wish to acknowledge the assistance and cooperation extended to the review team by each fund manager throughout the course of our study. Special appreciation is extended to the Auditor of Public Accounts, the Comptroller and the Division of the Budget for assistance during the review and in commenting on staff recommendations.

Ray D. Pethtel

February 24, 1976

Ray D. Pethtel
Director

WORKING CAPITAL FUNDS IN VIRGINIA

Over $7.9 million has been advanced to 17 State working capital funds since 1950. The value of services provided by these funds during fiscal 1975 exceeded $50 million. This chapter identifies two fundamental criteria used in determining whether a service is appropriately financed through a working capital fund: first, when the responsibility for providing a support service to several agencies is centralized in a State agency; and second, when it is possible and desirable to identify the level of services provided.

None of the 12 working capital funds administered by institutions of higher education in Virginia meet the first necessary criterion. Therefore, these funds should probably be abolished. This action will not adversely affect the ability of each school to provide existing support services or to properly account for them. The Public Printing fund administered by the Department of Purchases and Supply also fails to meet the criteria for working capital funds and should therefore be eliminated. Elimination of these funds will result in the transfer to the general fund of an amount up to $2.3 million in dedicated monies now reserved for working capital funds. This amount is now identified as loans on the books of the Comptroller.

Finally, additional consideration should be given to classifying the State Central Garage and Correctional Enterprises funds as working capital funds.

I. WORKING CAPITAL FUNDS IN VIRGINIA

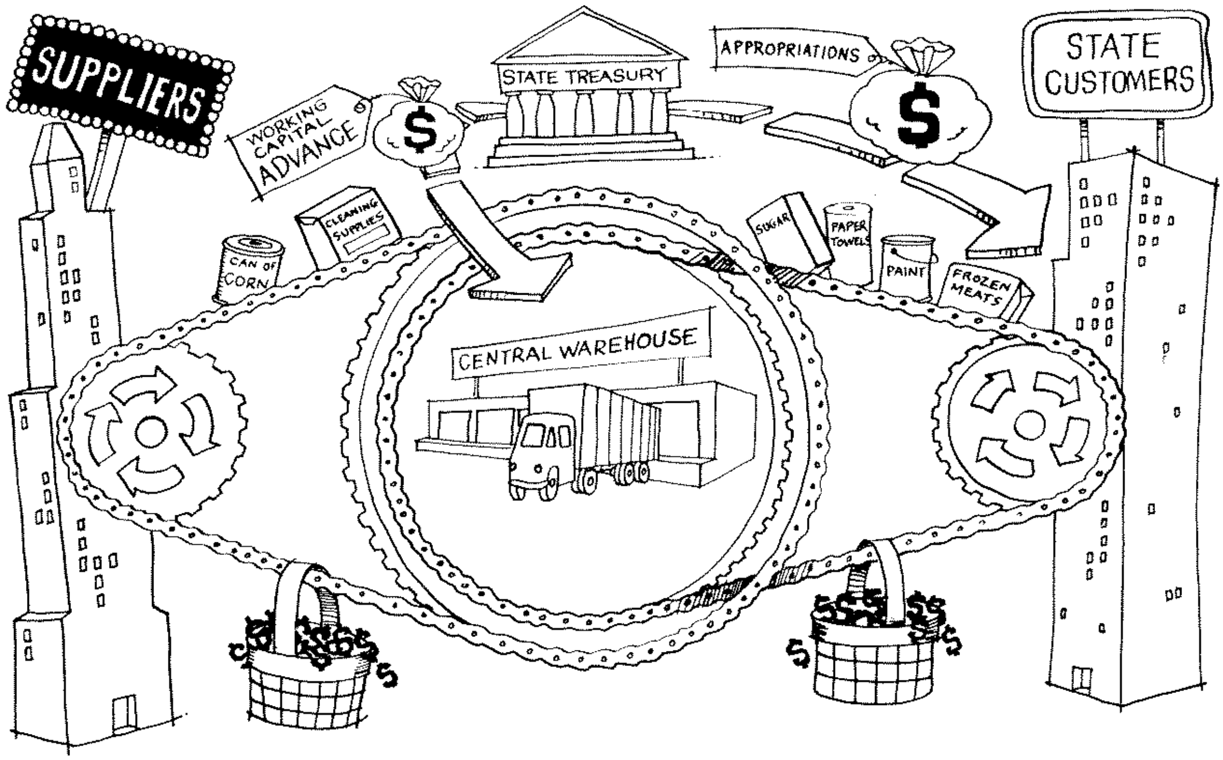
Since 1950, $7.9 million has been advanced to 17 working capital funds which finance and account for a variety of support services used by Virginia State agencies. Collectively, these funds provided goods and services to other State agencies amounting to more than $50 million during fiscal 1975. Over the years, however, charges to State agencies in excess of the cost of goods and services provided have enabled the funds to accrue retained earnings in excess of $2 million.

Twelve of the seventeen working capital funds are administered by four State institutions of higher education. Of these, three each are used to finance and account for supplies, buildings and grounds maintenance, and automated data processing services--the remainder are used for printing or motor pool operations. In addition, three State agencies administer working capital funds for supplies, printing, telephone, and automated data processing.

The concept of a working capital fund is relatively simple. A fund is established to record the value of goods and services provided by one State agency--the "service" agency, to other State agencies--the "user" agencies. Initial operations of the fund may be started with capital provided by direct appropriation from other funds, proceeds from the sale of general obligation bonds, or long term advances to be repaid over a fixed period from earnings of the fund. Cash is then disbursed by the service agency to pay for the materials, supplies, equipment, and personnel required to provide the authorized services. Billings to State agencies are based on direct and indirect costs incurred in the provision of services. The service agency recovers these costs from appropriations made to State agencies by means of interdepartmental cash transfers which are recorded in the fund accounts. The monies represented by these transfers are in turn used to finance additional services. A properly administered working capital fund will recover all operating expenses without incurring any significant profit or loss in the long run. As a result of the cyclical nature of these financial transactions, working capital funds are also known as revolving, rotary, or intragovernmental service funds. Figure 1 has been prepared to graphically illustrate the operation of a typical working capital fund.

From an accounting standpoint, a "fund" is a self-balancing set of accounts in which assets such as cash, accounts receivable, and inventories are offset by liabilities including accounts payable and cash advances due other funds plus any fund equity or retained earnings. Working capital funds constitute one of eight types of funds generally used in governmental accounting.[1] The use of various types of funds results from the diverse nature of governmental activities and the need to account for them independently to determine budgetary and legal compliance. It should be pointed out that the fund concept used in governmental accounting differs from the use of the term in the private sector. In commercial accounting, a fund is an amount of cash rather than a self-balancing set of accounts.

It appears Virginia first took an interest in working capital funds in the late 1940's. At that time, attempts were being made at the federal level to introduce civilian management techniques into Department of Defense



HOW A WORKING CAPITAL FUND WORKS

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activities. The Hoover Commission recommended that working capital funds be used to finance commercial or business-type activities of the military and in 1949 this recommendation was enacted into law as part of the National Security Act.

The following year, the Virginia Commission on State and Local Revenues and Expenditures (created by Senate Joint Resolution No. 32) issued a report on means of making "...improvements in Virginia's tax system, its expenditures, and general fiscal policies." The Commission recommended that

> ...all State departments, agencies, and institutions engaged in *business-type activities such as the retailing of merchandise, the conduct of dining halls, cafeterias, and restaurants for which a charge is made, the renting of living or other quarters, the operation of farming, industrial, and manufacturing enterprises* be operated on business-type budgets the forms for which should be prescribed by the State Division of the Budget and that only the net profit or loss of such enterprises be entered into the general accounts of the State.[2]

The apparent intent of this recommendation was to promote greater clarity in the financial records and systems of business-type activities operated by various State agencies and institutions. The Commission reasoned that

> ...the general accounts of the State should not reflect such revenues and expenditures inasmuch as the enterprises are purely incidental to the providing of normal governmental services but that the general accounts of the State should reflect only the net operating profit or loss incurred by such business-type activities.[3]

Following the completion of the Commission report, the General Assembly enacted Chapter 178 of the Acts of the Assembly of 1950 (Section 2.1-196.1 of the Code, as amended):

> As to the operations of *farms, laundries, merchandising activities, dining halls and cafeterias for which charges are made, and any other type of activity which, if conducted privately, would be operated for profit,* the system of accounting therefor shall be designed to reflect all charges properly allocable thereto to the end that the net profit or loss therefrom shall be reflected; provided that in the furtherance of this objective the Auditing Committee of the General Assembly on the recommendation of the Auditor of Public Accounts, may authorize the Director of the Department of Accounts and Purchases to establish working capital fund accounts on his books and record therein the receipts and expenditures of these several functions; and provided further that the said Director shall provide the agencies responsible for the operations of these functions with revolving funds with which to finance the operations.

The report of the Commission on State and Local Revenues and Expenditures did not specifically mention working capital funds. However, both the report and subsequent legislation contain similar language in describing certain business-type activities of the State for which working capital funds are authorized.

When Working Capital Funds Should Be Used

Working capital funds should only be used to account for internal support services when:

- the responsibility for providing a support service used by various State agencies has been centralized in a State agency; and,

- it is possible to identify the level of support services provided in measurable units.

Centralization. Centralization of the responsibility for providing a support service should be based on one or more of the following objectives, each of which is intended to minimize costs: economies of scale in operations; the efficient use of particularly costly services; or, greater uniformity in the types of support services used by State agencies.

Centralization of purchasing and distribution functions enables the State to take advantage of large volume purchases to acquire the lowest unit prices for various commodities. The alternative to the centralized purchase of institutional maintenance supplies, for example, may require that each State institution purchase from independent vendors. This practice could result in higher total costs to the State because it eliminates the opportunity to make large volume purchases and because additional personnel might be required to maintain and operate individual agency warehouses.

Centralization of support services should enable the State to provide services to user agencies at less cost than if each agency acted independently. For example, five State agencies might each purchase a computer. However, unless the data processing requirements of each agency required a separate computer 24 hours a day, the establishment of a central computer agency would enable the State to reduce the total number of machines it must acquire and operate, even though the potential availability of computer services for each agency would be increased. The reduction in the total number of computers in service, in this example, would result in cost savings to the State.

Centralization also provides greater control over the types of support services consumed as well as ensuring that the use of those services complies with appropriate State policies. This latter aspect is especially important for support services such as automated data processing in which incompatible computers and information systems can result in excessively high costs.

Measurable Units. Once a support service has been centralized in a single agency, it is advantageous to account for the amount of support services used by other State agencies so that public managers and legislators will have the most comprehensive data available on the true cost of agency operations. However, the use of a working capital fund requires the ability to measure the value of services provided to each State customer. It is relatively easy to measure the value of tangible items such as supplies or foodstuffs. On the other hand, the establishment of charges for personnel, budget, or legal services would require sophisticated cost accounting practices which may not be easily understood or accepted by fund customers.

Desire To Account for Support Services By User Agency

Beyond the criteria for centralization and measurable units, working capital funds should only be used when there is a desire to account for support services by individual State agencies. This notion allows considerable flexibility in the use of working capital funds. For example, a 1974 survey of the 50 states and Puerto Rico showed that working capital funds account for 23 types of internal support services (Figure 2). Working capital funds are most often used for data processing and prison industries--36 states. The least common are personnel, auditing, accounting, warrant processing, highway equipment, general obligation bond expense, state travel bureau, and architecture;

Figure 2

THE USE OF WORKING CAPITAL FUNDS AMONG THE STATES

Support Services	Number of States Using Working Capital Funds
data processing	36
prison industries	36
motor pool	34
telecommunciations	30
printing	30
supplies	28
state aircraft	19
personnel training	8
postage or messenger	7
surplus state property	6
microfilm & reproduction	3
insurance	3
legal--court costs, attorney general	2 (Oregon, New Jersey)
payroll processing	2 (Montana, California)
buildings & grounds maintenance	2 (Oregon, Virginia)
personnel	1 (Oregon)
auditing	1 (New Mexico)
accounting	1 (Oregon)
warrant processing	1 (Montana)
highway equipment	1 (Alaska)
general obligation bond expense	1 (California)
state travel bureau	1 (Connecticut)
architecture	1 (California)

Source: Illinois Economic and Fiscal Commission, State Revolving Funds: An Evaluation, Appendix II-A (Springfield, Illinois, 1974).

no more than one working capital fund exists for each of these services among the 50 states.

The alternative means of accounting for support services is by direct appropriation to the service agency without charge for services used. This method does provide data on total expenditures for support services, however, it understates the actual cost of individual agency operations by the amount of support services used. As indicated earlier, the value of goods and services sold by State working capital funds during fiscal 1975 exceeded $50 million--all of which had been appropriated in small amounts to many agencies, insitutions, and offices of State government. From an accounting perspective, working capital funds provide a means of highlighting these considerable expenditures for support services while providing the most comprehensive data available on total costs of agency operations.

Appropriateness of Virginia's Working Capital Funds

Table 1 shows the 17 working capital funds administered by Virginia State agencies and institutions of higher education. The first funds were established in 1950 for central stores (supplies) operations at the Medical College of Virginia (MCV), the University of Virginia (UVa.), and the College of William and Mary (W&M). One year later, three more funds were begun at the same institutions for buildings and grounds maintenance activities. A seventh fund was started in 1951 for operations of the university printing office at UVa.

The establishment of a fund in 1956 to account for telephone services to State offices in the Richmond area was followed one year later by a fund under the Department of Purchases and Supply for the printing of official State documents. In 1960, a working capital fund was begun for commodities sold by the Department of Purchases and Supply (DPS) central warehouse. The next two funds were established for automated data processing (1964) and motor pool (1969) activities at Virginia Polytechnic Institute and State University (VPI&SU). Additional funds for data processing were started in 1971 at W&M and at UVa.

Each of the first 14 funds were authorized by the Joint Auditing Committee upon the recommendation of the Auditor of Public Accounts. In 1973, the General Assembly amended the statute governing working capital funds (Section 2.1-156 of the Code, as amended) and made the Joint Legislative Audit and Review Commission (JLARC) responsible for authorizing the establishment of working capital funds. Two funds were authorized by JLARC at the request of the Auditor of Public Accounts in 1973: the first for data processing services provided by the Division of Automated Data Processing and the second for motor pool operations at UVa.

In 1972, legislation was enacted (Section 2.1-243.1 of the Code, as amended) for the establishment of working capital funds related to printing, office supplies, and other activities of DPS solely at the request of the Director. Pursuant to this legislation, the Director of DPS in 1974 requested the Auditor authorize the Comptroller to establish a working capital fund for central printing and graphics services.[4]

Funds Administered by Institutions of Higher Education. Twelve of Virginia's seventeen working capital funds are administered by four institutions of higher education. The most striking aspect of these funds is the extent to which their use varies among the schools. For example, three institutions use working capital funds for their supplies and buildings and grounds functions. Working capital funds are also used to finance and account for the services provided by three computer centers, two motor pools, and a print shop. However, neither the supplies, buildings and grounds, nor motor pool funds provide services to any agency other than the schools' internal divisions and departments. The three computer centers provide some services to other State agencies, but the amount of billings represented by these customers is relatively small. During fiscal 1975, for example, charges to external State agencies for computer services accounted for 3% of total billings at VPI&SU, 6% at UVa., and 9% at W&M.

Table 1
WORKING CAPITAL FUNDS--COMMONWEALTH OF VIRGINIA
July 1, 1975

SERVICE/Administering Agency	Date Established	Advances Initial	Advances Total
SUPPLIES			
Virginia Commonwealth University [1]	July 19, 1950	$ 75,000	$ 200,000
University of Virginia	July 19, 1950	125,000	125,000
College of William and Mary	July 19, 1950	60,000	75,000
Department of Purchases and Supply	January 8, 1960	369,000	2,980,000
BUILDINGS AND GROUNDS			
Virginia Commonwealth University [1]	April 21, 1951	75,000	200,000
University of Virginia	April 21, 1951	75,000	275,000
College of William and Mary	April 21, 1951	35,000	50,000
PRINTING			
University of Virginia	July 12, 1951	25,000	120,000
Department of Purchases and Supply			
printing	July 25, 1957	100,000	200,000
printing and graphics	April 24, 1974	280,000	280,000
CENTRAL TELEPHONE			
Virginia Public Telecommunications Council [2]	November 27, 1956	50,000	375,000
AUTOMATED DATA PROCESSING			
Virginia Polytechnic Institute & State University	October 16, 1964	60,000	60,000
College of William and Mary	June 10, 1971	125,000	125,000
University of Virginia	June 10, 1971	885,000	755,000
Division of Automated Data Processing	July 27, 1973	1,925,000	1,925,000
MOTOR POOLS			
Virginia Polytechnic Institute & State University	November 21, 1969	75,000	75,000
University of Virginia	July 27, 1973	80,000	80,000
TOTAL ADVANCES		$4,419,000	$7,900,000

[1]Formerly the Medical College of Virginia and Richmond Professional Institute.
[2]Transferred from Division of Engineering and Buildings, July 1, 1974.

Source: Data supplied by the Auditor of Public Accounts and the Comptroller.

The lack of consistency with which working capital funds are used by the universities is demonstrated further by the buildings and grounds fund at VCU. For the past several years the fund was used to finance and account for buildings and grounds services provided to the hospital and academic divisions of the university. Beginning in January, 1975, however, the fund has been restricted to the hospital division.[5] Buildings and grounds services provided to the academic division apparently are now charged directly to university departments, thereby avoiding the working capital fund.

None of the funds administered by Virginia institutions of higher education meet the first condition under which working capital funds should be used--centralization of a support service which is provided to other State agencies. While the working capital funds established at the universities in the 1950's may have served a useful purpose, present accounting systems at both the State and institutional levels do not require the use of working capital funds for support services which are provided and used solely by the universities. Furthermore, changing the use of working capital funds at a school, as occurred at VCU, indicates that such funds are not essential for the services presently provided.

Working capital funds appeal to university administrators because operating surpluses at the end of a biennium do not revert to the general fund. By charging more than actual costs, it is possible to acquire a surplus from other divisions and departments. The W&M automated data processing fund provides an excellent example. Exhibit 1 is a comparative balance sheet of the fund for the past three years. By June 30, 1973, the fund had accumulated retained earnings of almost $134,000. This amount increased to $150,000 the next year and by June 30, 1975, reached almost $200,000. The retained earnings (shown in italics) represent sizeable profits.

Exhibit 1

COLLEGE OF WILLIAM AND MARY
COMPUTER CENTER WORKING CAPITAL FUND
COMPARATIVE BALANCE SHEET

	June 30, 1973	June 30, 1974	June 30, 1975
ASSETS			
Current Assets:			
Cash	$252,770	$260,566	$294,559
Accounts Receivable	6,138	15,288	30,217
TOTAL ASSETS	$258,908	$275,854	$324,776
LIABILITIES AND RETAINED EARNINGS			
Current Liabilities:			
Accounts Payable	--	51	--
Long-Term Liabilities:			
Working Capital Advance	125,000	125,000	125,000
Total Liabilities	$125,000	$125,051	$125,000
Retained Earnings	*$133,908*	*$150,803*	*$199,776*
TOTAL LIABILITIES AND RETAINED EARNINGS	$258,908	$275,854	$324,776

Source: Adapted from data provided by the College of William and Mary.

It is clear the 12 working capital funds being used by the institutions of higher education should be discontinued. This action would make the State fund structure more consistent by ensuring that working capital funds are only used for centralized support services provided by one service agency to a number of other State agencies. The use of working capital funds to account for internal support services which are both produced and used within the respective schools is inconsistent with the five funds administered by central State agencies and with standard principles of governmental accounting. In effect, the university working capital funds introduce an element of inconsistency in the State accounting system which should be avoided.

Because expenditures for support services at the higher education institutions are financed out of appropriations for operating expenses, elimination of these working capital funds would not affect the continued availability of these support services. Furthermore, any institution which desires to allocate the cost of services by department may do so by using recovery accounts (object 1900). As explained by one university, the concept of recovery accounts is a type of budget control in which

> ...each department is allocated, at the beginning of each fiscal year, an amount corresponding to the total budget of the central department (and the support services it provides). This process insures the cost effectiveness of the central budget and places fiscal restraints on the using departments.[6]

It is this method by which VCU accounts for the services of its computer center and Old Dominion University accounts for printing and publications, mail, warehouse, and photocopying services.

Appropriateness of Public Printing Fund. All printing requisitions must first be submitted to the DPS printing manager, who determines whether jobs are to be completed at in-house facilities or contracted to private printers. If an outside printer is selected, the manager negotiates a fixed price contract whenever possible and the printer bills the agency directly. When composition is required and the exact number of pages cannot be determined in advance, the contract is based on a cost per page basis with the final amount determined when the job is completed. Payments for the latter printing jobs have been made through the Public Printing fund. The fund, however, is not used to finance and account for a centralized support service. Its principal function is to serve as a clearing account between State agencies and private printers and no costs of DPS are charged to the fund. The fund does not aid the State in accounting for printing expenditures by agency. Therefore, it does not meet the criteria for working capital funds and should be discontinued.

Elimination of this fund would not affect the ability of DPS to control State printing activities. DPS should continue to receive and act on all requisitions for printing. DPS should also adopt a formal policy that all major changes in printing contracts be approved by the department.

Appropriateness of Other State Working Capital Funds. A working capital fund is an appropriate method of financing and accounting for services provided by Central Warehouse, Central Telephone, Printing and Graphics and Automated Data Processing subject to some reservations pertaining to the latter which are discussed in Chapter IV. Each of these activities has been centralized to the extent that one agency provides services to other State agencies. Furthermore, it is possible, although not always easy, to measure the value of services provided to the agencies. Finally, the use of working capital funds provides a means for identifying agency expenditures for these support services.

Return of Advances to the General Fund

Table 2 shows advances to the 12 university working capital funds and the DPS public printing fund total $2,340,000. If these funds were abolished, the varying financial conditions would not permit the immediate return of all monies advanced. The amount of monies available for return to the general fund has no strict relationship to the amount of retained earnings, since retained earnings is simply the difference between total assets and liabilities and may be represented by assets other than cash including accounts receivable, inventories, equipment, and buildings.

Table 2

UNIVERSITY AND PUBLIC PRINTING WORKING CAPITAL FUNDS
WORKING CAPITAL ADVANCES AS OF JUNE 30, 1975

FUND	AMOUNT ADVANCED	
University of Virginia		
Motor Pool	$ 80,000	
Automated Data Processing	755,000	
Buildings and Grounds	275,000	
Supplies	125,000	
Printing	120,000	
		$1,355,000
College of William and Mary		
Buildings and Grounds	50,000	
Supplies	75,000	
Automated Data Processing	125,000	
		250,000
Virginia Polytechnic Institute & State University		
Automated Data Processing	60,000	
Motor Pool	75,000	
		135,000
Virginia Commonwealth University		
Supplies	200,000	
Buildings and Grounds	200,000	
		400,000
Department of Purchases and Supply		
Public Printing	200,000	
		200,000
Total		$2,340,000

Source: Data supplied by the Auditor of Public Accounts and the Comptroller.

For example, Exhibit 2 shows June 30, 1975, balance sheets for the two working capital funds administered by VPI&SU. The State has advanced \$135,000 to these funds--\$75,000 to the motor pool fund and \$60,000 to the fund for automated data processing. While both funds have substantial retained earnings, the motor pool fund has insufficient cash to repay the advance. Furthermore, the fact that accounts payable of the motor pool fund exceed accounts receivable by about \$6,000 means only \$43,000 is available to reimburse the general fund for the \$75,000 advance.

The working capital fund for automated data processing is in a much better position. As of June 30, 1975, accounts receivable exceeded payables by about \$20,000 and the fund held more than \$94,000 in cash--more than enough to repay the \$60,000 advance. It appears that by combining the net liquid assets (cash and accounts receivable less accounts payable) of the two funds the university could reimburse the general fund for the total advances made.

VCU maintains working capital funds for supplies and buildings and grounds activities and \$200,000 has been advanced to each fund (Exhibit 3). The financial condition of these funds is similar to the funds at VPI&SU to the extent that one fund, supplies, has insufficient liquid assets to repay the entire \$200,000 advance. Unlike the circumstances at VPI&SU, however, combining the liquid assets of the two funds would yield only \$277,000 to repay total advances of \$400,000.

Based on financial conditions as of June 30, 1975, abolition of the 13 working capital funds shown in Table 3 would return about \$2.1 million to the general fund, or \$225,000 less than the amount advanced. Of course, the exact amount available for return will depend on the financial condition of each fund at the time of liquidation. The Commission believes that whenever possible, the elimination of these funds should result in the immediate repayment of working capital advances to the general fund. In those cases in which liquid assets of a fund are not sufficient to repay the full amount, the difference should be recovered from future appropriations at the earliest practicable date.

New Working Capital Funds

In a national survey, 34 states reported the use of working capital funds to account for central motor pools and prison industries. In Virginia, special funds are used to account for both activities. Based on the criteria outlined in this report, however, working capital funds should be established for both operations.

Motor Pool. The Central Garage was established as a division of the Department of Highways in 1948 to promote economy and efficiency in the use of State automobiles. Today, the Department of Highways administers the Central Garage pursuant to policies developed by an autonomous statewide committee. The cars operated from the Central Garage have increased from 542 in 1948 to 2,300 in 1975. 2,025 are permanently assigned to individuals or to State agencies, leaving 275 available for dispatch to State employees.

State agencies are charged ten cents per mile for all cars used over 75 miles per day. Charges for cars used less than 75 miles are set at six

Exhibit 2

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
MOTOR POOL AND AUTOMATED DATA PROCESSING FUNDS
BALANCE SHEETS
June 30, 1975

ASSETS	Motor Pool	Automated Data Processing
Current Assets:		
Cash	$ 49,402	$ 94,792
Accounts Receivable	8,617	22,256
Fixed Assets:		
Buildings and Equipment	192,202	--
TOTAL ASSETS	250,221	117,048
LIABILITIES AND RETAINED EARNINGS		
Current Liabilities:		
Accounts Payable	14,777	1,489
Long-Term Liabilities:		
Working Capital Advance	75,000	60,000
Total Liabilities	89,777	61,489
Retained Earnings	160,444	55,559
TOTAL LIABILITIES & RETAINED EARNINGS	$250,221	$117,048

Source: Adapted from financial statements submitted by VPI&SU, 1975.

Exhibit 3

VIRGINIA COMMONWEALTH UNIVERSITY
SUPPLIES AND BUILDING & GROUNDS FUNDS
BALANCE SHEETS

	Supplies	Building & Grounds
ASSETS		
Cash	$ 84,000	$184,000
Accounts Receivable	53,000	97,000
Inventory	407,000	0
Other	0	70,000
TOTAL ASSETS	544,000	351,000
LIABILITIES AND RETAINED EARNINGS		
Accounts Payable	141,000	0
Working Capital Advance	200,000	200,000
Retained Earnings	203,000	151,000
TOTAL LIABILITIES & RETAINED EARNINGS	$544,000	$351,000

Source: Adapted from financial statements submitted by VCU, 1975.

Table 3

COMPARISON OF NET LIQUID ASSETS*
AND WORKING CAPITAL ADVANCES
As of June 30, 1975

Fund	Cash	Accounts Receivable	Accounts Payable	Net Liquid Assets	Advances	Difference
University of Virginia						
Motor Pool	$ (3,529)	$ 19,242	$ 9,052	$ 6,661	$ 80,000	$ (73,339)
Automated Data Processing	593,840	20,000	0	613,840	755,000	(141,160)
Buildings & Grounds	200,522	125,000	46,346	279,176	275,000	4,176
Supplies	(11,312)	26,208	31,334	(16,438)	125,000	(141,438)
Printing	105,031	91,352	4,154	192,229	120,000	72,229
William and Mary						
Buildings & Grounds	31,610	10,447	301	41,756	50,000	(8,244)
Supplies	28,531	1,307	0	29,838	75,000	(45,162)
Automated Data Processing	294,559	30,217	0	324,776	125,000	199,776
Virginia Polytechnic Institute and State University						
Automated Data Processing	94,792	22,256	1,489	115,559	60,000	55,559
Motor Pool	49,402	8,617	14,777	43,242	75,000	(31,758)
Virginia Commonwealth University						
Supplies	84,000	53,000	141,000	(4,000)	200,000	(204,000)
Buildings & Grounds	184,000	97,000	0	281,000	200,000	81,000
Purchases and Supply						
Public Printing	165,186	42,481	0	207,667	200,000	7,667
TOTAL	$1,816,632	$547,127	$248,453	$2,115,306	$2,340,000	$(224,694)

*Net liquid assets consist of cash plus accounts receivable less accounts payable.

Source: Data obtained from working capital fund financial statements.

cents per mile plus depreciation of $60 per month for permanently assigned vehicles and $3 per day for the remainder. With the exception of periodic appropriations to purchase additional cars, all costs associated with the Central Garage are paid from user fees. Although revenue from agency charges and the sale of cars in fiscal 1975 was $4.3 million, the fund incurred a current operating deficit of about $32,000. Detailed financial statements of the Central Garage fund are included in the Appendix.

Correctional Enterprises. The Correctional Enterprise fund finances ten industries within the Division of Enterprises and Agriculture of the Department of Corrections. These include wood products, printing, clothing, shoes, metal products, license plates, dental laboratory, book repair, data processing, and laundry services. The correctional factories and shops provide goods or services to approximately 600 State or local agencies.

The correctional industry operations have been accounted for by a self-sustaining special fund in which customers are charged prices for goods and services based on the cost of inmate labor, administrative overhead, and raw materials. Over 550 inmates are employed in these activities. The fund sold goods and services valued at more than $4 million during fiscal 1975 and had a current operating surplus of about $1 million. The June 30, 1975, financial condition of this fund is described in more detail in the Appendix.

In effect, both activities are operated and accounted for in every way like working capital funds and probably should be classified as such to make the accounting for support services more consistent. This action is especially important in light of the size of the operations and the fact they serve many State agencies. Reviews of these activities were not included within the initial scope of this report and some additional study is warranted prior to reclassification.

Operational Effectiveness

In order to realize maximum benefits from centralization of support services and the use of working capital funds, it is necessary that service agencies be organized efficiently and that services be provided in an effective manner. The following sections of this report are devoted to an assessment of the operational effectiveness of the remaining working capital funds: Central Warehouse; Central Telephone; Automated Data Processing; and, Printing and Graphics. The concluding chapter discusses changes deemed appropriate to properly establish, operate, and control working capital funds in the Commonwealth.

CENTRAL WAREHOUSE

A working capital fund was established in 1960 to finance and account for the Central Warehouse of the Department of Purchases and Supply. Central Warehouse is important to State efforts to reduce the cost of institutional food and supplies. Several obstacles, however, have limited its efficiency in recent years including operating from geographically separate facilities, deficiencies in materials handling, and the lack of an effective system for inventory management.

Since 1972, Central Warehouse has operated from two locations: a part of the ABC warehouse on Hermitage Road and a second facility in Fulton separated by ten miles and thirty minutes driving time. These separate storage facilities have reduced the efficiency of materials handling and consolidation of customer orders.

Another obstacle to efficient management of Central Warehouse has been the lack of an effective system of inventory control. A Kardex file used to record stock receipts and shipments was found to be susceptible to a high degree of error. Stock adjustments in fiscal 1975 amounted to $54,036 or 3.3% of warehouse inventory. Moreover, one-fifth of all stock records were found to contain errors greater than $20 during the September, 1975, inventory. Such a high level of error suggests the Department of Purchases and Supply should consider alternative systems for inventory management. Several operational changes are outlined to improve warehouse procedures.

II. CENTRAL WAREHOUSE

The Commission for Economy in Governmental Expenditures recommended in 1959 that a Central Warehouse be established so the Department of Purchases and Supply (DPS) could achieve maximum savings through bulk purchasing of institutional food and maintenance supplies.[7] This recommendation was implemented in 1960 and a working capital fund was established to finance and account for the operation.

Today, Central Warehouse maintains two facilities and employs 29 people to perform a wholesale function for State agencies by storing and distributing large quantitites of approximately 800 items, including:

- canned and frozen foods;
- silverware, plates, and cups;
- paints and painting supplies; and,
- cleaning, laundry, and dishwashing supplies.

Approximately three-fourths of the inventory consists of foodstuffs--the most expensive items are frozen meats, sugar, and canned goods. Primary customers at the State level include hospitals, mental institutions, correctional facilities, colleges, and universities. At the local level, cities, counties, school divisions, or individual schools may purchase through the warehouse. Net sales during fiscal 1975 totaled $12.9 million, of which 77% was to State agencies. Central Warehouse has approximately 451 accounts, of which 158 are State agencies and 293 are cities, counties, or school divisions.

The Central Warehouse function is important to State efforts to reduce costs of institutional food and supplies through bulk purchasing. Today, however, the effectiveness of the Central Warehouse is hindered by an inefficient distribution operation resulting from two geographically separate facilites; deficiencies in materials handling; and, inadequate inventory controls.

Facilities Utilization

From 1960 until 1972 Central Warehouse occupied 37,600 square feet in a portion of the Department of Highways warehouse in the Fulton section of Richmond. In 1966, DPS constructed a new warehouse (12,000 square feet) for $202,000 on nearby property leased from the Chesapeake and Ohio Railroad. An additional $7,200 in land improvements from 1966 to 1968, plus $10,300 to purchase the land in 1968, brought the total cost of this facility to $219,500.

Floods following Hurricane Agnes in June, 1972, forced temporary evacuation of the two Fulton facilities. Later, DPS moved back into its own warehouse in Fulton. The Alcoholic Beverage Control (ABC) Board, however, made 47,600 square feet of space available on a temporary basis, and DPS did not move back into the Department of Highways warehouse.

A three year agreement for occupancy of the ABC facility was negotiated between the ABC Board and DPS, covering the period July 1, 1972, to June 30, 1975. DPS, however, failed to sign this agreement and paid no rent until the former director left office in March, 1974. At that time all back rent was paid, and the new director authorized monthly rental payments of $3,500. The agreement expired and has not been renewed although DPS continues to pay the same rent.

Both DPS and the ABC Board would prefer to occupy separate facilities. The Commission on Alcoholic Beverage Control has recommended: "...that Purchases and Supply...seek other facilities for the (ABC) space it is now occupying."[8] The ABC Board contends it needs the area now occupied by Central Warehouse and DPS believes it needs additional space to improve the efficiency of its operations. Moreover, security measures at the ABC warehouse have reduced the flexibility of Central Warehouse operations by requiring that all personnel leave the warehouse area before the gates are locked at 5:15 p.m. daily. Hence, it is not possible for truck loading operations to continue past 5:00 p.m., even during rush periods.

Central Warehouse is currently utilizing about 60,000 square feet but additional space would provide for future expansion of the operation. It is not possible to return inventories presently stored at the ABC facility to the small warehouse at Fulton if current service levels are to be maintained. Moreover, the Fulton warehouse is located in an area subject to frequent flood warnings and should probably not be used to store items subject to damage by water. Since 1960, flooding has forced the complete evacuation of the Fulton warehouse four times.

An initial capital outlay request of $5 million for a new warehouse and railroad siding at the state owned Elko Tract (near Byrd Airport) has been withdrawn. Instead, the Department has submitted a request for $955,000 to purchase an existing facility near Interstate 95 in Southside Richmond. This request includes $600,000 to purchase a warehouse (151,000 square feet) and rail siding, $255,000 for improvements including installation of a freezer compartment and $100,000 for moving expenses and other contingencies.

Cost of Separate Facilities. The two DPS warehouses are separated by 10 miles and 30 minutes driving time by truck. This physical separation has led to inefficiencies in consolidating orders for shipment to customers. Generally, a single customer order involves items stored at both warehouses. In order to consolidate items for each customer order, supplies for several orders are moved from Fulton to the ABC warehouse, unloaded, and then stored on the loading dock until combined with items stored at the ABC facility to form complete shipments. The items are again loaded on trucks for delivery to final destination.

At the request of JLARC staff, DPS recorded the extent of time and mileage for a one week period to compute the cost of extra trips required to consolidate orders. Five extra trips are required each week between the Fulton and ABC warehouses. The average cost of each trip is $63.42, including $55.17 labor and $8.25 for transportation costs (30 miles x .275¢ per mile). Based on these figures, the annual cost of just the extra trips is about $16,500. This may be a conservative estimate of the actual operating loss resulting from two separate facilities, as it does not take into account reduced truck and driver utilization; extra utilities, maintenance, supervision, and other costs of operating separate facilities; or, time lost by DPS management in overseeing the warehouses. Clearly, the operation of two separate facilities has reduced the efficiency of Central Warehouse.

Materials Management

A primary dilemma facing Central Warehouse is one of balancing two conflicting objectives: maximizing customer service and minimizing inventory investment. Maintaining excessive inventory to ensure no item is ever out of stock (maximizing customer service) requires excessive capital be tied up in merchandise and storage facilities. This practice, however, conflicts with the objective of minimizing investment in inventory. Balancing these objectives requires establishment of effective procedures for inventory control.[9] Such procedures are essential to ensure sufficient quantities of items are available to meet anticipated customer demand, and to provide an accurate record of stock on hand. A review of Central Warehouse procedures indicates some inventory controls have been relaxed and other generally accepted procedures have not been implemented.

Inventory Control. The primary tool for inventory control at Central Warehouse is a Kardex filing system in which receipts and shipments of stock are recorded manually from receiving reports and shipping orders. The accuracy of Kardex data is verified by physically counting the items in stock several times each year. At each inventory the department prepares worksheets listing the first count of stock on hand for each item, the Kardex record, and the amount found during a second count, if required. For some items the actual count will be over or under the Kardex record--these "overages" and "shortages" represent gross stock adjustments.

During the September, 1975, inventory JLARC staff tested Central Warehouse procedures by observing the actual counting of stock by the Warehouse Foreman. The procedures appeared to be sound, indicating the initial count and recount of stock should provide a reliable basis for measuring the accuracy of Kardex records.

JLARC used two measures to evaluate the accuracy of the Kardex system: a gross stock adjustment ratio, and an error rate. The gross stock adjustment ratio is the relationship of the value of overages and shortages to the average monthly value of total inventory. For fiscal 1975, gross stock adjustments of \$54,036 (Table 4) and an average warehouse inventory of \$1,620,000 resulted in a gross stock adjustment ratio of 3.3% (\$54,036 ÷ \$1,620,000 = 3.3%). The error rate is the proportion of items for which an inventory error greater than \$20 is found. For the September, 1975, inventory this proportion was found to be 20%. JLARC staff believes both rates are excessively high and reflect a need for increased attention to inventory control procedures. (The Department of Highways Warehouse has reported a gross stock adjustment ratio of 0.3% and an error rate of 0.5%.)

Upon completion of each inventory, the warehouse accountant devotes considerable time to searching for and correcting clerical errors in the Kardex

Table 4

CENTRAL WAREHOUSE GROSS STOCK ADJUSTMENTS FOR INVENTORIES DURING FISCAL 1975

Date of Inventory	Amount Over	Amount Under	Total
September 30, 1974	$ 4,568	$ 5,574	$10,142
December 13, 1974	5,608	7,145	12,753
May 9, 1975	11,403	11,649	23,052
June 15, 1975	1,539	4,201	5,740
June 30, 1975	1,075	1,274	2,349
Total	$24,193	$29,843	$54,036

Source: Department of Purchases and Supply.

file. After this process is completed, a list of "final stock adjustments" is prepared identifying those overages and shortages which could not be resolved. Inventory records are then adjusted to reflect actual stock on hand. Final inventory stock adjustments during fiscal 1975 totaled $51,600 for the entire year. This included overages of $25,400 and shortages of $26,200. Furthermore, stock adjustments increased significantly from the September to the May inventories. The mid-June inventory reduced the losses and gains to a more acceptable level at the time of the Auditor of Public Accounts' annual inventory on June 30. This trend suggests considerable effort was applied by DPS during the closing months of the fiscal year to straighten out the Central Warehouse inventory in preparation for the Auditor's annual inventory.

In September, 1975, final stock adjustments were $11,450 (25% higher than September, 1974), and gross adjustments were $36,630 (over 200% higher than in September, 1974). This suggests the level of clerical error in the Kardex file has increased significantly in recent months.

Poor internal controls make it impossible to determine whether inventory losses are due to theft or to clerical errors in recording receipts and shipments. For example, failure to post receipts to the Kardex file could be offset by items pilfered or misplaced. As existing inventory records do not provide sufficient guarantees against stock losses, DPS should consider the development of more effective inventory control procedures.

Items Out-of-Stock. Reorder points are the inventory levels at which additional stocks should be ordered to ensure inventory is not depleted before new stock arrives, taking into account the lead time required to replenish stock as well as anticipated demand. To perform this function, reorder points must be listed in the Kardex file and updated periodically. It is also important to review the economic order quantity of each item (EOQ), which is the optimal lot size that should be ordered at one time to balance inventory carrying costs with ordering and delivery costs. When the Kardex file indicates the level of inventory has reached the reorder point, the DPS purchasing agent is notified and action is taken to purchase the economic order quantity.

Neither reorder points nor economic order quantities have been adequately maintained. JLARC selected a five percent sample out of 800 items from the 1975 Central Warehouse catalog and found 75% of these did not contain re-order points in the Kardex inventory file. This suggests the actual proportion of items without reorder points can range from 60% to 90%. The failure to maintain reorder points can also result in the total depletion of many items before new shipments arrive. For example, a review of requisitions filled between September 23 and 25, 1975, revealed stock levels were inadequate to meet requests for 71 different items. This represented almost 10% of items stocked in the warehouse, most of which were standard foods. While a number of these items had been ordered, several vendors were late in delivery. (DPS has since instituted a policy that second bids will not be accepted from vendors who have been late in delivery on the first bid. Nevertheless, DPS should take immediate steps to review all reorder points and economic order quantities for inclusion in the Kardex file.)

Materials Handling. JLARC found a number of areas at both DPS warehouse facilities in which improved materials handling was needed, including greater use of metal storage frames, numbered stock locations, provision of staging areas, and assignment of responsibility for checking orders at the loading docks.

Insurance regulations for the ABC facility require that merchandise stacked on pallets not exceed a height of 20 feet, except that a minimum of three feet clearance from the ceiling sprinkler system must be provided. While no violations of these regulations were noted, JLARC staff found instances of damaged packages on lower pallets because items were not sturdy enough to withstand the weight of tall stacks. Greater use of metal storage frames would increase utilization of available space and reduce damage to inventory. In addition, numbered stock locations could aid in storing materials received, assembling shipments, and reducing inventory errors. While housekeeping was considered less than adequate in both facilities at the beginning of this review, increased attention to neat and orderly storage of merchandise was noted on subsequent visits.

There is no staging area for assembling shipments in either warehouse. A staging area facilitates both the efficient collection of items to fill requisitions and a quick review of orders before loading trucks. Lacking a staging area, Central Warehouse brings merchandise from Fulton to the ABC warehouse loading dock, where it is consolidated before loading on outgoing trucks for delivery. This process creates confusion and congestion and provides the opportunity for misplacing merchandise unless a special effort is made to check all items against the order at the time of loading. One person should be responsible for checking all orders at the ABC facility loading dock to prevent shipping errors.

Alternative Systems for Inventory Control

The Department should review alternative systems for inventory control regardless of whether a single facility is made available. Possible alternatives include: (1) maintenance of the present Kardex file with improved procedures for posting to the file; (2) purchase of a commercial inventory control package; and, (3) development of an automated inventory control system linked to an existing State computer.

The Present Kardex System. Manual inventory systems have not been improved in recent years because the cost of computerized inventory systems has been reduced significantly. For very small warehouse operations with stable customer demand, however, the Kardex system is adequate.

If the present inventory system is retained, greater attention to clerical procedures should reduce arithmetic error in posting receipts and shipments. For example, the Kardex clerk uses copies of customer requisitions to compute stock prices and adjust inventory levels. Presently, the Kardex clerk does not receive a requisition until orders have been filled by dock workers. As a result, the clerk is given an inordinate number of requisitions to process late in the day and is forced to compute prices and stock levels under considerable time constraints.

The limited amount of time available to the clerk to process requisitions before the trucks leave (as now required) has contributed to inventory errors. These errors could be reduced by providing all copies of the requisition (form 180) to the Kardex clerk (for computing prices and posting adjustments to inventories) except for the copy sent to the warehouse for stock selection. One of the copies completed by the Kardex clerk would accompany the shipment to serve as the agency receiving report.

Greater attention to updating reorder points and economic order quantities should also reduce the present number of items out of stock. In addition, designation of appropriate responsibility for checking orders as they are received or shipped at the loading dock should reduce inventory errors.

The Kardex system should provide Central Warehouse with adequate inventory control, given increased attention to clerical procedures and accuracy. However, if a single facility with adequate space were provided, DPS could increase the number of items supplied by Central Warehouse. An automated inventory control system might then be appropriate. JLARC reviewed several commercial inventory systems available on the market.

Commercial Inventory Packages. A second alternative is the purchase of a commercial package for automated inventory control at Central Warehouse. A wide variety of mini-computers is available in the range of \$10,000-\$60,000, including installation and training. For example, JLARC staff reviewed four available commercial computer packages, each of which provides a standard set of inventory management tools, including stock on hand, reorder points and economic order quantities, seasonal forecasting, and product usage reports. These computers retail for approximately \$20,000, not including software or program development. Although JLARC staff contacted only a few local sales representatives, it appears that one of these specialized computers would easily meet Central Warehouse inventory management needs.

Existing State-owned Computers. Utilization of an existing State computer to provide a similar capability is a third alternative. No capital outlay would be required for computer hardware and existing software programs utilized by other agencies could be modified for this purpose. Three possible options might be developed using existing computers. First, requisitions could be batched daily and sent to a keyboard entry unit within DPS or another State agency for recording. Second, a remote job entry terminal could be provided at Central Warehouse to keypunch data for transmission to a central computer. Third, an on-line system with direct access to the computer could be developed. In such a system, inventory data would be entered by keyboard into the computer, and a video terminal would enable warehouse personnel to make direct inquiries about information stored. The first option--use of a keyboard entry unit within DPS or another State agency for recording inventory changes--may be the least costly. This unit could also be used for other management information functions of DPS.

The Department should consult with the Division of Automated Data Processing (ADP) prior to making any decision regarding automated inventory control. ADP is charged with responsibility for reviewing all agency data processing budget requests and must approve all equipment purchases. Working with ADP, DPS should develop an appropriate system for inventory control based on current as well as anticipated needs.

Financial Management

The Central Warehouse working capital fund was established in 1960 with an initial advance of $369,000. By June 30, 1975, seven additional advances and one repayment had brought the balance to $2,500,000 (Table 5). In addition, an advance of $330,000 was provided in August, 1973, and another $150,000 in November, 1973, for the emergency purchase of fuel oil--bringing the balance of this separate account to $480,000. DPS is now in the process of closing out the fuel oil account and reports a current inventory of approximately $3,500. In February, 1974, at the request of the Auditor of Public Accounts, DPS repaid the August, 1972, advance of $300,000 provided to cover flood losses. At the same time, an additional advance of $400,000 was provided.

Financial Condition. Central Warehouse appears to be in sound financial condition, and financial statements for June 30, 1975, are correctly prepared. Unfortunately, the value of financial statements for management purposes is diminished due to excessive delays in preparation. Copies of the fiscal 1975 statements were not available until late September, 1975, almost three months after the close of the accounting period. If financial statements are to be used effectively as management tools, they should be available within one month following the close of the fiscal year. In addition, financial statements should be available to DPS management as soon as feasible following the close of each quarter.

The June 30, 1975, balance sheet (Exhibit 4) shows retained earnings of more than $445,000. This resulted from June 30, 1974, retained earnings of about $313,000 (Exhibit 5) and an excess of billings over costs during fiscal 1975 of more than $132,000 (Exhibit 6). Exhibit 6 shows billings to

Table 5

ADVANCES TO CENTRAL WAREHOUSE WORKING CAPITAL FUNDS

Date		Advances
March, 1960		$ 369,000
April, 1961		131,000
March, 1966		500,000
January, 1968		300,000
August, 1972		300,000
June, 1973		300,000
February, 1974 (Repayment)		-300,000
February, 1974		400,000
November, 1974		500,000
Total		$2,500,000
Fuel Oil		
August, 1973	330,000	
November, 1973	150,000	480,000
Grand Total as of June 30, 1975		$2,980,000

Source: Department of Purchases and Supply.

customers by Central Warehouse exceeded $12,860,000 during fiscal 1975, of which 77% were to State agencies and institutions. The cost of goods sold was approximately $12,290,000 while operating expenses were about $440,000.

Direct and Indirect Costs. The operating statement seems to indicate that all direct costs of goods sold, as well as most indirect costs of operating the warehouse are accounted for properly. Indirect costs include salaries and wages, personnel benefits, building maintenance and utilities, motor vehicle supplies and repairs, rent, and other materials. However, a portion of the salaries of two buyers who are responsible for Central Warehouse purchasing (about $13,000 annually) might also be charged to the working capital fund. In addition, DPS should consider charging an appropriate portion of management salaries to the fund.

A 1969 report of the Virginia Advisory Legislative Council (VALC) addressed the issue of charging indirect management costs to the working capital fund.[10] Although minutes for May 22, 1969, suggest the VALC Subcommittee favored such a policy, no recommendation was included in the final report. In May, 1974, the Auditor of Public Accounts reported no apportionment of administrative buying costs had been made to the fund, but made no other comment except this practice was "...in keeping with our principle of reporting on this operation in previous years."[11]

JLARC recommends a reasonable proportion of DPS purchasing and management costs be charged to the Central Warehouse working capital fund. This policy would ensure that billings to warehouse customers cover all

CENTRAL WAREHOUSE FUND

FISCAL 1975 FINANCIAL STATEMENTS

Exhibit 4

BALANCE SHEET

ASSETS			
Current Assets:			
Cash			$1,053,516
Accounts Receivable			351,813
Inventory			1,309,997
Prepaid Expenses			3,786
Total Current Assets			$2,719,112
Fixed Assets:			
Land		$ 17,490	
Buildings, Machinery & Equipment	$499,933		
Less: Allowance for Depreciation	254,930	245,003	
Total Fixed Assets			262,493
TOTAL ASSETS			$2,981,605
LIABILITIES AND RETAINED EARNINGS			
Current Liabilities:			
Accounts Payable		25,824	
Other Liabilities		9,982	
Long-term Liabilities:			
Working Capital Advance		2,500,000	
Petty Cash Reserve		375	
Total Liabilities			2,536,181
Retained Earnings			445,424
TOTAL LIABILITIES AND RETAINED EARNINGS			$2,981,605

Exhibit 5

ANALYSIS OF CHANGES IN RETAINED EARNINGS

Balance of Retained Earnings, July 1, 1974	$ 313,334
Add: Excess of Billings to Departments Over Costs	132,090
Balance of Retained Earnings, June 30, 1975	$ 445,424

Exhibit 6

STATEMENT OF OPERATIONS

Billings to Departments and Political Subdivisions			$12,864,860
Less: Costs of Services Rendered:			
Cost of Materials Used:			
Inventory, July 1, 1974		$ 1,542,609	
Net Purchases		12,058,566	
Total		13,601,175	
Inventory, June 30, 1975		1,309,997	
Total Cost of Materials Used		12,291,178	
Other Operating Costs:			
Personnel Compensation	$234,133		
Personnel Benefits	31,803		
Rent	41,502		
Utilities	1,713		
Communication	1,791		
Printing	1,764		
Travel	3,456		
Repairs	29,303		
Other Contractual Services	693		
Office Supplies	2,347		
Fuel Supplies	4,987		
Motor Vehicle Supplies	20,982		
Other Supplies	1,067		
Depreciation	64,685		
Inventory Changes	1,366		
Total Other Operating Costs		441,592	
Total Cost of Services Rendered			12,732,770
Excess of Billings to Departments Over Costs			$ 132,090

Source: Adapted from financial statements provided by the Department of Purchases and Supply.

operating costs, including indirect administrative costs, consistent with generally accepted accounting principles for working capital funds. Moreover, such a policy would also ensure that all customers, including local governments, support their share of indirect costs.

Pricing and Billing. Prices for goods stocked in the Central Warehouse are determined by adding a four percent charge for overhead expenses to the weighted average price of each item. For example, 100 units of an item purchased at $1.00 each would be priced at $1.04. Adding 50 units to inventory costing $1.10 each would require the computation of a new weighted average selling price as follows:

100	items @$1.00 x (4% markup) =	$104.00
+ 50	items @$1.10 x (4% markup) =	57.20
150		$\frac{\$161.20}{150 \text{ items}}$ = $1.07 (new selling price)

The determination of unit prices in this manner appears to provide adequate revenue to cover costs while providing State agencies and local governments with favorable prices compared to buying direct from local vendors.

State and local agencies submit requisitions for food and supplies on a combined requisition form. Central Warehouse prepares an Interdepartmental Transfer which each agency must approve before monies may be transferred by the Comptroller from an agency appropriation to the working capital fund. The Comptroller then sends the warehouse a monthly tabulation of accounts paid. Local government agencies pay for goods received by check.

Accounts Receivable. When Central Warehouse was established, the Comptroller and the Auditor of Public Accounts agreed all customer accounts should be paid within 15 days. This was considered necessary for Central Warehouse to take advantage of cash discounts by prompt payment of vendor invoices. As shown in Table 6, accounts receivable totaled over $1 million in November and in December, 1974. This led to a deficit balance of cash on hand, as vendor invoices were paid from the Treasury with insufficient funds in the Central Warehouse account to cover the checks.

Figure 3 provides an analysis of accounts receivable by length of time overdue for selected months during fiscal 1975. On December 31, 1974, receivables totaled over $1 million, including $771,000 from State agencies. Figure 3 also shows that an amount over $240,000 was overdue by 30 days or more, and almost $60,000 by 60 days or more. At the close of fiscal 1975, however, receivables had been reduced to $351,000, primarily in accounts less than 30 days old. The Department of Purchases and Supply should take appropriate steps to notify its customers that all accounts must be paid promptly.

Auditing. The Auditor of Public Accounts conducts an inventory of Central Warehouse merchandise at the end of each fiscal year. Based on this inventory, the Kardex file is adjusted to reflect current stock levels. Working papers used to conduct the inventory are retained by DPS and by the Auditor for use in future audits of the Department. In addition, records of final stock adjustments to all inventories are maintained by the warehouse for audit

Table 6

CENTRAL WAREHOUSE WORKING CAPITAL FUND
June, 1974 - December, 1975

Month	Accounts Receivable[a]	Accounts Payable[a]	Cash on Hand[a]
June (1974)	$ 282,700	$126,000	$ 325,000
July	494,700	36,500	298,600
August	872,700	30,000	73,900
September	925,000	-0-	392,700
October	956,400	-0-	350,000
November	1,011,000	822,000	(214,700)
December	1,023,000	704,000	(65,400)
January (1975)	911,500	830,500	234,400
February	906,000	481,000	176,700
March	709,000	479,700	476,700
April	767,000	388,000	563,000
May	660,000	332,500	743,000
June	351,800	25,800	1,048,000
July	480,000	190,000	1,114,500
August	844,000	342,000	771,000
September	999,000	465,200	781,800
October	952,600	446,100	651,400
November	958,900	531,800	537,400
December	715,100	371,700	703,400

[a] Figures rounded to nearest $100.

Source: Department of Purchases and Supply.

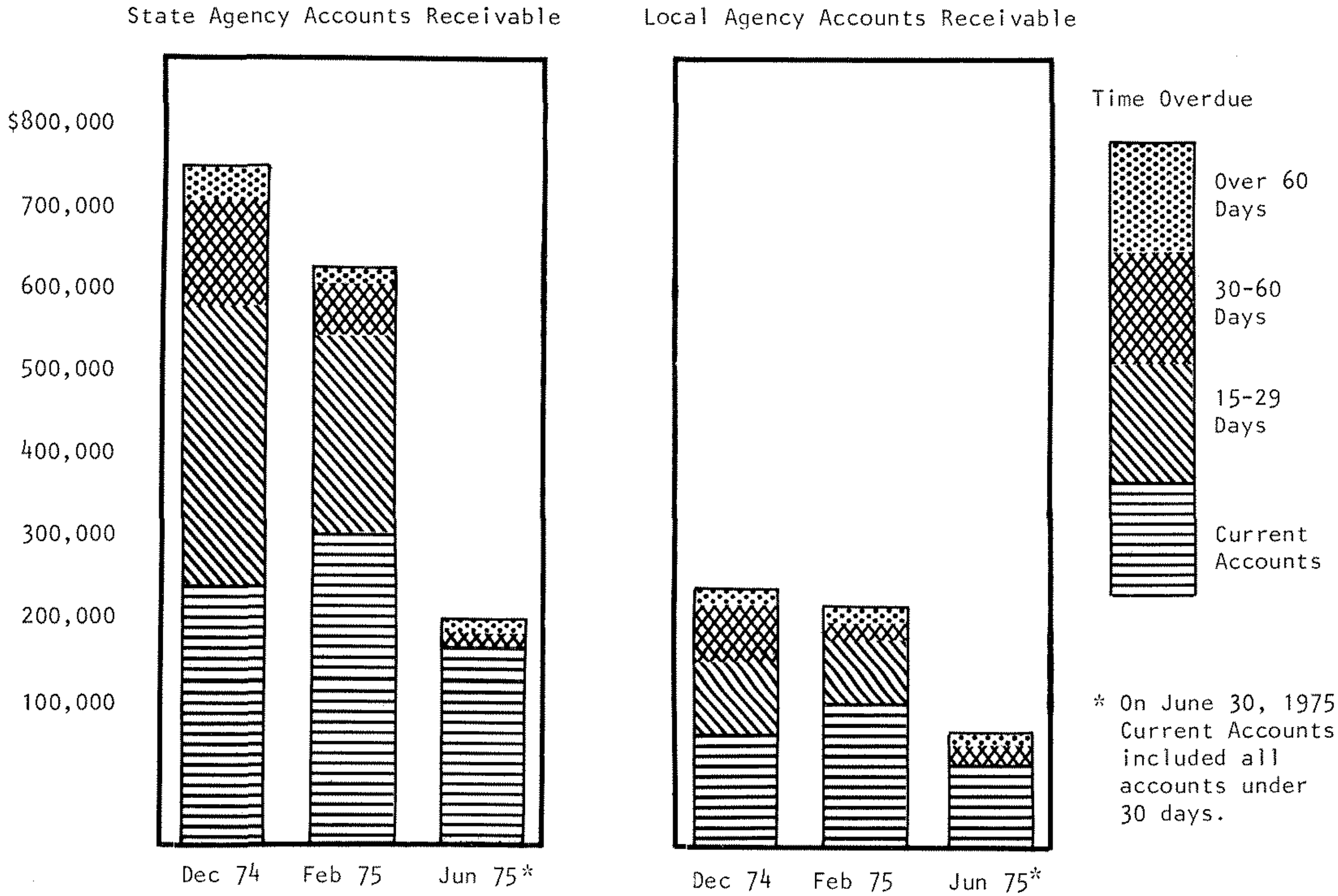
purposes. The last financial audit report of DPS (including Central Warehouse and Public Printing funds) covered fiscal 1972 but was not distributed until May, 1974. Such reports would be more useful if they dealt with a more recent period. Furthermore, in light of the inventory adjustment process outlined above, the Auditor might consider carrying out an annual inventory on an unannounced basis.

Conclusion

While the Central Warehouse is important to State efforts to reduce the cost of institutional food and supplies, its efficiency has been reduced by the use of two geographically separated facilities. Additionally, the susceptibility of Kardex records to a high level of error has contributed to inadequate inventory management. Generally accepted inventory controls such as reorder points and economic order quantites have not been utilized effectively. The department should immediately take steps to improve inventory management, regardless of whether a single facility is made available.

Figure 3

CENTRAL WAREHOUSE
ANALYSIS OF ACCOUNTS RECEIVABLE
December, 1974-June, 1975



Source: Department of Purchases and Supply.

Paper and Other Office Supplies. In 1957 the Auditing Committee of the General Assembly foresaw the need of a central warehouse for materials and supplies common to all State agencies.[12] The committee recommended a study of food requirements for State institutions, culminating in a 1959 report by the Commission on Economy in Governmental Expenditures which recommended establishment of a central warehouse. The Commission believed the warehouse should provide food and other institutional supplies initially, but that more items should be stocked in the future, if needed.

DPS has statutory authority for all State purchasing and should consider the feasibility of stocking items such as paper and other office supplies if adequate space is made available. Presently, State agencies are directed to purchase materials, equipment, and supplies through DPS, with certain exceptions as authorized by statute or by the Director of DPS.[13] Statutory exceptions are the purchase of construction materials and equipment by the Department of Highways and Transportation, and of alcoholic beverages by the ABC Board.[14]

State agencies purchase paper and other office supplies direct from the vendor under a blanket contract negotiated by DPS. All supplies included in these contracts are purchased from suppliers at contract prices, although a minimum purchase of $10 is required for Richmond area agencies ($20 outside of Richmond) before the contract price goes into effect. Also, State agencies are authorized by DPS policy to purchase items amounting to less than $200 per transaction without DPS approval. Total State expenditures for office supplies amounted to $2,436,700 in fiscal 1975, of which $376,300 (15%) was not purchased under contract. If facilities available to Central Warehouse were expanded to accomodate additional inventory such as paper and other office supplies, volume purchasing could reduce prices and agencies would be able to purchase in small quantities as needed. It appears that substantial savings could be realized.

CENTRAL TELEPHONE

The Central Telephone fund finances and accounts for the Central Telephone Exchange (CENTREX) in Richmond and the State Controlled Administrative Telephone System (SCATS). On July 1, 1974, responsibility for administration of the Central Telephone fund was transferred from the Division of Engineering and Buildings to the Virginia Public Telecommunications Council (VPTC). Substantial improvements in billing and collection processes made by VPTC have enabled it to administer the fund without additional working capital advances. Further improvements can be made in the administration of the fund by ensuring that only actual expenses of telephone services are charged to the fund and by developing and applying written criteria to evaluate State agency needs for telephone equipment and service.

III. CENTRAL TELEPHONE

The Central Telephone working capital fund was established in November, 1956, under what is now the Division of Engineering and Buildings with an initial advance of $50,000. Subsequent advances have increased the total amount provided this fund to $375,000. The original purpose of the fund was to finance telephone services provided by the Chesapeake and Potomac Telephone Company (C&P) to State agencies located in the Richmond area. Today, the fund finances the central telephone exchange (CENTREX) in Richmond and the State Controlled Administrative Telephone System (SCATS). This includes all telephone services required for the transmission of data signals to State computers. The CENTREX system provides normal commercial telephone service to all State agencies in the Richmond area while SCATS provides long distance service to subscribers throughout the State. Responsibility for administration of the Telephone fund was transferred to the Virginia Public Telecommunications Council (VPTC) on July 1, 1974. In addition to rebilling telephone charges received from C&P, the fund finances and accounts for publication of the State telephone directory, evaluation of State agency telephone needs, and the central switchboard.

Financial Management

Financial Condition. The June 30, 1975, balance sheet (Exhibit 7) of the Central Telephone fund shows retained earnings of $12,174. Because billings to State agencies were less than the cost of services rendered (charges by C&P plus VPTC operating costs) the fund suffered a loss of more than $38,000 for fiscal 1975 (Exhibit 9). It is recognized that some one-time expenses are to be expected during the first year of operation under a new agency. However, the present financial condition of the fund requires that VPTC monitor operating expenses closely to prevent another loss of this magnitude.

The balance sheet of the Central Telephone fund conforms to generally accepted principles and standards of governmental accounting but is prepared only at the close of each fiscal year. The analysis of changes in retained earnings and the statement of operations have been incorrectly combined in one statement. The preparation of separate monthly statements in accordance with generally accepted standards of accounting such as those recommended by the National Committee on Governmental Accounting would provide VPTC administrators a clearer picture of the financial condition of the fund and allow for timely management decisions when required.

Direct and Indirect Costs. The direct costs charged to the Central Telephone fund consist of payments to C&P and the General Services Administration. These costs appear to be appropriate and are accounted for in a proper manner. Selected indirect or operating costs were reviewed (Exhibit 9) and seem to be appropriate with the exception of the $9500 expense item for "Agency Services Contracts". The State budget manual stipulates amounts charged to this account should reflect "services rendered by a State agency and not included in other specified classification."[15] Apparently, VPTC anticipated the need for extensive assistance from Division of Engineering and Buildings personnel in the monthly billing process when the telephone function was

VIRGINIA PUBLIC TELECOMMUNICATIONS COUNCIL
CENTRAL TELEPHONE FUND
FISCAL 1975 FINANCIAL STATEMENTS

Exhibit 7

BALANCE SHEET
June 30, 1975

ASSETS		
Current Assets:		
Cash		$ 640,460
Accounts Receivable		499,750
TOTAL ASSETS		1,140,210
LIABILITIES AND RETAINED EARNINGS		
Current Liabilities:		
Accounts Payable	$753,036	
Long-term Liabilities:		
Working Capital Advance	375,000	
Total Liabilities		1,128,036
Retained Earnings		12,174
TOTAL LIABILITIES AND RETAINED EARNINGS		$1,140,210

Exhibit 8

ANALYSIS OF CHANGES IN RETAINED EARNINGS
For the Fiscal Year Ended June 30, 1975

Balance of Retained Earnings, June 30, 1974	$ 50,302
Add: Excess of Billings Over Costs (Deficit)	(38,128)
Balance of Retained Earnings, June 30, 1975	$ 12,174

Exhibit 9

STATEMENT OF OPERATION
For the Fiscal Year Ended June 30, 1975

Billings to Agencies and Institutions			$5,947,107
Less: Costs of Service Rendered			
C&P Telephone Company of Virginia		$5,679,083	
General Services Administration		1,208	
Total		5,680,291	
Other Operating Costs:			
Salaries	$145,747		
Wages	35,999		
Special Payments	315		
General Repairs	232		
Travel	1,914		
Convention and Education Travel	555		
Transportation	437		
Communications	6,214		
Printing	20,677		
Electronic Data Processing	20,795		
Agency Services Contracts	9,500		
Contractual Services	411		
Office Supplies	2,192		
Housekeeping and Maintenance Supplies	39		
Electronic Data Processing Supplies	864		
Other Supplies and Materials	46		
Equipment - Replacement	2,153		
Equipment - Additional	576		
Rent - Land and Structures	36,412		
Rent - Business Equipment	1,652		
Fringes	15,782		
Recovery Expenditures	2,432		
Total Other Operating Costs		304,944	
Total Cost of Services Rendered			5,985,235
Excess of Billings to Departments Over Costs (Deficit)			$ (38,128)

Source: Adapted from financial statements of the Virginia Public Telecommunications Council.

transferred on July 1, 1974. The actual transfer services rendered, however, were limited to the first several months of operation.

The unfortunate aspect of the continued payments to the Division of Engineering and Buildings is the implication that such payments were made not in consideration of any special services rendered, but rather to provide the division with monies to help meet the salaries of personnel no longer engaged in Central Telephone fund activities. That VPTC continues to make these payments more than a year after the transfer of the telephone activity lends credence to this suggestion.

The effect of charging the fund for the questionable services rendered by the Division of Engineering and Buildings is to recover these costs from all fund customers. While the amount is a very small share of total overhead costs, the practice is improper and should be terminated immediately. Furthermore, DEB should reimburse the Central Telephone fund for all payments made during fiscal 1976.

Pricing and Billing. The Central Telephone pricing and billing procedures are relatively straightforward and acceptable to fund customers. C&P provides to VPTC monthly computer tapes which contain charges by type of service for each State agency account financed through the fund. The tapes are then processed to provide a single, consolidated telephone bill for each State agency in the following format:

- CENTREX
    - -share of operating expense
    - -direct service charges
    - -long distance charges
    - -other charges and credits

- SCATS

The operating costs are recovered by charging customers an average of $6.40 per main line (share of operating expense), plus four and one-half percent of SCATS charges.

Accounts Receivable. Shortly after it assumed responsibility for the Central Telephone fund, VPTC requested that JLARC approve an increase in the working capital advance from $375,000 to $500,000. VPTC stated the increase was necessary because according to the Director of the Division of Engineering and Buildings and divisional accounting personnel,

> ...the procedures for the telephone company billings for the services, for processing such billing to the respective State agencies and institutions that received such services, and for the approval of payment, is such that it is difficult at times to avoid an overdraft situation in the State Comptroller's Office, if the telephone company bill is to be paid within a reasonable time after its receipt by the State.[16]

JLARC staff reviewed the request and found that overdrafts had not occurred with regularity. Instead, the problem was in the collection of accounts receivable which amounted to more than $184,000. About $139,000 of this amount was from two to three months overdue and some accounts were more than three years old. On October 22, 1974, VPTC was advised that its request would not be approved and that there was substantial concern about the large amount and age of outstanding accounts receivable. VPTC was requested to make every effort to collect all outstanding accounts and to report on their efforts to collect the delinquent bills. On December 2, 1974, VPTC reported that more than $181,000 of the $184,000 in delinquent bills had been collected and that an increase in the working capital fund advance did not seem to be necessary.

The success of VPTC in collecting these outstanding bills and the relatively smooth operation of the present billing process appear to have been aided by five main developments: (1) attempts to inform State agencies of overdue telephone bills, (2) an inventory of State agency telephone equipment conducted by C&P, (3) provision of more detailed telephone billings to customers, (4) establishment of an interim policy allowing State agencies to deduct disputed charges from their telephone bills and to resolve such conflicts after paying VPTC for the remainder, and (5) the utilization of automated data processing equipment to process billing data provided by C&P. Further evidence of the progress being made in the billing and collection processes is a current effort--now reported near completion--to print interdepartmental transfer invoices by computer.

Conclusion

A review of the administration of the Central Telephone activity would be remiss if it failed to take into account the fact that VPTC assumed this responsibility as recently as July 1, 1974. Since then, VPTC management has demonstrated an ability to make substantial improvements in financial management, particularly in the billing process. These improvements having been made, however, VPTC management should devote attention to the development and application of written criteria for the evaluation of State agency needs for telephone equipment and services.

VPTC conducts "use studies" to determine whether an agency request for a SCATS line is justified by the volume of intrastate long distance calls. While VPTC management claims to have developed specific criteria to evaluate requests for equipment, these criteria apparently have not been documented. The implications of strictly verbal criteria are twofold: first, unwritten criteria are more difficult to apply in an objective manner; and second, unwritten criteria make it difficult to maintain continuity in application when the agency undergoes changes in personnel. The development of written criteria will enable VPTC to oversee the acquisition and use of telephone equipment by State agencies in a more effective manner.

Since July, 1974, VPTC management has made a number of improvements in telephone operations, particularly in matters of financial administration and the CENTREX system. Continued aggressive program administration, including comprehensive evaluation of State agency telephone use, will make this operation an even more efficient and effective support service to the Commonwealth.

AUTOMATED DATA PROCESSING

Increasing costs of data processing applications in Virginia during the 1960's led to the establishment of the Division of Automated Data Processing (ADP) in 1968 to coordinate the use of computers by State agencies. In 1973, a working capital fund was established to finance and account for services provided by ADP to other State agencies.

A portion of the increasing costs for data processing operations can be attributed to the widespread use of computers to replace manual data processing functions. On the other hand, the inability of ADP to: develop and implement a State plan for data processing based on realistic objectives; and, exercise sound financial management of the working capital fund, have also adversely affected costs.

Financial practices which have been characterized by erroneous or confusing charges and misleading financial statements have contributed to the inefficient management of this fund since its beginning. Furthermore, ADP customers have reported considerable difficulty making meaningful comparisons between their monthly bills. The complex nature of quantifying automated data processing services requires the preparation and maintenance of accurate, timely accounting records. If ADP is not able to improve the billing process, consideration should be given to alternative methods of financing and accounting for automated data processing services.

IV. AUTOMATED DATA PROCESSING

Prior to 1967, automated data processing in Virginia was a relatively new management tool being developed on an individual agency basis. Although the position of computer coordinator was established in 1963 to coordinate and monitor statewide data processing activities, little control was exercised over individual agencies. The Governor's Computer Advisory Committee projected in 1967 that State data processing expenditures would increase from $6.7 million to $16.0 million by 1977. In view of anticipated increasing demands for funds to support agency data processing interests, the Division of Automated Data Processing (ADP) was established in 1968 to coordinate the use of electronic data processing operations by all agencies. The division was charged with:

- coordinating the use of automated data processing techniques, personnel, and equipment on a statewide basis; and,
- providing automated data processing services to State agencies as directed by the Governor and the Secretary of Administration.

Despite the creation of ADP, however, annual budgeted expenditures for data processing in Virginia increased to approximately $30 million by 1973.

Recognizing that costs for data processing were rising at an ever increasing rate, ADP developed a master plan in 1973 which included a two-part plan to consolidate existing data processing activities. The first phase called for reducing the total number of computers used by State agencies. The second phase involved the identification and development of standard data requirements to minimize the number of agency information systems. ADP also recommended that a separate service organization be established, administered by ADP, and financed through a working capital fund to provide centralized data processing services to State agencies. Staff for ADP consists of 16 positions financed by general fund appropriation. The Automated Data Processing Service Organization (ADPSO) is authorized 213 positions financed by revenues of the working capital fund. Assignment of the responsibility for coordinating State data processing to ADP appears to provide a rational basis for ensuring these operations are performed in an efficient and effective manner. Unfortunately, the consolidation effort has been plagued by inadequate planning and administration.

Planning

The lack of effective planning by ADP is exemplified by the failure to: reduce the number of computers according to plan; develop anticipated information systems; and, incorporate higher education data processing requirements into the State master plan.

Reducing Computer Equipment. At the time the 1973 ADP master plan was developed, there were 39 computer systems operating in the State: 12 in State agencies and 27 in institutions of higher education.[17] A major objective of the plan was to reduce the number of agency computers from a total of twelve at eleven agencies, to only four at three ADP centers by September,

1974. As shown in Figure 4, however, State agency data processing operations currently involve nine computers--five located at ADPSO computer centers and four at individual State agencies.

One reason for the delay in achieving planned computer reductions rests with the failure of ADP to identify the cost of providing services. For example, the Virginia Employment Commission (VEC) and the Medicaid Division of the Department of Health contract for data processing services with IBM and The Computer Company respectively. Because ADP has been unable to specify the cost of providing equivalent services, both agencies have been reluctant to participate in the consolidation effort.

Revisions to the 1973 master plan issued in 1975 specified that the four centers and five computers now operated by ADPSO would be further consolidated, leaving three computers at two centers. The computer located at the Finance Center was scheduled to be removed by October, 1975, and the computer located at the Central Resource Center was scheduled to be returned to the contractor by July, 1976. The October deadline has not been met and the likelihood of meeting the July, 1976, deadline is questionable. Clearly, the planned objective of reducing the number of computers in use has not been met. In addition, ADP has already fallen behind schedule on its revised plan for consolidation.

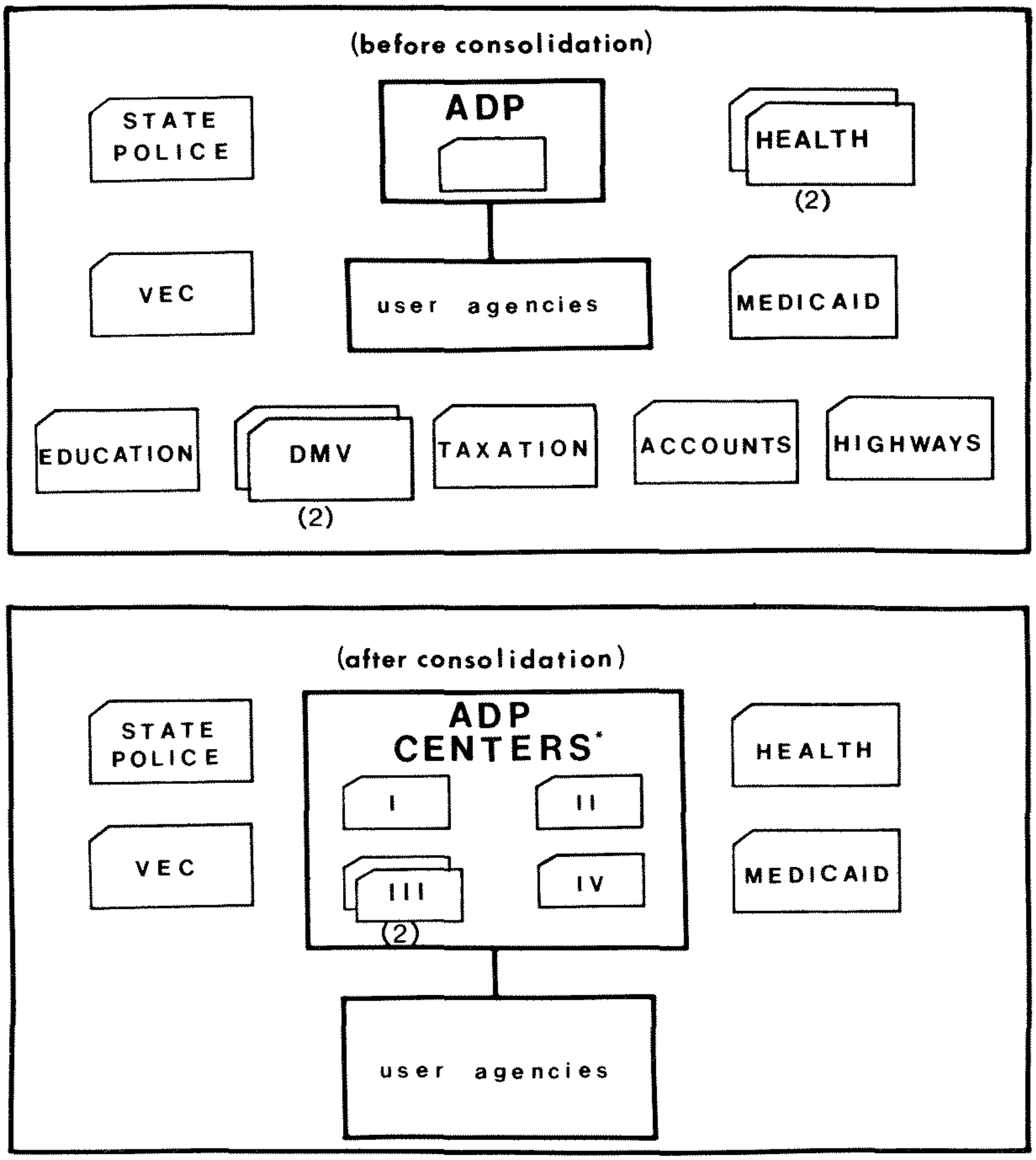
Management Information Systems. A second objective in the 1973 master plan was the development of multi-agency management information systems. Specifically outlined in the plan were information systems for the Divisions of Budget, Personnel, Justice and Crime Prevention, the Office of Human Affairs, the Department of Agriculture and Commerce, as well as various State registration and licensing agencies. Each information system was scheduled to be implemented by early 1975. Thus far, the Administrative Management (for Budget and Personnel) and Human Affairs Information Systems have been developed only in part. The Uniform Registration and Licensing, Criminal Justice, and Agriculture Information Systems have not progressed beyond the conceptual stage.

Higher Education. In 1967, the Computer Advisory Committee reported that 14 institutions had been budgeted $1.8 million to support data processing operations. By 1974, data processing expenditures budgeted for 37 institutions (including two-year colleges) and 27 computer systems totaled $13.6 million--an increase of 655%. The average amount budgeted per institution almost tripled, from $132,680 in 1967 to $369,940 in 1973. Currently, higher education institutions account for almost half of all budgeted expenditures for State data processing. Despite the dramatic increase in higher education data processing expenditures, ADP has not yet incorporated this activity into the State plan.

The use of computers by institutions of higher education is directed at both administrative and research functions. State agencies, on the other hand, tend to use computers for administrative functions. The different applications complicate a consolidation effort between institutions and agencies. The Virginia Plan for Educational Data Processing, reported by the State Council of Higher Education in 1969, proposed a regional approach to the consolidation of higher education data processing requirements. Current references to the proposed centers (University of Virginia, Virginia Polytechnic

Figure 4

STATE AUTOMATED DATA PROCESSING



Source: from information provided by ADP to JLARC, 1975.

* I-Central Resource Center (Highways)
II-Finance & Administration Center (Finance)
III-Trans. & Public Safety Center (DMV)
IV-Foundation Center (now called Mid-Town Center at Plaza Building)

Institute and State University, and The College of William and Mary) continue to regard each as a regional center, even though this plan was never fully implemented.

The legislation which outlines the duties and responsibilities of ADP to coordinate State data processing activities did not distinguish between agencies and institutions of higher education. Accordingly, the 1973 master plan indicated that

> (ADP will)...coordinate data processing functions in the institutions of Higher Education. (These functions), however, are not discussed in this Plan, but will be presented in a separate plan for Higher Education.[18]

To date, however, no such plan has been issued by ADP. Since higher education institutions account for almost half of the Commonwealth's total expenditures for automated data processing, it is imperative that their requirements be included in statewide planning.

Administration

Administration of ADP during the consolidation effort has been characterized by inadequate personnel management, questionable analysis of equipment acquisition, and weak financial management.

Personnel Management. In 1967, The Computer Advisory Committee projected that expenditures of $3.1 million for data processing personnel would reach $6.5 million by 1977. Fiscal 1975 budget estimates, however, exceeded $17.0 million, an increase of 448% since 1967. Much of this increase is due to the growth of data processing applications and the personnel required to develop, program, and monitor these operations. However, lack of control of personnel requirements and levels of compensation have also contributed to the rapid rise in personnel costs.

Prior to the 1973 consolidation effort, agencies directing extensive data processing activities generally required systems analysts, programmers, and operators. The personnel policy adopted by ADP called for each agency to retain some systems analysts and programmers but recommended the transfer of operators to the service organization. ADP then established five program coordinator positions (later called MIS directors) to integrate data processing programs among agencies. In addition, ADP established a number of program manager positions reporting to the MIS directors to assist in developing program requirements.

This arrangement appears to have resulted in some confused and duplicated program responsibilities between ADP and the user agencies. For example, the Department of Welfare requested a computer system development manager position for the development of its data processing activities, even though a program manager in ADP was at one time responsible for the same function. Correspondence from the Secretary of Administration and ADP indicate that attempts have been made to clarify the responsibilities of MIS directors and program managers. The Division of Personnel reports that agency requests for systems development personnel have been increasing. In some cases these positions may be justified, however, any duplication with current ADP responsibilities must be avoided.

Recruitment and retention of qualified, upper level management personnel was a chief concern of ADP during initial phases of consolidation. ADP charged that salary levels were too low to attract qualified personnel. In a letter to the Division of Personnel, a former Director of ADP stated

> The Division of Automated Data Processing (has) had continuing problems in attracting and retaining persons with the qualifications and experience needed to accomplish the goals which have been set for ADP... This situation exists because the...compensation program in the ADP occupational specialities do not adequately meet our needs and is inconsistent with what exists in other sectors from which we seek professional talent.[19]

Although the Director of Personnel indicated some reservation about the proposed increases, the Secretary of Administration submitted a proposal to the Governor which resulted in increased compensation levels for data processing positions.

> The Secretary of Administration has approved, for submission to the Governor, a number of new class titles and salary ranges for key positions in the Division of Automated Data Processing. These classes and salary ranges have been developed in response to proposals made by the Director, Division of Automated Data Processing, that substantially higher salaries are needed to attract qualified persons for key positions in his agency.[20]

New class titles and salary ranges for eight positions were approved on July 26, 1974, effective July 1, 1974. At the time these salary adjustments were made, ADP was recruiting personnel to fill a number of top level management positions. Even though the stated purpose of the request for increased salaries was to "...attract qualified persons for key positions...," six of the eight positions were filled from within ADP--four only five days after the salary adjustments were approved.

Equipment Acquisition. In 1974, ADP requested a $4 million working capital advance to purchase two computers and other data entry equipment located at the Division of Motor Vehicles. The request raised two important questions: how would purchase affect the total cost of operation?, and how would purchase affect the flexibility of operation?

An ADP analysis showed that purchase would save the State approximately $2 million over a five-year period compared to a lease arrangement. At the request of JLARC, interest, inflation, and the risk of technical obsolescence were included in the cost comparison and resulted in revised anticipated savings of $1.4 million over a five-year period, assuming a salvage value of $844,000. JLARC denied the advance of additional monies on the basis that the proposed method of using working capital fund monies to purchase the computers was inappropriate as specified; and, because the projected savings (based largely on estimated salvage value) was not enough to warrant the loss in flexibility.

Flexibility. The purchase of computer equipment cannot be justified solely on the basis of tangible cost differences. Such anticipated savings may be more than offset by the loss of flexibility to meet future needs. ADP predicted large financial savings to the State from the purchase of two computers. Overlooked were considerations that purchase restricts the release, modification, or expansion of equipment as technology advances, as well as competition with other vendors for auxiliary and peripheral equipment. A 1974 report by the Council of State Governments highlights the reasons most state agencies do not purchase computers:

> ...leasing remains by far the most common method of procuring computers by state agencies. In both 1974 and 1973, 70 percent of the reported systems were under lease...These leases, in addition to offering savings, permit avoidance of longer term commitment to particular hardware configurations.[21]

Equipment procurement by an agency such as ADP affects both the cost of operations and the flexibility of service. The emphasis on capital investment for computers demands that consideration of ways to finance equipment be given a very high priority. In May, 1975, ADP elected to purchase the same two computers at DMV by a third-party agreement. The resulting contract affords ADP the benefits of potential savings while maintaining a certain degree of flexibility. Although the contract is extended over an 84-month period, ADP has the option to terminate the agreement without penalty after 14 months--an arrangement that is superior to the one originally proposed.

Financial Management

Financial Condition. The financial condition of the ADP fund improved significantly during the second year of operation. Having suffered a loss of more than $102,000 during the first year, an excess of billings over costs during the second year of operation exceeded $142,000, enabling the fund to report a balance of retained earnings of about $40,000 on June 30, 1975. The fund assets, liabilities, and retained earnings are detailed on the balance sheet in Exhibit 10. Exhibit 11 provides an analysis of changes in retained earnings for the year ending June 30, 1975. The statement of operations for the ADP working capital fund for fiscal 1975 is shown on Exhibit 12. Billings to State agencies for ADP services amounted to about $8.5 million. The total cost of providing these services was about $8.3 million, resulting in an operating surplus of about $142,000.

Direct and Indirect Costs. The statement of operations (Exhibit 12) should include all direct and indirect costs associated with operating the working capital fund. However, personnel costs attributed to administration of the ADP Service Organization are not charged to the fund. For example, the ADP Administrative Officer records and reports the financial condition of the working capital fund. His salary is paid in full by direct appropriation. Likewise, the deputy directors spend much of their time working for the service centers. Again, their salaries are paid out of the general fund appropriations to ADP. Since a primary advantage of the working capital fund method of financing is to record the total cost of providing a support service, all appropriate indirect costs associated with fund services should be recorded.

AUTOMATED DATA PROCESSING FUND

FISCAL 1975 FINANCIAL STATEMENTS

Exhibit 10

BALANCE SHEET

ASSETS		
Current Assets:		
Cash		$1,146,322
Accounts Receivable		1,038,501
Prepaid Expenses		406
TOTAL ASSETS		2,185,229
LIABILITIES AND RETAINED EARNINGS		
Current Liabilities:		
Accounts Payable	$ 154,356	
Employee Benefits	65,990	
Long-term Liabilities:		
Working Capital Advance	1,925,000	
Total Liabilities		2,145,346
Retained Earnings		39,883
TOTAL LIAIBLITIES AND RETAINED EARNINGS		$2,185,229

Exhibit 11

ANALYSIS OF CHANGES IN RETAINED EARNINGS

Balance of Retained Earnings, July 1, 1974 (Deficit)	$ (102,884)
Add: Excess of Net Billings to Departments Over Costs	142,767
Balance of Retained Earnings, June 30, 1975	$ 39,883

Exhibit 12

STATEMENT OF OPERATIONS

Billings to State Agencies		$8,460,833
Less: Costs of Services Rendered		
Salaries and Wages	$1,794,457	
Contractual Services	612,236	
Supplies and Materials	250,327	
Grants/Shared Revenues	3,015	
Equipment Replacement	2,037	
Equipment Additional	589,483	
Current Charges and Obligations	4,892,984	
Pensions, Retirement, and Insurance	173,527	
Total Cost of Services Rendered		8,318,066
Excess of Billings to State Agencies Over Costs		$ 142,767

Source: Adapted from ADP Financial Statements, June 30, 1975.

Financial Statements. It appears that ADP received assistance in the design of its financial statements from the Auditor of Public Accounts. However, these statements have misrepresented the condition of the working capital fund by failing to follow generally accepted governmental accounting principles. One such principle is that the format of financial statements be consistent to allow for comparison and analysis of trends. Balance sheets prepared by ADP have varied considerably. For example, accounts receivable have been identified as "due from other funds," "amount billed to other agencies," "deliquent and doubtful," and "current accounts."

A second principle is that the balance sheet reflect all assets, claims against those assets in the form of liabilities, and any retained earnings. Beginning in April, 1975, however, ADP did not include retained earnings on the balance sheet. As shown on Exhibit 13, assets were not equivalent to liabilities and retained earnings. Statements for April and for subsequent months have listed the amounts that should have been reported as retained earnings as:

- Amount to be recovered from future operations (listed as asset)
- Amount to be reimbursed to future operations (listed as liability)
- Amount to be liquidated through future operations (listed as liability)

Exhibit 13 compares the financial statements prepared by ADP as of April 30, 1975, to a balance sheet prepared in accordance with standards of the National Committee on Governmental Accounting. The latter clearly shows an accumulated deficit of $10,290. However, this deficit is difficult to identify in the corresponding statement prepared by ADP. ADP has also neglected to record the value of its computer equipment as a fixed asset of the fund. Without showing these data on its financial statements, the true condition of the fund cannot be determined. ADP administrators have indicated that equipment will be recognized on future statements.

Pricing and Billing. ADP billings to user agencies have been severely criticized since consolidation began in October, 1973. The primary problems have been undefined and erroneous charges and increasing costs of services without proper accounting of billing adjustments. It has been difficult for most user agency managers to understand and review the ADP billing formula. Exhibit 14 shows the algorithm used by ADP to bill some user agencies for services (others, such as DMV are billed a prorated share of computer expenditures). Due to the technical nature of the formula and statements of charges, many bills are questioned by customers and either all or parts of the charges are left unpaid. For example, in May, 1974, the Division of Motor Vehicles (DMV) was billed $129,831 for miscellaneous service charges. Subsequently, ADP explained the purpose of the charge was to rectify previous billing errors. In September, 1974, the Department of Accounts was billed $22,000 for services rendered but agreed to pay only $12,000. Later, it was determined the remaining

Exhibit 13

COMPARISON OF FINANCIAL CONDITION STATEMENTS

AUTOMATED DATA PROCESSING

BALANCE SHEET
April 30, 1975

ASSETS		
Cash with Treasurer of Virginia		$ 339,662
Prepaid Expenses		661
Due from other Funds:		
Amount Billed to Agencies	$1,785,496	
Amount to be recovered from Future Operations	10,290	1,795,786
		$2,136,109
LIABILITIES		
Accounts Payable	44,459	
Accrued Taxes & Employee Benefits	100,930	
Reserves for Annual & Sick Leave	65,720	211,109
ADVANCE DUE TO TREASURER OF VIRGINIA		$1,925,000

Source: ADP statement from Exhibit A, ADP Working Capital Fund Statement of Financial Condition, April 30, 1975.

NATIONAL COMMITTEE ON GOVERNMENTAL ACCOUNTING

BALANCE SHEET for ADP
April 30, 1975

ASSETS		
Cash		$ 339,662
Accounts Receivable		1,785,496
Prepaid Expenses		661
TOTAL ASSETS		$2,125,819
LIABILITIES AND RETAINED EARNINGS		
Current Liabilities:		
Accounts Payable	$ 44,459	
Benefits	166,650	
Long-Term Liabilities:		
Working Capital Advance	1,925,000	
Total Liabilities		2,136,109
Retained Earnings (Deficit)		(10,290)
TOTAL LIABILITIES & RETAINED EARNINGS		$2,125,819

Italics denote change presentation.

Source: Adapted by JLARC from ADP Balance Sheet, April 30, 1975. Format based on standards published by NCGA, Governmental Accounting, Auditing, and Financial Reporting, 1974, page 73.

$10,000 consisted of charges for equipment that belonged to other agencies and for equipment that was no longer in use.

In addition to misunderstandings of the billing algorithm and statements, many agencies simply do not have sufficient funds to pay for data processing services received. The data processing portion of the Division of Personnel budget for fiscal 1975, recommended by ADP, amounted to about $6,000 per month. Subsequently, the division was billed almost $27,000 by ADP in the first two months of the year. In a letter to ADP on September 17, 1974, the division noted the cost of maintaining its on-line inquiry system alone was more than had been budgeted for all Personnel data processing operations. As a result, the Division of Personnel has been paying ADP one-twelfth of its data processing budget each month--regardless of the bill rendered by ADP. Other agencies have experienced similar budget problems, including seven agencies which collectively owed ADP approximately $250,000 as of October, 1975. Although ADP acknowledges billing problems, inaccurate charging for services continues. For example, expenses for tape and disk storage, a service required by a few agencies, are often prorated to all user agencies.

Another shortcoming of the billing and pricing system is the inability to make accurate comparisons of the costs associated with services rendered. ADP can adjust billings to customers to recover losses or prevent excessive profits. However, user agencies are seldom able to determine whether increases are due to an adjustment of the rate structure to cover ADP

Exhibit 14

BILLING RATES FOR CENTRAL RESOURCE AND
TRANSPORTATION AND PUBLIC SAFETY CENTERS

Algorithm

$$\text{TOTAL JOB CHARGE} = .70^{*} \times \frac{\text{LP}}{1000} + 1.73^{*} \times \frac{\text{CR}}{1000} + \frac{26.77\ \text{CP}}{1000} + 205.00 \times \text{CPU Hours} + 49.00 \times \text{I/O Hours} + .60\ \text{CORE K BYTE HOUR}$$

*Substitute .30 if by RJE (Remote Job Entry)

Where:

LP =	Lines Printed	($.70 per 1000 lines)
CR =	Cards Read	(1.73 per 1000 cards)
CP =	Cards Punched	(26.77 per 1000 cards)
CPU HOURS =	Total CPU Hours Used	(205.00 per CPU Hour)
I/O Hours =	Total I/O Hours Used	(49.00 per I/O Hour)
CORE K BYTE HOURS=	$(\text{I/O Hours} + \text{CPU Hours}) \times \frac{\text{Memory used in BYTES}}{1000\ \text{BYTES}}$	($.60 per CORE K BYTE Hours)

Source: Data provided by ADP, September, 1975.

costs or to an increase in services received. For example, prior to the consolidation effort, average monthly data processing expenditures of the Department of Accounts (DOA) were approximately $8,500. Current monthly DOA expenditures for services provided by the ADP fund range from $15,000 to $20,000. Unfortunately, DOA has been unable to determine the relationship between its increasing expenditures for data processing and the increased capabilities and other benefits provided by ADP. In addition, DOA continues to support internal data processing personnel, supplies, and telephone connections.

Generally, ADP believes increased charges have resulted from tremendous growth in capacity and in applications by user agencies. Unfortunately, the lack of quantitative unit cost data make it impossible to determine if actual savings have occurred. This frustrated analysis is compounded by the fact that efforts to decrease data processing charges to the agencies have been unsuccessful. For example, in October, 1973, DMV was billed at a rate that was based on the number of other user agencies sharing the same computer. The fact that approximately 20 additional agencies were sharing this computer by May, 1974, should have lowered the cost to DMV. Its costs, however, remained unchanged.

Another recent case illustrates the billing problems of ADP. Medicaid is scheduled to be added to one of the computer centers. Although the cost of operating the center will not increase with the addition of Medicaid, ADP has indicated that costs to agencies currently using the same computer will not decrease. Finally, ADP recently purchased two computers which were previously leased. Savings to the State were estimated to be $1.4 million over a five-year period. To date, charges to customers have not been reduced. In short, the lack of a systematic method for pricing ADP services and billing customers has a major impact on the effectiveness of ADP. ADP must develop an accurate and understandable billing system which reflects the true cost of all State data processing operations if this service is to be financed through a working capital fund. If a satisfactory billing system is not developed, consideration should be given to financing ADP through a general fund appropriation with estimated allocations by agency for information purposes.

Accounts Receivable. The complex billing structure used by ADP has caused disagreements over items contained in monthly bills and has resulted in a large accounts receivable balance. At the close of fiscal 1975, ADP reported accounts receivable of $1,038,501, including $458,739 identified as delinquent and doubtful accounts.[22] During the period July to November, 1975, ADP reduced the delinquent accounts to $251,334. However, ADP administrators have indicated that accounts receivable continue to increase, primarily due to insufficient agency data processing budgets.

While the recently appointed Director of ADP has recognized and begun to take action to collect overdue accounts, this problem has not been a primary concern of ADP managers in the past. According to a former director of ADP in a memorandum to the Secretary of Administration:

> The Division has attempted to provide an explanation of the charging procedures and methods... It is not staffed to operate a collection agency nor to reconcile its charges to alternate projections made by another agency. It is

> willing to, of course, respond to additional and future reasonable requests from any agency.[23]

ADP has been able to carry significant delinquent accounts receivable due to the substantial $1.9 million working capital advance. As operating costs continue to increase, however, it becomes increasingly important that delinquent accounts be collected in order that ADP meet expenditure obligations.

Auditing. To date there has not been a completed financial audit of ADP by the Auditor of Public Accounts. Following the appointment of a new director in July, 1975, ADP requested that a financial audit be conducted and one was started in September. After three months, the Auditor of Public Accounts and the Director of ADP agreed to halt the examination to allow ADP to organize its financial records. The Auditor has indicated the audit will resume by March, 1976.

Conclusion

Automated data processing development in Virginia has not been effectively coordinated by ADP for a number of reasons, including: unsuccessful attempts to consolidate computer equipment and information systems; ineffective management of personnel requirements; and, improper financial management. These problems have resulted, in part, from a lack of continuity of top management, ineffective planning, and poor communication between ADP and other State agencies.

Continuity of Top Management. There have been four directors of the Division of Automated Data Processing since 1967. This lack of continuity has contributed to organizational instability, unsuccessful attempts to meet objectives, and inadequate financial management of the working capital fund. With stable leadership, however, ADP should be able to set more realistic objectives and improve overall data processing management. It appears the current director has made progress in attempting to organize and manage ADP since his appointment in July, 1975. A fiscal division has been organized to administer all financial affairs; task forces have been formed to study and recommend changes in pricing and billing methods and consolidation of agency work load requirements; and, a resource sharing committee has been established to review data processing requirements in higher education.

Planning. Since 1968 ADP has published two comprehensive master plans and a 1975 revised master plan for data processing. Unfortunately, the combination of ineffective management and unrealistic goals has resulted in limited achievement of planned objectives. In less than three years, ADP proposed to:

- centralize all State data processing activities;
- reduce the number of computers while increasing total data processing capacity;
- refine and improve existing data processing programs; and,
- develop new, multi-agency information systems.

It is recognized that planning for consolidation of State computer resources is a complex and difficult task. However, steps should have been taken to ensure that goals and objectives were outlined in a realistic manner with proper consideration given to time frame, effects of the proposals, and benefits to the Commonwealth.

Communication. Lack of open and effective communication with user agencies has severely impacted on the ability of ADP to accomplish its objectives. Disagreements, confusion, and mistrust have thwarted attempts at both consolidation and the development of information systems. In addition to logistical and financial difficulties, the lack of cooperation between ADP and user agencies has hindered implementation of the 1973 plan. ADP recognized this problem in its September, 1974, annual report.

> To place the subject of communications any other place but at the top of the list (of problems) would be to ignore one of management's major concerns. A need for effective communications at all levels exists. The scope of communication requirements includes internal and all external interfaces for technical, operational and management subjects.[24]

While recognition of this problem by ADP is the first step toward a viable solution, the division should place increased emphasis on improving daily communication with user agencies. Integral aspects of improved communications require that ADP fully explain its operational decisions and billing procedures. At the same time, the user agencies should recognize the difficulties in controlling data processing costs and cooperate with ADP in developing and implementing realistic objectives. The recent establishment of a task force on billing, which includes representatives of ADP and user agencies, is a positive step toward establishing open lines of communication. Further efforts to improve agency communications are essential to the success of the development of centralized automated data processing in Virginia.

PRINTING AND GRAPHICS

A working capital fund was initiated in 1974 to finance and account for a consolidated printing and graphics shop established by the Department of Purchases and Supply (DPS) to serve the capitol area. After the shop experienced substantial losses during the first six months of operation, the State Printing Coordinator was detailed to the activity in January, 1975, to improve work procedures, records management, and financial accounting. Four months later the fund realized a modest profit for the month of April. The difficulties experienced in recovering operating costs rest, in part, on the inability of DPS to carry out a more comprehensive consolidation program. At least 52 offset presses operated by 75 persons who are assigned to 18 different agencies in the Richmond area (not including the DPS shop), are printing items that could be produced by a centralized printing shop.

Section 2.1-243.1 of the Code charges the Director of DPS with developing guidelines for improving the efficiency of State printing facilities and provides him with the authority to centralize printing equipment and services. Immediate steps should be taken to develop comprehensive plans for the efficient utilization of State printing resources--including centralization of agency printing functions to the maximum extent practicable. Further consolidation should provide more efficient utilization of personnel and equipment and reduce the cost of State printing.

V. PRINTING AND GRAPHICS

The rapidly increasing cost of State printing and duplicating has been the subject of a number of executive and legislative studies. Common to these studies has been a recognition of the need to develop guidelines for efficient utilization of State printing equipment and to centralize printing equipment and services. In 1972, the General Assembly amended existing legislation to provide the Director, Department of Purchases and Supply, with authority to:

> Establish criteria and procedures to obtain more economical operation of State printing facilities, provide guidelines to agencies regarding the most beneficial utilization of duplicating and reproduction equipment, *and to centralize printing, duplicating, and reproduction equipment and services*;[25]

The amended statute also provided for the use of a working capital fund to finance centralized printing operations. A cabinet committee created in 1973 recommended the establishment of a central printing operation convenient to the capitol area. Subsequently, the printing functions of the Division of State Planning and Community Affairs, Department of Health, and Department of Mental Health and Mental Retardation were consolidated to form the Department of Purchases and Supply (DPS) printing and graphics shop. A working capital fund was established with a $280,000 advance on July 1, 1974. In December, 1974, the shop moved into renovated facilities at 1322 East Main Street in Richmond.

All jobs not printed by individual agencies must be requisitioned from DPS. A printing manager determines whether a job should be contracted to a private printer or completed at either the State Penitentiary or DPS printing shops. If the DPS shop is selected, work is scheduled by the shop foreman and the shop accountant prepares and mails an IDT for billing the agency upon delivery of its order.

While this shop is not yet two years old, JLARC staff review indicates that increased attention to planning and organization, personnel and equipment utilization, and financial management is necessary to obtain more economical printing services as intended by the General Assembly.

Planning and Organization

Consolidation of printing and graphics functions from three State agencies to form the DPS printing and graphics shop provides the opportunity to obtain more efficient utilization of expensive printing equipment. Since a number of State agencies in the Richmond area continue to operate small printing shops for internal use, it appears additional economies could be achieved by further consolidation.

Lack of Centralization of Printing and Graphics Operations. As illustrated in Table 7, at least 18 agencies in the Richmond area maintain

Table 7

DISTRIBUTION OF PRINTING RESOURCES IN RICHMOND AREA AGENCIES[a]
(Equipment, Personnel, and Type of Work Performed)

Agency	Offset Presses	Printing Personnel[b]	Forms	Reports & Memos	Regulations Manuals, Surveys & Price Lists	Letterhead	Newsletters, Brochures & Publications
Employment Commission	5	6	X	X			
Water Control Board	2	3	X	X			
Agriculture & Commerce	2	3.5	X			X	X
Labor & Industry	3	2	X	X	X		
Education	1	3	X	X	X		
State Library	2	5[c]	X				X
Community Colleges	2	2	X			X	
Alcoholic Beverage Control	4	4	X		X		
Welfare	2	1	X	X	X		
Highways & Transportation	8	19	X	X	X	X	
State Police	3	4	X	X			X
Motor Vehicles	4	5	X	X	X		
Professional & Occupational Regulation	1	2	X		X		
Virginia Museum	1	1	X	X	X		X
Vocational Rehabilitation	1	2[c]	X	X	X		
Visually Handicapped	1	1	X			X	X
Military Affairs	2	1		X	X		
Penitentiary	8	11	X				
Total	52	75.5					

[a]Excludes DPS.

[b]Duplicating Services Series: Duplicating Machine Operators and Supervisors. Larger shops may employ additional persons in platemaking, composition, binding, accounting, etc.

[c]Positions other than duplicating services series (e.g. clerical, photo-operators, etc.).

Source: JLARC survey, December, 1975.

separate printing operations (excluding the DPS printing and graphics shop) using 52 offset presses and employing over 75 persons. Moreover, these separate shops print essentially the same items: blank forms, internal reports or memoranda, and printed regulations or manuals. Several shops print letterhead stationery, while others publish brochures, newsletters, annual reports, and magazines. As with duplicating machine operators and supervisors, graphics technicians are assigned to a number of agencies. The Division of Personnel reports a total of 16 illustrator positions authorized in 5 Richmond area agencies (excluding DPS).

The Cabinet Printing Committee. A committee composed of representatives of each cabinet secretary was established in 1973 to analyze State agency printing operations. Subsequently, a technical subcommittee with representatives from several agency printing functions was formed to advise the committee.

Thus far, recommendations by these committees do not appear to be aimed at achieving maximum economies through consolidation of small, often underutilized printing operations. On the contrary, the recommendations provide for token consolidation, which has already been accomplished, and the maintenance of existing agency printing activities. The committee recommended the General Assembly alter Section 2.1-243.1 (3) of the Code by substituting "...provide a *central* printing, duplicating and reproduction facility"[26] for the actual wording of the section:

> ...to *centralize* printing, duplicating, and reproduction equipment and services;

The General Assembly has not adopted this proposed change. Nevertheless, a March, 1975, memorandum of the technical subcommittee implies legislative intent of Section 2.1-243.1 (3) has been carried out, because "a central printing, duplicating and graphics facility has been established."[27]

In addition, the committee recommended the State maintain separate agency printing operations for: rush printing jobs, limited numbers of copies, and primarily duplicative materials. During a series of on-site inspections, JLARC staff found that most agencies which have internal printing operations are printing routine materials that could be scheduled well in advance and accomplished more economically by a central printing shop.

Recognizing the advantages of centralized printing, several agencies have eliminated their internal printing operations. The Divisions of State Planning and Community Affairs, and Drug Abuse Control, and the Departments of Health, Mental Health and Mental Retardation, and Taxation now utilize the DPS Printing and Graphics shop, with no apparent adverse impact on operations. Other agencies in the capitol area with similar printing requirements could easily utilize the central shop.

It is recognized that not all printing and duplicating operations in the Richmond area, or even in the capitol area, should be consolidated into a single shop. However, Section 2.1-243.1 of the Code clearly charges the Director of DPS to take steps towards centralization to provide more efficient and economical printing services. Currently, the Director of DPS reviews all budget requests for new printing equipment. In addition, JLARC staff recommends the Director of DPS review current printing operations among State agencies and develop a comprehensive plan to centralize printing services to achieve the most efficient and effective service to State agencies. Additional funds for printing equipment and personnel positions should not be appropriated until such a plan is completed.

Personnel and Equipment Utilization

The existence of small internal printing operations has resulted in inefficient personnel and equipment utilization in the DPS Printing and Graphics shop. Because other agencies do not operate on a profit or loss basis, under-utilized printing equipment and personnel are not major concerns. However, the DPS printing and graphics operation is financed by a working capital fund, so it must generate enough sales to cover costs. If sales are not sufficient to cover both direct and overhead costs, the shop will suffer a loss. In fact, the printing and graphics shop was initially overstaffed for the amount of sales generated. Sales did not exceed expenses for the first nine months of operation (Table 8). Since April, 1975, sales have begun to cover operating expenses (except for the month of June).

The graphics section of the shop has also been overstaffed and has contributed to the poor financial condition of the fund. There has been insufficient demand for graphics services to justify transfer of three illustrators

Table 8

ANALYSIS OF PROFIT AND LOSS
July, 1974 - October, 1975

Month	Work-orders	Sales	Operating Expenses	Profit (Loss)
July, 1974	118	$ 8,497	$17,938	$(9,441)
August	151	14,367	17,084	(2,717)
September	160	12,513	17,820	(5,307)
October	221	14,473	19,661	(5,188)
November	189	11,434	18,984	(7,550)
December	65	6,583	23,786	(17,203)
January, 1975	295	16,202	22,127	(5,925)
February	172	17,145	25,202	(8,057)
March	231	21,476	25,874	(4,398)
April	322	31,431	30,444	987
May	335	32,396	31,094	1,302
June	264	24,175	29,241	(5,066)
July	378	31,310	30,669	641
August	390	33,314	32,256	1,058
September	362	35,662	34,289	1,373
October	334	35,941	32,707	3,234

Source: Department of Purchases and Supply, Printing and Graphics Shop.

from the Division of State Planning and Community Affairs. Two illustrator positions which became vacant in April, 1975, were abolished but the remaining position is still not fully utilized. Moreover, less than half of this individual's current workload is related to jobs handled in the print shop.

Changes in work performed by the Printing and Graphics shop required an initial period of adaptation. Not only did the number of work orders per month increase rapidly during the first year, but customer demand placed primary emphasis on quantity rather than quality of output. While under the Division of State Planning and Community Affairs, the printing operation had been oriented toward high-cost State, regional, and local planning documents for public distribution. Recently, however, the shop workload has included more high-volume, internal reports and forms. Austerity measures have also restricted the demand by State agencies for high quality, expensive printing. Recognizing the need for increased efficiency, the DPS printing coordinator was assigned to the shop in January, 1975, to improve work procedures, records management, and financial reporting. Continued attention to each of these areas is needed.

Equipment Utilization. Nine printing presses are currently used in the print shop (Table 9). While overall equipment condition is satisfactory, the application of one utilization measure--the ratio of actual to estimated maximum impressions per hour--indicates some equipment is not effectively utilized compared to average utilization indices. For the period April through July, 1975, utilization indices ranged from a low of .06 to .22, with an average of .15. For September and October, the average increased slightly to .20.

While there is no single standard for determining the desired level of equipment utilization, it is apparent that some presses are used to a greater extent than others. The highest utilization index in each period was recorded for a 13 year old press rated in poor condition by the shop foreman. On the other hand, the lowest utilization index (.06) for April-July was recorded for a one year old press which is rented for $10,062 per year. It is important to note that the purchase price of this press (Multilith 1520) is $13,750. The print shop manager should reconsider whether the equipment is needed and, if so, review rental versus purchase options.

Financial Management

The Printing and Graphics working capital fund incurred an operating loss of about $78,000 during its first year. The fund balance sheet for June 30, 1975 (Exhibit 15), shows assets of $252,599 and liabilities of $285,036. The analysis of changes in retained earnings (Exhibit 16) shows a balance of $45,952 on July 1, 1974. This initial balance--representing the value of contributed equipment from consolidated printing activities--reduced the fund deficit to $32,437 on July 1, 1975. The statement of operations adapted from reports submitted by the shop manager is shown in Exhibit 17. Billings to State agencies totaled $204,210 in fiscal 1975. Costs of materials used of $57,131 and operating expenses of $227,911 resulted in an operating deficit of $78,389.

Direct and Indirect Costs. A limited review of Printing and Graphics records indicates all direct and some indirect costs appear to be accounted

Table 9

PRINTING SHOP EQUIPMENT SUMMARY

Name (Paper Stock)		Age (Years)	Condition[1]	Manufacturers' Estimated Maximum IPH[2]	Equipment Utilization Index[3] April-July, 1975 Actual IPH	Utilization	September-October, 1975 Actual IPH	Utilization
Davidson 700	(15x18)	6	Good	8,000	1,651	.21	1,608	.20
Davidson 700	(15x18)	13	Poor	8,000	1,790	.22	2,221	.28
A. B. Dick 360	(15x18)	9	Fair	9,000	1,538	.17	1,420	.16
Davidson 700	(15x18)	6	Good	8,000	1,750	.22	1,567	.20
Davidson 500	(11x15)	3	Good	8,000	1,307	.16	2,041	.26
Multilith 1250	(11x14)	11	Poor	10,000	1,307	.13	1,897	.19
Multilith 1250-W	(11x17)	15	Poor	10,000	575	.06	995	.10
Multilith 4250[4]	(11x17)	1	Good	9,200	1,390	.15	2,126	.23
Multilith 1520[4]	(17X22)	1	Good	6,000	368	.06	900	.15
Total Shop				76,200	11,676	.15	14,775	.20

[1]Shop foreman's assessment.

[2]Unijax, Inc. (Davidson), A. B. Dick and Co., Inc., and Addressograph Multilith Corporation (Multilith).

[3]Ratio of actual hourly utilization (average impressions per hour) to estimated maximum utilization.

[4]Rental.

Source: Department of Purchases and Supply.

PRINTING AND GRAPHICS FUND
FISCAL 1975 FINANCIAL STATEMENTS

Exhibit 15

BALANCE SHEET

ASSETS			
Current Assets:			
Cash			$114,183
Accounts Receivable			11,349
Inventory			27,376
Prepaid Expenses			256
Total Current Assets			153,164
Fixed Assets:			
Buildings and Machinery	$45,423		
Less Allowance for Depreciation	7,188	$38,235	
Improvements	76,500		
Less Allowance for Depreciation	15,300	61,200	
Total Fixed Assets			99,435
TOTAL ASSETS			$252,599
LIABILITIES AND RETAINED EARNINGS			
Current Liabilities:			
Accounts Payable		$ 5,011	
Long-Term Liabilities:			
Working Capital Advance		280,000	
Advance from General Fund		25	
Total Liabilities			285,036
Retained Earnings (Deficit)			(32,437)
TOTAL LIABILITIES AND RETAINED EARNINGS			$252,599

Exhibit 16

ANALYSIS OF CHANGES IN RETAINED EARNINGS

Balance of Retained Earnings, July 1, 1974	$ 45,952
Add: Excess of Billings to Departments Over Costs (Deficit)	(78,389)
Balance of Retained Earnings, June 30, 1975 (Deficit)	$(32,437)

Exhibit 17

STATEMENT OF OPERATIONS

Billings to Agencies & Institutions			$204,210
Add: Inventory Changes			2,443
Less: Costs of Services Rendered:			
Cost of Materials Used:			
Inventory, July 1, 1974		$ 7,373	
Net Purchases		74,691	
Total		82,064	
Inventory Changes		2,443	
Total		84,507	
Inventory, June 30, 1975		27,376	
Total Cost of Materials Used		57,131	
Other Operating Costs:			
Personnel Compensation	$154,565		
Personnel Benefits	10,641		
Communications	2,158		
Travel	1,215		
General Repairs	5,950		
Motor Vehicle Repairs	151		
Other Contractual Services	7,872		
Office Supplies	949		
Motor Vehicle Supplies	80		
Photographic Supplies	1,465		
Other Supplies	11,399		
Equipment	793		
Rental Equipment	8,185		
Depreciation	22,488		
Total Other Operating Costs		227,911	
Total Cost of Services Rendered			285,042
Excess of Billings to Agencies & Institutions Over Costs (Deficit)			$ (78,389)

Source: Adapted from statements submitted by Department of Purchases and Supply.

for properly. However, salaries of the Printing Coordinator (when assigned to this activity) and of DPS management have not been charged to the fund. Appropriate portions of these salaries should be charged in order to reflect the true cost of the operation.

Pricing and Billing. Personnel, equipment, and materials costs are included in a pricing mechanism adapted from a standard formula used by private printers. Graphics work is priced at $15 per hour.

Accounts Receivable. Efficient utilization of personnel and equipment coupled with prompt collection of accounts receivable should allow the Printing and Graphics working capital fund to recover all costs and maintain a satisfactory financial position. While the shop expects payment within 30 days, a serious problem arose in accounts receivable during the first several months of the operation of this fund. Beginning in January, 1975, special emphasis was applied to billing and collections, and the level of unpaid accounts was reduced from $31,555 in April to $11,349 by June. Four-fifths of this amount was less than 30 days old. By August, however, accounts receivable had risen to $37,339, indicating continued attention is required by DPS to ensure bills are paid promptly by State agencies.

Financial Statements. Financial statements for the shop have not been prepared in accordance with generally accepted accounting principles and have often been submitted later than desirable. Statements have been prepared monthly, but a trial balance rather than full balance sheet has been submitted. While the format has improved since July, 1974, further attention is required. A balance sheet and statement of operations were prepared for the period ending June 30, 1975, but were not available until late September, 1975. Financial statements for July and August, 1975, were not available until early November. Prompt submission of financial statements is required for effective management review and decision making, especially for a fund which continues to operate with a precarious financial posture.

Conclusion

The General Assembly has charged the Director of DPS with developing guidelines for improving the efficiency of State printing facilities, and has provided him the authority to centralize printing equipment and services where appropriate. In recent months, DPS has taken steps to implement the first part of this charge. The department has not yet developed plans, however, for effectively centralizing printing equipment and services.

Although the Director of DPS was granted authority by the General Assembly to centralize printing equipment and services, the cabinet committee has in part circumvented that authority. The General Assembly has already defined the way in which centralization decisions should be made. The Director, Department of Purchases and Supply, should develop a comprehensive plan for the most efficient and effective means of providing all State printing services. Legislative intent mandates that DPS planning encompass the centralization of State printing services to the maximum extent practicable.

ADMINISTRATION AND LEGISLATIVE OVERSIGHT

This chapter sets forth specific recommendations for improved controls of working capital funds. First, no useful purpose is served by providing independent authorization for the group of working capital funds enumerated in Section 2.1-243.1 of the Code. Authority to establish working capital funds should be clarified, and the initiation and operation of all working capital funds should be subject to appropriate review processes.

Current procedures for authorization of a working capital advance have resulted in the disbursement of monies from the Treasury without specific appropriations, an action that is inconsistent with constitutional and statutory provisions of the Commonwealth. All monies advanced to establish a working capital fund should be pursuant to appropriation by the General Assembly.

The Comptroller should consider development of an automatic collections system in which budgeted appropriations would be transferred directly from agency accounts to a working capital fund, upon receipt by the Comptroller of suitable evidence of services rendered. Such a system would speed collection of agency bills, and permit adjustments and reductions in the total amount of monies required to be advanced.

Finally, all services financed by working capital funds should be subjected to executive budget administration processes. In addition, the Auditor of Public Accounts should conduct more current financial audits of working capital funds, paying particular attention to accurate financial records, financial statements, determination of prices for services, billing, and the level of retained earnings.

VI. ADMINISTRATION AND LEGISLATIVE OVERSIGHT

The primary benefit of working capital funds is the ability to relate costs of centralized support services to the State agencies and institutions which use them. For this reason, working capital funds are widely used by State and local governments. However, potential disadvantages of working capital funds include unnecessary expansion of the range of services provided and the accumulation of excessive inventories or retained earnings at the expense of State customers.

To realize the full benefits of working capital funds while avoiding the disadvantages, care must be taken to ensure that services accounted for in this manner not be isolated from executive or legislative review. In particular, this study finds a need for changes in how working capital funds are established, a more effective collections process, and a more thorough review of services financed through working capital funds by the Division of the Budget and the Auditor of Public Accounts.

Establishment of Working Capital Funds

As indicated in Chapter 1, authority for the establishment of working capital funds is derived from two sections of the Code. The working capital funds created between 1950 and 1973 were authorized by JLARC or its predecessor, the Joint Auditing Committee, pursuant to Section 2.1-196.1 of the Code.[28]

> As to the operation of farms, laundries, merchandising activities, dining halls and cafeterias for which charges are made, and any other type of activity which, if conducted privately, would be operated for profit, the system of accounting therefor shall be designed to reflect all charges properly allocable thereto to the end that the net profit or loss therefrom shall be reflected; provided that in the furtherance of this objective the Auditing Committee of the General Assembly on the recommendation of the Auditor of Public Accounts, may authorize the Director of the Department of Accounts and Purchases to establish working capital fund accounts on his books and record therein the receipts and expenditures of these several functions; and provided further that the said Director shall provide the agencies responsible for the operations of these functions with revolving funds with which to finance the operations.

In 1974, the Printing and Graphics fund was established pursuant to Section 2.1-243.1 of the Code. This statute also directs the Auditor of Public Accounts to authorize the Comptroller to establish working capital funds following a written request of the Director of DPS for any of three activities: (1) design, utilization, procurement, and inventory of State forms; (2) printing, duplicating, and reproduction equipment and services; and, (3) an equipment pool and central repair shop. When the request for a Printing and Graphics fund was under consideration in 1974, the Auditor asked the

Attorney General whether approval of JLARC was required by Section 2.1-243.1 of the Code. The Attorney General replied that

> The working capital fund accounts for which approval of the Joint Legislative Audit and Review Commission is required under this section extend to operation of farms, laundries, merchandising activities, dining halls and cafeterias for which charges are made, and any other type of activity which, if conducted privately, would be operated for profit. The office services for State agencies provided in subsections (2), (3), and (4) of § 2.1-243.1 of the Code do not extend to nor include these items. Therefore, in establishing working capital fund accounts under provision of § 2.1-243.1 of the Code, the approval of the Joint Legislative Audit and Review Commission is not required.[29]

It is difficult to envision the logic in restricting the authority of JLARC to the group of working capital funds enumerated in Section 2.1-196.1 of the Code, especially since the Auditor carries out his duties under the review of the Commission. If the reasons for this arrangement are based on the nature of the support services financed under the two statutes, the distinctions are not clear. Section 2.1-243.1 of the Code should probably be amended to require that any working capital funds for the services indicated be established subject to authorization by JLARC. This provision (with Section 2.1-196.1 of the Code) would ensure that all future working capital funds established in the Commonwealth meet the criteria discussed in Chapter 1.

The working capital fund process could be improved further by updating the current statutes to recognize changing duties of the Auditor regarding State accounting systems. Presently, Section 2.1-196.1 of the Code provides the "...Joint Legislative Audit and Review Commission on the recommendations of the Auditor of Public Accounts, may authorize..." the Comptroller to establish working capital funds for the services described in that statute. The Auditor's role in establishing working capital funds had been consistent with earlier statutory arrangements in which the Auditor and the Comptroller had coordinate responsibilities for designing the State accounting system. Effective July, 1975, however, the General Assembly assigned primary responsibility for the State accounting system (except for working capital funds) to the Comptroller, the Auditor retaining responsibility for conducting financial audits and certifying systems for audit purposes. The Code now provides the Auditor of Public Accounts shall

> ...audit all the accounts of every State department, officer, board, commission, institution or other agency in any manner handling State funds;[30]

and that

> All systems so developed (by the Comptroller) shall require the approval of the Auditor of Public Accounts that they are adequate for purposes of audit and financial control.[31]

Thus, Section 2.1-196.1 of the Code needs to be amended to clarify the JLARC authority to authorize the establishment of working capital funds and recognize recent changes in statute. This change would further ensure working capital funds are established according to appropriate criteria.

The final change recommended for the establishment of working capital funds pertains to the advance of monies which have not been appropriated by the General Assembly. As indicated in Table 1, $7.9 million in general fund monies have been advanced by the Comptroller to the 17 existing working capital funds as loans and are recorded as assets of the General Fund. It is apparent, however, that the advance of these monies is not consistent with certain constitutional and statutory provisions:

- Virginia Constitution, Article 10, section 7--No money shall be paid out of the State Treasury except in pursuance of appropriations made by law;

- Virginia Constitution, Article 4, section 11--No bill which... makes, continues, or revives any appropriation...shall be passed except by affirmative vote of a majority of all the members elected to each house...

- Section 2.1-224 of the Code--No money shall be paid out of the State Treasury except in pursuance of appropriations made by law.

The key issue is whether monies advanced to working capital funds by the Comptroller are disbursed from the Treasury. Merely posting an amount to the cash account of a working capital fund does not in itself constitute disbursement of monies from the State Treasury. However, the advance is made for the sole purpose of providing working capital to an activity to permit the purchase of goods and services for sale to State customers. It is therefore reasonable to assume that once the advance is made, money will be paid out of the State Treasury. In fact, whenever the amount reflected in a cash account is less than the amount advanced, monies can be considered to have been disbursed from the Treasury.

Supplemental advances to existing funds further illustrate the notion that working capital funds may result in disbursement of monies from the Treasury without an appropriation. For example, in addition to approving the establishment of two working capital funds at its first meeting on July 23, 1973, JLARC also approved an additional advance of $330,000 to the Central Warehouse fund to finance the purchase of fuel oil. At the next JLARC meeting (March 15, 1974) the Auditor of Public Accounts reported he had approved the following additional advances without Commission review:

- $150,000 for the purchase of additional fuel oil;

- $400,000 to the Central Warehouse fund for additional inventories and to cover accounts receivable; and,

- $100,000 to the Department of Purchases and Supply Printing fund.

Present procedures for the administration of working capital funds allow for the disbursement of monies from the Treasury without appropriations.

This procedure should be avoided altogether by requiring all advances to working capital funds, whether initial or subsequent, be made pursuant to appropriations.

Collections

At the outset of this study JLARC staff found that managers of appropriate working capital funds (Central Warehouse, Central Telephone, Automated Data Processing, Printing and Graphics) have experienced considerable difficulties in collecting amounts billed to other State agencies for services rendered. In particular, collection problems experienced by the Central Telephone and Central Warehouse funds resulted in requests for additional working capital advances. Recognizing this problem, JLARC staff recommended to the Comptroller in October, 1974, that consideration be given to implementing an automatic collections system.

With such a system, the Comptroller would be provided a periodic listing of the amounts to be charged to each agency. At the same time, user agencies could be provided a list of charges incurred by them. The Comptroller would then automatically charge each agency appropriation by the amount indicated on the listing and make interdepartmental transfers to the appropriate working capital funds. Any necessary adjustments to agency charges could be made in subsequent months.

An automatic collections system would speed the processing of agency bills, possibly reducing the total amount of monies advanced to State working capital funds. The Comptroller should be urged to give further consideration to the development and implementation of this system. It appears there is no statutory provision which prohibits this arrangement.

Working Capital Funds and the Budget Process

All activities financed by working capital funds should also be included in the Executive Budget, in order to: provide a comprehensive financial plan for all State activities during a biennium; provide proper legislative and managerial control; and, ensure uniformity of financial policy and administration. Only three of the seventeen State working capital funds, however, have been included in the 1974-76 budget.

Failure to subject the services provided by working capital funds to budget preparation and administration precludes the opportunity to exercise control over agency expenditures. For example, Chapter IV demonstrates billings to a number of State agencies for automated data processing services have been in excess of budgeted allocations. The Division of the Budget should monitor working capital operations closely throughout the budget cycle to ensure that expenditures of service agencies are reasonably equivalent to total budget allocations of user agencies.

Working Capital Funds and the Auditor

This operational review of Central Warehouse, Central Telephone, Automated Data Processing, and Printing and Graphics funds points out considerable variations in the management of these funds, particularly with respect to financial matters. For example, fund retained earnings as of June 30, 1975, ranged from a $78,000 deficit for the Printing and Graphics fund to more than a $445,000 surplus for the Central Warehouse fund. Collectively, financial statements prepared by these funds lack both standard formats and reporting schedules. The four funds also vary with respect to policies established for coping with overdue accounts receivable.

Such disparities demonstrate a clear need for more comprehensive and current financial audits of working capital funds. The Auditor is particularly well qualified to ensure that managers of working capital funds:

- maintain financial records necessary to provide accurate, timely data;
- prepare financial statements consistent with generally accepted principles of governmental accounting;
- accurately charge all expenses related to the provision of fund services;
- set prices for fund services adequate to recover operating costs;
- prepare agency bills which clearly define the nature and quantity of services rendered; and,
- avoid the accumulation of excessive fund retained earnings.

Since the Auditor reports to the JLARC, the cycle of authorization, implementation, and oversight is therefore completed.

Conclusion

The observations made in this chapter are based on two assumptions. The first is that a working capital fund is a desirable method of financing and accounting for centralized support services provided to State agencies; provided that such services meet specific criteria. The second assumption is that accounting systems required for working capital funds are inherently more complex than for services financed through direct appropriations and for which no charges are made.

Continued assignment to JLARC of the responsibility for authorizing the establishment and elimination of working capital funds should guarantee that such funds effectively serve the purposes for which they are intended. The requirement that advances to working capital funds be made pursuant to appropriations by law would eliminate the possibility of conflicts between constitutional and statutory provisions and actions of the Comptroller. A more efficient collections process would minimize the amount of advances required by individual working capital funds and make them less difficult to administer. Finally, more extensive reviews of working capital fund services by the Division of the Budget and by the Auditor would help provide for the most benficial utilization of these funds by the Commonwealth.

END NOTES

1. The eight types of funds generally used in governmental accounting include: General; Special Revenue; Debt Service; Capital Projects; Enterprise; Trust and Agency; Working Capital; and Special Assessment Funds. (See glossary for definitions of use).

2. Proposal for Virginia School Buildings and Improvements Program: Report of the Commission on State and Local Revenues and Expenditures, Senate Document No. 7, 1950. Richmond: Division of Purchasing and Printing. p. 35.

3. Ibid.

4. In addition to the existing working capital funds shown in Table 1, a fund was established in 1966 for the State Board of Education to finance and account for the purchase of accounting and other financial records to be sold to local school boards. In 1966, however, the initial $15,000 advance was repaid and the fund was designated a special fund.

5. Virginia Commonwealth University, Budget Exhibit, 1976-78. p. VII-3.

6. Old Dominion University, Budget Exhibit, 1976-78. p. 19.

7. Inventory Management for the State of Virginia: Report of the Commission for Economy in Governmental Expenditures, Senate Document No. 8, 1959. Richmond: Department of Purchases and Supply.

8. Alcoholic Beverage Control in Virginia: Report of the Commission on Alcoholic Beverage Control, House Document No. 29, 1974. Richmond: Department of Purchases and Supply. p. 9.

9. Plossl, George W. and O. W. Wright, Production and Inventory Control: Principles and Techniques. Englewood Cliffs, New Jersey: Prentice-Hall, 1967. p. 47.

10. Department of Purchases and Supply: Report of the Virginia Advisory Legislative Council. House Document No. 7, 1969. Richmond: Department of Purchases and Supply. p. 4. (Data for this report was provided by the Auditor of Public Accounts in a letter to the Purchases and Supply Study Committee of VALC, February 20, 1969. Minutes of the Subcommittee are dated June 3, 1969.)

11. The Department of Purchases and Supply: Report on Audit for the Fiscal Year Ended June 30, 1972. Richmond: Auditor of Public Accounts, May, 1974.

12. Purchasing for the State of Virginia: Report of the Auditing Committee of the General Assembly and the Auditor of Public Accounts, House Document No. 16, 1957. Richmond: Division of Purchasing and Printing. p. 11.

13. Code of Virginia (1950), Section 2.1-273 and 2.1-281.

14. *Code of Virginia* (1950), Section 2.1-286.

15. Division of the Budget, *Budget Manual*, 1976-78. p. 14.

16. Virginia Public Telecommunications Council, letter from George Hall, Director of VPTC, to Joseph James, Auditor of Public Accounts. July 8, 1974.

17. Division of Automated Data Processing, *The Virginia Plan for Data Processing in State Government*, July, 1973. pp. 1-4, and Computer Advisory Committee, *Automated Data Processing in the State of Virginia*, October, 1967. p. 20.

18. Division of Automated Data Processing, *The Virginia Plan for Data Processing in State Government*, Volume 1, 1973. pp. 32.

19. Memorandum from J. Howard Bryant, Director of ADP, to John W. Garber, Director of Personnel. March 20, 1974.

20. Division of Personnel, Memorandum from John W. Garber. July 26, 1974.

21. *State Use of Electronic Data Processing*. Lexington, Kentucky: Council of State Governments, 1974. p. 56.

22. Subsequent interviews with ADP administrators have revealed total accounts receivable listed on June 30, 1975, have been reduced to $251,333.52. Accounts receivable from July 1, 1975 to January 30 1976, are not listed in the new total. However, ADP indicates receivables since June 30, 1975, will increase the total to a level comparable to the previously listed figure.

23. Memorandum from J. Howard Bryant, Director of ADP, to Maurice B. Rowe, III, Secretary of Administration. May 7, 1974.

24. Division of Automated Data Processing, *Annual Report for Automated Data Processing Service Organization: October, 1973, through September, 1974*, Richmond, 1975.

25. *Code of Virginia* (1950), Section 2.1-243.1 (3).

26. Committee on Printing Operations, *Report I: Equipment, Facilities, Services, Personnel*. November 17, 1973. p. 8.

27. Memorandum from Earl A. Scott to William B. Rowland: "Technical Committee on Printing, Report on Recommendations." March 21, 1975.

28. Prior to 1973, authority for establishment of working capital funds in this section was derived from Section 2.1-156 of the *Code of Virginia*.

29. Opinion of the Attorney General, December 19, 1973. 2-35S25.

30. *Code of Virginia* (1950), Section 2.1-155.

31. *Code of Virginia* (1950), Section 2.1-196.1.

GLOSSARY

ACCOUNT	A record of the financial data pertaining to a specific asset, liability, income item, expense item, or net-worth item.
ACCOUNTING	The total structure of records and procedures which discover, record, classify, and report information on the financial position and operations of a governmental unit or any of its funds, balanced account groups, and organizational components.
ANALYSIS OF CHANGES IN RETAINED EARNINGS	A statement which indicates the amount of increases or decreases in a fund's retained earnings. The amount is based on the accumulated retained earnings less the current excess (or deficit) of billings to departments over costs.
ASSET	Property owned by a governmental unit which has a monetary value.
BALANCE SHEET	A statement which discloses the assets, liabilities, reserves, and equities of a fund or governmental unit on a specified date properly classified to exhibit the financial position of the fund or unit at that date.
CAPITAL	Expenditures which result in the acquisition of or addition to fixed assets.
CAPITAL PROJECTS FUND	A fund used to account for the receipt and disbursement of monies used for the acquisition of capital facilities other than those financed by special assessment and enterprise funds.
DEBT SERVICE FUND	A fund used to account for the payment of interest and principal on long-term debt other than special assessment and revenue bonds.

ECONOMIC ORDER QUANTITY (EOQ)	The optimal lot size of an item to be purchased at one time for storage in a warehouse, to balance inventory carrying costs with ordering and delivery costs.
ECONOMIES OF SCALE	The decreasing cost of goods and commodities as the volume of purchase increases.
ENTERPRISE FUND	A fund used to account for the financing of services to the general public where all or most of the costs involved are paid in the form of charges by users of services.
EQUIPMENT UTILIZATION INDEX	The ratio of actual impressions (copies) per hour to the manufacturer's estimated maximum impressions per hour for an offset printing press.
ERROR RATE	Proportion of items stocked in the warehouse for which errors greater than a certain dollar value above or below inventory records were discovered.
FINAL STOCK ADJUSTMENTS	Differences ($\pm$) between inventory records and actual stock on hand, after correcting for arithmetic/clerical errors.
FIXED ASSETS	Assets of a long-term character which are intended to continue to be held or used, such as land, buildings, machinery, furniture, and other equipment.
FUND	An independent fiscal and accounting entity with a self-balancing set of accounts recording cash and/or other resources together with all related liabilities, obligations, reserves, and equities which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions, or limitations.
GENERAL FUND	A fund used to account for all financial transactions not properly accounted for in

	another fund. It is used to account for the ordinary operations of a governmental unit which are financed from taxes and other general revenue.
GROSS STOCK ADJUSTMENTS	Differences ($\pm$) between inventory records and actual stock on hand, before correcting arithmetic/clerical errors.
INTRAGOVERNMENTAL SERVICE FUND	See WORKING CAPITAL FUND
INVENTORY	(a) Stock on hand in the warehouse, or (b) Process of physically counting stock on hand in order to verify the accuracy of written records.
INVENTORY CONTROL	A management function of continuously reviewing the level of stock on hand for each item in a warehouse, in order to ensure adequate stock is always available to meet customer demand, and to ensure all stock is properly accounted for.
LIABILITY	Debt or other legal obligations arising out of transactions in the past which must be liquidated, renewed, or refunded at some future date.
OPERATING STATEMENT	A statement showing charges made to various departments for commodities and services rendered and the costs of furnishing such commodities and services. The statement summarizes the financial operations of a governmental unit for an accounting period.
REORDER POINT	That quantity of an item currently on hand at which it is necessary to reorder the item to ensure continued ability to satisfy customer demand.
REQUISITION	A form submitted by a customer consisting of a request for goods to be delivered.

RESERVE	An account which records a portion of the fund balance which must be segregated for some future use and which is, therefore, not available for further appropriation or expenditure. A Reserve for Inventories equal in amount to the Inventory of Supplies on the balance sheet of the General Fund is an example of such a reserve.
RETAINED EARNINGS	The accumulated earnings of an Enterprise or Working Capital Fund which have been retained in the fund and are not reserved for any specific purpose.
REVOLVING FUNDS	See WORKING CAPITAL FUND
SPECIAL ASSESSMENT FUND	A fund used to account for special assessments levied to finance public improvements or services deemed to benefit the properties against which the assessments are levied.
SPECIAL REVENUE FUND	A fund used to account for the proceeds of specific revenue sources (other than special assessments) or to finance specified activities as required by law or administrative regulation.
TRUST AND AGENCY FUND	A fund used to account for assets held by a governmental unit as trustee or agent for individuals, private organizations, and other governmental units.
WORKING CAPITAL FUND	A fund established to finance and account for services and commodities furnished by a designated department or agency to other departments and agencies within a single governmental unit. Amounts expended by the fund are restored thereto either from operating earnings or by transfers from other funds, so that the original fund capital is kept intact.

APPENDICES

IMPLEMENTATION PLAN

The purpose of this appendix is to identify the specific actions required to implement the recommendations contained in the report that are within the authority of JLARC.

RECOMMENDATION: Abolish the following working capital funds and revert the amounts advanced to the general fund as soon as possible.

FUNDS	AMOUNT ADVANCED
• *Virginia Commonwealth University*	
Inventories	$ 200,000
Buildings and Grounds	200,000
• *College of William and Mary*	
Inventories	75,000
Buildings and Grounds	50,000
Automated Data Processing	125,000
• *University of Virginia*	
Inventories	125,000
Buildings and Grounds	275,000
Printing	120,000
Automated Data Processing	755,000
Motor Pool	80,000
• *Virginia Polytechnic Institute and State University*	
Automated Data Processing	60,000
Motor Pool	75,000
• *Department of Purchases and Supply*	
Public Printing	200,000
Total	$2,340,000

ACTIONS

- Advise agencies of the decision to eliminate selected working capital funds and why.

- Request the Comptroller to close out the accounts on June 30, 1976, and transfer to the general fund the amounts previously advanced to each working capital fund to the extent liquid assets permit. In the event liquid assets available for transfer are less than the amount advanced, request the Comptroller recover the difference from the 1976-78 agency appropriations except for the University of Virginia automated data processing fund. The total advanced to this fund consists of $225,000 provided in 1971 and the balance of a $660,000 loan made to the fund in 1974 to be repaid in ten equal installments of $65,000 each six months for five years. The initial advance of $225,000 should be recovered as described above. The loan balance should be repaid according to the payment schedule except the last payment should be $75,000 instead of $65,000 to recover the full amount loaned.

RECOMMENDATION: Return to the general fund the amount of $480,000 advanced to the Central Warehouse working capital fund to purchase fuel oil.

ACTION

- Advise the Director of Purchases and Supply of the decision. Request the Comptroller to transfer $480,000 from the Central Warehouse working capital fund to the general fund.

RECOMMENDATION: Clarify the authority of JLARC regarding the establishment and disestablishment of working capital funds.

ACTION

- Draft legislation to provide JLARC the authority to establish working capital funds without restriction as to functional area; and, provide JLARC the authority to disestablish those funds no longer considered appropriate.

RECOMMENDATION: Restrict the advance of monies to working capital funds to the specified amounts appropriated by law.

ACTION

- Draft legislation to provide that the Comptroller shall not make advances to working capital funds except pursuant to an appropriation made by law.

RECOMMENDATION: Confirm previous advances made by the Comptroller to existing working capital funds.

ACTION

- Request an amendment to the 1976-78 Appropriations Act to confirm previous working capital fund advances.

RECOMMENDATION: Require agency budget requests include the same level of detail for activities financed by working capital funds as all other activities.

ACTION

- Advise the Division of the Budget of the Commission's desire that working capital fund activities be reflected in the budget in the same level of detail as all other activities.

RECOMMENDATION: Bring to the attention of working capital fund activity managers the Commission's concern regarding operational and management deficiencies identified in the report.

ACTION

- Advise activity managers of the specific operational and management deficiencies contained in the report and request the commission be kept advised of progress in correcting these deficiencies as appropriate.

RECOMMENDATION: Implement procedures to accelerate the collection of working capital fund accounts receivable from State agencies.

ACTION

- The JLARC staff shall work with the Comptroller, the Division of the Budget, and operating agencies to develop and implement procedures to permit the Comptroller to make transfers to working capital fund accounts from State agency accounts upon notification of charges due by working capital fund managers.

RECOMMENDATION: Require the Auditor of Public Accounts to conduct periodic financial audits of all working capital funds.

ACTION

- Advise the Auditor of Public Accounts of the Commission's desire that periodic financial audits of all working capital funds be performed to measure the extent to which managers of working capital funds:

  - Maintain financial records necessary to provide accurate, timely data;
  - Prepare financial statements consistent with generally accepted principles of governmental accounting;
  - Accurately charge all expenses related to the provision of fund services;
  - Set prices for fund services adequate to recover operating costs;
  - Prepare agency bills which clearly define the nature and quanitity of services rendered; and,
  - Avoid the accumulation of excessive fund retained earnings.

RECOMMENDATION: JLARC review the financial condition of each working capital fund on a regular basis.

ACTIONS

- JLARC establish, in cooperation with the Comptroller, standard reporting formats required to keep JLARC and agencies concerned with proper management abreast of the financial conditions of each working capital fund.

- Request working capital fund managers submit standard reports to JLARC semiannually for review.

- Based on an analysis of financial conditions, JLARC may determine the amount of working capital fund monies available, if any, for transfer to the general fund.

CENTRAL GARAGE FUND
FISCAL 1975 FINANCIAL STATEMENTS

BALANCE SHEET

ASSETS			
Current Assets:			
Cash			$1,235,109
Accounts Receivable			468,158
Total Current Assets			1,703,267
Fixed Assets:			
Motor Equipment	$7,184,569		
Less: Allowance for Depreciation	3,780,976	$3,403,593	
Office and Shop Equipment	30,053		
Less: Allowance for Depreciation	9,837	20,216	
Total Fixed Assets			3,423,809
TOTAL ASSETS			5,127,076
LIABILITIES AND RETAINED EARNINGS			
Current Liabilities:			
Accounts Payable		308,767	
Total Liabilities			308,767
Contribution from General Fund			1,738,139
Retained Earnings			3,080,170
TOTAL LIABILITIES AND RETAINED EARNINGS			$5,127,076

ANALYSIS OF CHANGES IN RETAINED EARNINGS

Balance of Retained Earnings, July 1, 1974	$4,850,329
Add: Excess of Net Billings to Departments Over Costs (Deficit)	(32,020)
Balance of Retained Earnings, June 30, 1975	$4,818,309

STATEMENT OF OPERATIONS

Operating Revenue:			
Billings to Agencies & Institutions		$3,922,775	
Receipts (Other)		349	
Sale of Motor Equipment		334,673	
Total Operating Revenue			$4,257,797
Less: Costs of Services Rendered			
Salaries and Wages	$ 189,200		
General Repairs	1,149		
Motor Vehicle Repairs	971,770		
Heat, Light, Power and Water	531		
Traveling Expenses	2,238		
Communication	536		
Towel Service	628		
Other Contractual Services	1,580		
Agricultural Supplies	33		
Office Supplies	3,299		
Gasoline	996,764		
Oil and Grease	56,860		
Parts and Supplies	6,099		
Wearing Apparel for Employees	421		
Other Materials and Supplies	4,045		
Rent	4,866		
Insurance	127,892		
Miscellaneous	4,446		
Depreciation on Motor Equipment	1,914,748		
Depreciation on Office & Shop Equipment	2,712		
Total Cost of Services Rendered			4,289,817
Excess of Operating Revenue Over Costs (Deficit)			$ (32,020)

Source: Adapted from Central Garage Financial Statements.

CORRECTIONAL ENTERPRISES
FISCAL 1975 FINANCIAL STATEMENTS

BALANCE SHEET

ASSETS			
Current Assets			
Cash			$ 391,297
Accounts Receivable			243,290
Inventories			2,270,772
Prepaid Expenses			7,560
Total Current Assets			2,912,919
Fixed Assets			
Land		$ 94,515	
Buildings		602,708	
Machinery and Equipment	$2,201,115		
Automative Equipment	30,119		
Furniture and Fixtures	98,040		
Less: Allowance for Depreciation	1,613,328		
		715,946	
Total Fixed Assets			1,413,169
TOTAL ASSETS			$4,326,088
LIABILITIES			
Current Liabilities			
Accounts Payable		219,595	
Other Liabilities		19,033	
Long-Term Liabilities			
Temporary loan due to Commonwealth		200,000	
Petty cash reserve		1,000	
Total Liabilities			439,628
Surplus			
Capital surplus		791,623	
Retained Earnings		3,094,837	
			3,886,460
TOTAL LIABILITIES AND SURPLUS			$4,326,088

ANALYSIS OF CHANGES IN RETAINED EARNINGS

Balance of Retained Earnings, July 1, 1974	$2,101,998
Add: Excess of Net Billings to Departments Over Costs	992,839
Balance of Retained Earnings, June 30, 1975	$3,094,837

STATEMENT OF OPERATIONS

Income			
Billings to Departments and Political Subdivisions		$4,160,314	
Sale of Surplus Property		13,992	
Other Income		5,416	
			$4,179,722
Less: Costs of Services Rendered			
Costs of Materials Used			
Inventory, July 1, 1974		$ 727,410	
Net Purchases (Raw Materials)		2,924,056	
Total		3,651,466	
Inventory, June 30, 1975			
Raw Materials	$1,039,214		
Finished Goods	1,164,611		
		2,203,825	
Total Cost of Materials Used		1,447,641	
Other Operating Costs			
Inmate Labor	145,186		
Supervisor salaries	640,008		
Guard salaries	87,076		
Utilities	55,073		
Cleaning supplies	7,367		
Repairs	79,466		
Other materials	7,654		
Depreciation	110,777		
Consumable supplies	56,383		
Miscellaneous expenses	101,324		
Small tools	6,440		
Shipping and storage	442,488		
Total Other Operating Costs		1,739,242	
Total Cost of Services Rendered			3,186,883
Excess of Billings to Departments Over Costs			$ 992,839

Source: Department of Corrections, Division of Enterprises and Agriculture.

MAR 4 1976

COMMONWEALTH *of* VIRGINIA

RICHARD C. MOSCHLER, JR.
DIRECTOR

Division of Automated Data Processing
201 Eighth Street Office Building

RICHMOND, VIRGINIA 23219
[redacted]
(804) 786-6041

March 4, 1976

Mr. Ray D. Pethtel, Director
Joint Legislative Audit and Review Commission
823 East Main Street
Richmond, Virginia 23219

Dear Ray:

Your report of the Joint Legislative Audit and Review Commission's Operational Review of Working Capital Funds in Virginia has been read with interest, and the sections pertaining to the Working Capital Advance for the Commonwealth ADP Service Organization administered by the Division of Automated Data Processing have been carefully reviewed.

We are in basic agreement with the content of this report, and we commend the work of your staff in conducting the study and reporting their findings. You will be pleased to know that work is in progress to correct the various areas of concern noted in your report, and that most of this work was begun prior to our becoming aware of the conclusions of your staff.

We are also appreciative of your cooperation in incorporating the several suggested changes into the report which we discussed with your staff following our review. There are still some items, however, on which we offer the following comments:

1. Summary Section, Automated Data Processing, Organization

Report States:

"Even though the purpose of the request was to '...attract qualified persons for key positions...,' six of the eight management positions were filled from existing staff, four positions only five days after the request was approved." This topic is also discussed in the detail section under Administration, Personnel Management.

Comments:

-The process of recruiting and selecting qualified personnel occurred over a period of several months, rather than the implied "five days".

-Recruiting was conducted within government and throughout industry.

-Approximately 300 applicants were considered for the new positions.

-ADP has the selection process used documented and on file along with the applications of the top contenders for each position.

-All actions made during this process were not documented in writing; salary offers, for example, were made verbally by telephone, and rejected verbally (mostly because of salary scales).

-Applications no longer of interest have since been discarded.

Report States:

> "...the present director appears to be making a number of efforts to determine a set of realistic goals and objectives to guide the efforts of ADP in the future. Foremost among the priorities should be improved communication with user agencies, particularly with respect to ADP billings for services rendered."

Suggested Wording:

> "...the present director appears to be making a number of efforts to determine a set of realistic goals and objectives to guide the efforts of ADP in the future. A top priority in this direction is improved communications with user agencies, particularly with respect to ADP billings for services rendered. A Services Billing Task Force is at work, charged with the task of studying all aspects of the billing operation and recommending to the director a process for properly recovering ADP costs."

Comments:

- Improved communication with the user agencies <u>is</u> a top priority, and it was a top priority at the time of your review.

- The Billing Task Force was established shortly after appointment of the present director, and was in existence during the time of your review.

- This suggested rewording is made because we feel that the management summary of the report should acknowledge more strongly the sound progress which is being made.

2. Blue page preceding detail section on Automated Data Processing

Report States:

> "A portion of the increasing costs for data processing operations can be attributed to the widespread use of computers to replace manual data processing functions. On the other hand, the inability of ADP to: develop and implement a State plan for data processing based on realistic objectives; and, exercise sound financial management of the working capital fund, have also adversely affected costs."

Suggested Wording:

> "Although costs associated with automated data processing have continued to increase, the increase is occurring at a declining rate. One basic reason for the declining rate of increase has been the establishment of the Commonwealth ADP Service Organization proposed by and partially implemented by the Division of Automated Data Processing as documented in the State Plan for Automated Data Processing."

Comments:

- 1974-76 Agency budget requests for data processing services were reduced by $5 million after the State plan was developed.

- Operating costs under the plan are more than $1 million less than budgeted.

- Where are the other adverse effects on costs documented?

Again, we appreciate the cooperation and understanding of your organization in incorporating our several other comments in the revised report content.

Sincerely,

Dick

Richard C. Moschler, Jr.

RCMjr/d

MAR 5 1976

COMMONWEALTH of VIRGINIA

Department of Purchases and Supply

PHILIP R. BROOKS
DIRECTOR

217 Governor Street

POST OFFICE BOX 1199
RICHMOND, VIRGINIA 23209
([redacted]
(804) 786-3845

March 5, 1976

Mr. Ray D. Pethtel, Director
Joint Legislative Audit and Review Commission
823 East Main Street
Richmond, Virginia

Dear Mr. Pethtel:

While we feel your Joint Legislative Audit and Review Commission report on our various Working Capital Funds covers the situation in each fund quite well, we do think some comments are in order. This is intended to report certain actions taken by us since our meeting with you prior to publishing the report, and to clarify certain observations in the report.

Public Printing Working Capital Fund (153-70) will be closed by June 30, 1976 or as soon thereafter as jobs in process can be completed and accounts receivable eliminated, unless an alternate close out method can be found to accomplish this by June 30, 1976.

On February 16, 1976, a letter was sent to all agencies setting forth a program which would allow us to eliminate this account, yet giving them adequate information to process invoices.

Central Warehouse Working Capital Funds:

Fuel Oil (160-73) will be closed on or before June 30, 1976.

Central Warehouse (160-72). We will report actions taken and comment on certain observations in paragraph order in this section.

Page 24 - Paragraph 2 -- The 293 accounts include a number of individual schools, not just school divisions, therefore, we are not servicing as many local government units as one might read into this.

Page 28 - Paragraph 3 and Page 29 - Paragraph 1 -- states that we had a gross stock adjustment of $54,000 and $51,600 respectively, which we cannot reconcile, which, in any event, could lead one to think the warehouse had a loss of $50,000+. In actuality, they simply had a net stock adjustment loss of $51.94. Even with the low net adjustment figure, we do concede that our number of adjustments are excessive and could be improved on with certain changes as recommended later on in your report.

Page 28 - Paragraph 2; Page 31 - Paragraphs 2 & 3; and Page 32 - Paragraphs 2 & 3 -- We feel that stock errors are created at the kardex and in loading trucks because of frequent rush situations in the afternoon and our lack of space to have receiving and shipping separated. The suggestion you made on Page 32, Paragraph 3, was looked into after our meeting, and so far we have not been able to institute this because the kardex clerk does not know what is being loaded on the truck (i.e., one requisition from one institution requires six truck loads), nor does the clerk have the information on the frequent pickups during the day. Also, after our meeting we, that day, contacted ADP and now have an analyst making an indepth study of our inventory control and management needs. The rush situation in loading in the afternoon is created by unloading incoming stock in the morning, consequently blocking off our loading area. But, more space would alleviate this problem.

Page 30 - Paragraph 2 -- Some of the items counted as "outs" are what we call specialty items that are only ordered by us upon receipt of a requisition from an institution. This eliminates our tying up monies and space for infrequently requested items that can usually be purchased off of an existing general contract. The reorder point and economic order quantity is currently being updated and placed on regular stock item cards.

Page 34 - Paragraph 3 -- Financial statements are delayed until the 15th or 30th of the next month on any month as a result of not receiving final I.D.T. invoice credit information from the Comptroller until between the 10th and 15th of the month. We feel that to reduce money tied up in accounts receivable between State agencies and to at least be in a position to publish an unaudited statement for management each month that the Comptroller should set up an automatic I.D.T. credit transferring to agencies having a large volume of I.D.T. billings, and particular those having working capital funds.

Page 38 - Paragraphs 1 and 3 -- We take definite exception to charging a portion of Department of Purchases and Supply Buyer and Management salary to Central Warehouse because without Central Warehouse, our buying staff costs chargeable to the general fund would be materially increased and management receives no additional compensation as a result of establishing Central Warehouse.

If, after your evaluation of the above comments, JLARC feels their recommendations are still valid, we will proceed to proportion whatever costs you set forth, but we would like to have same in written form from you for the record.

Page 39 - Paragraph 3 continued to Page 40 -- Our warehouse manager has for sometime and still does call on any I.D.T. invoice that is more than 30 days old and any local government invoice that is more than 60 days old attempting to collect same. And, in the case of local government, if they are not paid, we have cut off the services of the warehouse. Based on this, we feel we are and have been taking appropriate steps to collect accounts receivable.

Page 40 - Paragraph 1 continued to Page 42 -- The delay in releasing 1971-72 annual statement and audit was caused by our involvement with Federal Audit of

COMMONWEALTH of VIRGINIA

Virginia Public Telecommunications Council
902 Ninth Street Office Building
Richmond, 23219
(804) 770-3153

March 11, 1976

Mr. Paul W. Timmreck
Joint Legislative Audit and Review Commission
823 E. Main Street
Richmond, Virginia 23219

Dear Paul:

We now have had an opportunity to thoroughly review the JLARC audit of the working capital fund used to operate the Central Telephone and Scats systems.

Your audit was in our view accurate, and your observations were fair and constructive. We found your work with us helpful in our own management planning. Although we had some initial reservations about your recommendation that we develop guidelines for telephone equipage, we later came to understand what you had in mind and to agree with it. Indeed, we will try to develop such guidelines over the next few months.

You and your JLARC staff are to be complimented on the professional character of your audit.

Sincerely yours,

George L. Hall, Director

GLH:ga

JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

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