# **1984 FOLLOW-UP REPORT OF THE**

JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION ON

# The Virginia Department of Highways and Transportation

TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA



# **House Document No. 23**

COMMONWEALTH OF VIRGINIA RICHMOND 1984

# MEMBERS OF THE JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

**Chairman** Senator Hunter B. Andrews

Vice Chairman Delegate L. Cleaves Manning

Delegate Richard M. Bagley Delegate Robert B. Ball, Sr. Senator Peter K. Babalas Senator John C. Buchanan Delegate Vincent F. Callahan, Jr. Delegate Theodore V. Morrison, Jr. Delegate Lacey E. Putney Delegate Ford C. Quillen Senator Edward E. Willey Mr. Charles K. Trible, Auditor of Public Accounts

> **Director** Ray D. Pethtel

# PREFACE

House Bill 532, enacted by the 1982 General Assembly, directed JLARC to monitor the progress of the Department of Highways and Transportation (DHT) in implementing recommendations contained in Senate Documents 7, 8, and 14 of the 1982 Session. The Commission was to report its findings and recommendations to the Governor and General Assembly before the 1983 and 1984 legislative sessions.

Last year, the department estimated that it had saved over \$20 million by implementing JLARC recommendations dealing with improved equipment management and use. A number of improvements were also made in restructuring the department's central office. These findings were communicated to the 1983 General Assembly in House Document No. 34.

During 1983 the department has continued to make progress in putting these recommendations into effect. However, there are two areas which require additional attention on the part of DHT: manpower planning and maintenance operations. These findings were briefed at the December 12, 1983, Commission meeting and are summarized in the attached letter report.

Sincerely,

tthe

Ray D. Pethtel Director

January 10, 1984

# 1983 FOLLOW-UP REPORT ON THE DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

This is the second of two follow-up reports scheduled by the Joint Legislative Audit and Review Commission (JLARC) on the Department of Highways and Transportation. House Bill 532, enacted by the 1982 General Assembly, directed JLARC to monitor the progress of the department in implementing recommendations contained in Senate Documents 7, 8, and 14 of the 1982 Session. The Commission was to report its findings and recommendations to the Governor and General Assembly before the 1983 and 1984 legislative sessions.

# 1982 Follow-Up Report

In the fall of 1982 the Department of Highways and Transportation (DHT) submitted a comprehensive statement summarizing its progress in putting into effect 75 recommendations resulting from the three JLARC studies: (1) organization and administration of the department, (2) highway construction and maintenance, and (3) highway financing.

The Commission concluded that the department had made substantial headway in implementing these recommendations. Some had resulted in substantial savings. During the course of the study JLARC found that the department might accrue a one-time savings of \$13 million through better use of its fleet equipment and removal of surplus items from its general supply inventory. In fact, however, officials of the department estimated that dollar savings during fiscal years 1982 and 1983 were in excess of \$20 million.

Considerable progress had been made in overhauling the structure of the central office. A deputy commissioner position was created to strengthen oversight of policy research, planning, and budgetary functions. A public transportation directorate was created to provide both visibility and an appropriate degree of participation in department decision-making.

# 1983 Follow-Up Report

A three-part follow-up was carried out during 1983. First, the department was asked in May 1983 to provide comments on any actions taken since November 1982 on the JLARC recommendations contained in Senate Documents 7, 8, and 14. A copy of these comments accompanies this report. The comments indicate that the department is continuing to make progress in many areas:

• The first Annual Maintenance Program with three funding levels was submitted to the General Assembly in January 1983.

- •In July 1982, procedures were developed and implemented by the Department of Planning and Budget and the Department of Accounts to separate the control accounts for highway construction and maintenance in the "highway work in progress" fund.
- •All bidders are now required to sign a statement that the bid is being made without any collusion.
- •A higher priority is being given to disposing of surplus and residue parcels. During FY 1983, 276 acres were conveyed for a total consideration of \$1.8 million.
- As a part of its truck weight regulation program, the department has acquired 80 low-profile, light-weight scales.

The second follow-up activity concerned DHT staffing and manpower planning. The 1981 JLARC studies recommended development of a department-wide manpower plan, a reduction in area headquarters, and a program to review maintenance standards. These recommendations were reaffirmed under Items 649.2 and 649.3 of the 1982 Appropriations Act requiring DHT to prepare a manpower plan. On December 12, 1983, the Commission was briefed on the status of the department in carrying out this legislative mandate. DHT seems to have made major strides in developing its manpower planning system. However, the department needs to expedite its productivity assessments of maintenance operations. For example, departmental data collection for studies of area headquarters and maintenance productivity is not scheduled to begin until late 1983 or 1984. Results are not expected for approximately one to two years. (A full discussion of DHT staffing and manpower planning efforts is described in the December 9, 1983, letter report "DHT Manpower Planning.")

JLARC's third follow-up effort occurred as part of the study of the Equity of Current Provisions For Allocating Highway and <u>Transpor-</u> <u>portation Funds in Virginia (House</u> Document No. 11, 1984). Portions of this report examine DHT's progress in establishing ordinary maintenance budgeting standards, developing a pavement management system, budgeting for snow removal, and developing uniform financial reports for public transit systems. The report concludes that:

- •the maintenance management system could be improved through annual updating of maintenance standards.
- •the department needs to place a higher priority on completing the pavement management system so that it can be used in budgeting all highway systems for the 1986-88 biennium.
- •the budgeting of snow removal as part of ordinary maintenance has made rational workplanning by field units very difficult. An alternative budgeting procedure may be necessary.

# DHT COMPLIANCE WITH LEGISLATION RESULTING FROM JLARC STUDIES

# Legislation

House Bill 978 of the 1982 Session directed DHT to divide the position of deputy commissioner into two separate positions.

House Bill 364 of the 1982 Session established a directorate of public transportation in DHT.

House Bill 565 of the 1982 Session defined allocations as a commitment to expend funds in each fiscal year.

1982 Appropriations (649.1) required DHT to develop a plan for addressing imbalances in construction expenditures and allocations.

1982 Appropriations Act (649.3) directed DHT to develop a maintenance program based on an up-to-date pavement management system.

SJR 46 of the 1982 legislative session directed the Highway and Transportation Commission to consider realigning the construction districts to better serve the State's highway and transportation needs.

1982 Appropriations Act directed DHT to prepare a manpower plan that was to identify minimum staffing levels necessary to carryout programs funded by the Act.

# DHT Action

Reorganization was completed in July 1982.

A director was hired in October 1982

DHT is complying with this provision.

A plan was submitted to the General Assembly in 1983.

The Maintenance Program was prepared in January 1983. A pavement management system is under development.

A new, ninth construction district is proposed for Fairfax, Arlington, Loudoun, and Prince William counties. Legislation will be submitted to 1984 General Assembly.

A plan is under development.

• the public transportation division needs to develop uniform financial and operating data for all transit systems.

#### <u>Conclusion</u>

The Department of Highways and Transportation has made considerable progress in implementing the recommendations contained in Senate Documents 7, 8, and 14 of the 1982 legislative session. This year, the three follow-up efforts of the Commission seem to indicate that DHT needs to devote more attention to two areas -- manpower planning and maintenance operations. Specific recommendations are included in the December 9, 1983, letter report "DHT manpower Planning" and in the report Equity of Current Provisions for Allocating Highway and Transportation Funds in Virginia. Copies of these reports are available upon request.

Consistent with the follow-up provisions of Section 30-58.2, JLARC will continue to monitor the progress of the department in implementing recommendations. The Commission will report its findings to the Governor and General Assembly before the 1986 legislative session.

HAROLD C. KING, COMMISSIONER EUGENE M. BANE, GRUNDY, BRISTOL DISTRICT T. GEORGE VAUGHAN, JR., GALAX, SALEM DISTRICT WILLIAM R, WATKINS, SOUTH BOSTON, LYNCHBURG DISTRICT W F. MOHR, RICHMOND, RICHMOND DISTRICT . BRYDGES, VIRGINIA BEACH, SUFFOLK DISTRICT H. JPHREYS, JR., WEEMS, FREDERICKSBURG DISTRICT JOSEPH M, GUIFFRE, ALEXANDRIA, CULPEPER DISTRICT ROBERT W. SMALLEY, BERRYVILLE, STAUNTON DISTRICT T EUGENE SMITH, MCLEAN, AT LARGE-URBAN ROBERT A, QUICKE, BLACKSTONE, AT LARGE-RURAL

Suite 1100

Dear Ray:

910 Capitol Street

recommendations.

Mr. Ray Pethtel, Director Joint Legislative Audit and Review Commission

Richmond, Virginia 23219



COMMONWEALTH of VIRGINIA

DEPARTMENT OF HIGHWAYS & TRANSPORTATION 1221 EAST BROAD STREET RICHMOND, 23219

June 30, 1983

Your letter dated May 27, 1983 invited the Virginia Department of Highways and Transportation to provide comments on any actions taken since November

Sincerely,

Harold C. King, Commissioner

We have enclosed an updated "status of actions" statement for selected

on the JLARC recommendations in Senate Documents 7, 8, and 14.

If I can be of further assistance, please advise.

LEO E BUSSER, III DEPUTY COMMISSIONER

JOHN M. WRAY, JR. CHIEF ENGINEER

J T. WARREN DIRECTOR OF ADMINISTRATION

OSCAR K. MABRY DIRECTOR OF PLANNING

HAROLD W. WORRALL DIRECTOR OF FINANCE

J. S. HODGE ASSISTANT CHIEF ENGINEER

SALLY H. COOPER DIRECTOR OF PUBLIC TRANSPORTATION IN REPLY PLEASE REFER TO

Enclosure

5

# DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

Senate Document No. 7 - Recommendation No. 4:

c. "DHT should expedite the completion of the highway improvement program which identifies high priority spending objectives for construction during subsequent four to six-year period. The program should be completed and made available to the General Assembly for distribution and review in the 1982 Session. The program should include provisions for annually updating and adjusting the program to report on progress and fulfilling program objectives and to accommodate the General Assembly action or other changes to existing conditions."

# Status:

The Department, in 1981, developed a Six-Year Critical Improvement Program and held meetings in each of the eight construction districts with members of the General Assembly to discuss the program and funding necessary for its implementation.

Subsequent to the 1982 Session, the Department has revised the critical improvement program to reflect the anticipated revenue over the program period FY 83 through FY 88.

The first annual update of the Transportation Improvement Program through the process indicated by the flow diagram in Appendix A, has been accomplished with the program reflecting the anticipated revenue over the program period FY 84 through FY 89.

Copies of the updated program tentatively approved by the Commission were distributed to all members of the General Assembly as well as notices for each of the preallocation hearings and final allocation hearings. Subsequently, the allocations and Transportation Improvement Program with final Commission approval were distributed to all General Assembly members.

The Transportation Improvement Program clearly reflects priorities on a project-by-project basis within each construction district. The program is developed in accordance with projected revenues and the allocation of funds pursuant to the statute and the Appropriations Act.

The program is designed to accommodate annual updates and adjustments, and its implementation progress is closely monitored by the management of the Department and the Secretary of Transportation. Senate Document No. 7 - Recommendation No. 4: (Continued)

d. "The Highway and Transportation Commission should formally review and approve the highway improvement program as well as annual updates and keep appraised of the progress made by the Department in meeting the program objectives."

#### Status:

The Department has recently completed the first update of the Six-Year Improvement Program and tentative allocations for FY 84. The Highway and Transportation Commission gave its approval to the tentative allocations and program at its May meeting and, with benefit of the testimony received at the two final allocation hearings held in June, took final action on the allocations and program at its July meeting.

The tentative allocations and preliminary Six-Year Improvement Program was sent to all members of the General Assembly and to each political subdivision. The program also reflects the progress implementing the projects during FY 83.

In February 1983, the Department's progress in implementing the program since July 1, 1982, was reported to the Members of the Commission in some detail. Additionally, program progress was reported to individual Commission Members in April and May, 1983.

The Secretary of Transportation also requires a progress report quarterly, and the success of the Department in implementing the program has been excellent.

Senate Document No. 7 - Recommendation No. 5:

"DHT should re-evaluate its policies regarding the workload standards used in budgeting for routine maintenance. Either closer adherence to the standards by field managers should be required, or the value of maintaining and updating the standards should be reconsidered."

#### Status:

In March 1983, the Department contracted with the Productivity Evaluation Center at VPI&SU to conduct an "Evaluation of Highway Maintenance Performance Measures" to develop a methodology for determining the validity of the performance standards.

Additionally, in lieu of the Maintenance Division budgeting funds based on Residency past performance, the Residencies have been allowed to shift funds between activities within the systems according to need. This is anticipated to result in more accurate charging and a higher level of accountability. Senate Document No. 7 - Recommendation No. 6:

"DHT staff should develop an annual maintenance program to provide the necessary level of accountability for spending. The program should identify a 'minimum funding level necessary for maintenance which constitutes a program to protect the highway investment and provide for reasonable levels of safety and comfort to the travelling public.' The plan should also identify 'other spending levels above the minimum program which are recommended to provide for higher levels of comfort, convenience, and other maintenance enhancements.' The intent of this recommendation is to provide the General Assembly with alternatives for funding highway maintenance and the implications of each spending level.

"The Highway and Transportation Commission should review and approve the maintenance program and provide opportunity for review by and consultation with appropriate legislative committees. A draft version of the program should be developed by January 1983 and a status report provided to the General Assembly. The approved program should then be available for incorporation into the budget development cycle for the 1984-86 biennium."

# Status:

An Annual Maintenance Program with three funding levels was submitted to the Highway and Transportation Commission and, on January 20, 1983, Level B was approved. Subsequently, January 26, 1983, Harold C. King, Commissioner, forwarded the tri-level funding document to the appropriate State Legislators.

Senate Document No. 7 - Recommendation No. 7:

"DHT should place a high priority on full implementation of a pavement management system for Virginia. The system should be able to provide analytically based data on the pavement condition on all of the highway systems by using appropriate sampling procedures. The preliminary information should be incorporated in the maintenance program described in Recommendation 6 for the 1983 status report to the General Assembly. The 1982-84 Appropriations Act should mandate that a complete assessment of highway condition be finished by the start of the 1984-86 biennial budget preparation cycle."

# Status:

The VDHT Pavement Management System is under development. Pavement condition ratings have been conducted on both the Interstate and Primary systems. The results of the Interstate System have been analyzed, and projections are set to be made shortly. The results of the Primary ratings are currently being analyzed. A system for condition rating of the Secondary System has been developed and will be conducted during the winter of 1983-84.

The Maintenance Division is continuing further development of the Primary and Secondary pavement management systems, and anticipate their operationalization by next year. In addition, the Federal Highway Administration recently reviewed Virginia's pavement management system. Senate Document No. 7 - Recommendation No. 8:

"Greater emphasis should be placed on the bridge condition rating system by the Bridge Division. Data from the rating system should be used systematically by maintenance staff to set statewide priorities for bridge maintenance replacement."

#### Status:

To re-emphasize the importance of uniformity and continuity in the Bridge condition ratings, the Department's Bridge Division developed and held a training program for all personnel associated with the Bridge Safety Inspection Program. The training program was held on March 30, 1982, and was attended by the District Engineer for Maintenance, the District Bridge Engineer, and all safety inspectors.

Since that time, the monitoring of the bridge safety inspection reports as well as the structure inventory data base indicate improved reporting and adherence to the instructions that were presented at the training program. The desired consistency statewide in the reporting of the inspection and inventory data has for the most part been obtained. When problems arise, they are resolved through direct contact with the District personnel. The system will continue to be monitored on an ongoing basis.

Senate Document No. 7 - Recommendation No. 9:

"The Department of Planning and Budget and the Department of Accounts should take immediate steps to establish separate control accounts for highway construction and maintenance in the 'highway work in progress' fund. Appropriation and allotment increases made to the work in progress fund should identify the amount of increase for maintenance and construction separately, and the specific legislative authorization for the increase."

# Status:

In July 1982, procedures were developed and implemented to separate highway work in progress between construction and maintenance. Current procedures will, in all probability, eliminate the necessity for any specific appropriations and/or allocations to support any construction in progress amounts in the future.

Senate Document No. 7 - Recommendation No. 11:

"For purposes of addressing current imbalances between allocations and expenditures among highway systems, the General Assembly may wish to consider one of the following actions."

- (Note: Of the three proposed actions, the General Assembly chose the action shown below.)
  - a. "require DHT to prepare a plan for General Assembly consideration to address and amortize the existing imbalances within the statutory provisions."

Senate Document No. 7 - Recommendation No. 11 (Continued)

# Status:

Paragraph 649.1 of the 1982 Appropriations Act requires -

"prior to January 1, 1983, that the Department of Highways and Transportation will develop and provide to the Senate Committee on Transportation and Finance and the House Committees on Roads and Internal Navigation, Appropriations and Finance a plan for addressing existing imbalances between allocations made under Section 33.1-23.1, Code of Virginia, and expenditures among highway systems."

The Department prepared the plan required by Paragraph 649.1 for consideration by the 1983 Session of the General Assembly and submitted it to the appropriate Senate and House Committees in October 1982.

Senate Document No. 7 - Recommendation No. 12:

"The DHT budget division should place a priority on bringing the program budget into compliance with established format and content requirement. Both DHT management and the budget division should take steps to familiarize managers with the budget process."

# Status:

This portion of this recommendation relative to DHT placing a priority on bringing the program budget into compliance with established format and content requirement is in error. Correspondence between Mr. Ray T. Sorrell, Deputy Director, Department of Planning and Budget and Mr. Ray Pethtel, Director of JLARC, documenting this fact was presented in the October, 1982 Status Report.

Relative to DHT familiarizing managers with the budget process, the following actions have occurred:

- (1) The 1984-86 Program Proposal was completed and forwarded to the Department of Planning and Budget and involved numerous managers throughout the Department.
- (2) The 1983-84 Commission Budget was completed and approved by the Highway and Transportation Commission on June 16, 1983.
- (3) On March 28, 1983, the Executive Committee was briefed on the 1984-86 Program Proposal as well as the financial plan for the 1983-84 Commission Budget.
- (4) On April 21, 1983, the Commission's Budget and Finance Committee was briefed on the 1983-84 Commission Budget as well as the 1984-86 Program Proposal.
- (5) At a workshop session of the full Commission on June 15, 1983, members were briefed along with the Commissioner's staff on the 1983-84 Commission Budget.

Senate Document No. 7 - Recommendation No. 14:

"The department should clarify the role of the maintenance division in controlling spending for ordinary maintenance at the residency level. Control would be improved by more systematic monitoring of expenditures against budgets with exception reporting of overexpenditures provided to field staff and the director of operations. Separating snow removal spending from other maintenance expenditures for monitoring purposes should be considered."

#### Status:

At the present time, the Maintenance Division checks monthly expenditures at the Residency level. Unusual expenditures are discussed with the District Engineer or his assistant. Action beyond this point is basically the responsibility of the District.

Exception reporting of individual maintenance item expenditure is not feasible since the timing of expenditures on any item is not constant throughout the year. Exception reporting would be feasible on total ordinary maintenance expenditures; however, the number of counties to be reviewed by a District or Residency are so few that the exception reporting would not be warranted.

Reviews are easily made from the monthly maintenance expenditures report. On monthly performance reports, snow removal cost is reported separately. While this cost is reviewed separately in analyzing expenditures, it still must be included in the total expenditures to compare expenditure to budget.

Senate Document No. 7 - Recommendation No. 20:

"The DHT purchasing division should develop a training program for stockroom employees. Particular attention should be given to procedures for conducting quarterly inventories and correcting errors in the inventory. The importance of retaining proper documentation should be stressed."

# Status:

Training guides were developed and distributed on January 1983, for the stockroom personnel in the Residencies, Districts, and Central Warehouse. Particular attention was given to the procedure of continuing quarterly inventories and correcting errors. The importance of retaining proper documentation was stressed. Auditors review conformity to the guide when making field audits.

Senate Document No. 7 - Recommendation No. 25:

"Procurement procedures used by the purchasing division should be strengthened to reduce the possibility of fraudulent activity and to conform to accepted purchasing procedures.

a. "The procurement function should be divided between two separate sections within the purchasing division. Buyers should not send, receive, open, or tabulate bids."

# Status:

The procurement function was divided into separate sections effective January 1, 1983.

Senate Document No. 7 - Recommendation No. 25: (Continued)

b. "All vendors should register with the department before submitting bids on any contract. Disclosure of corporate affiliations should be required and vendors should update the registration as necessary."

# Status:

The Administrative Services Division is opposed to prequalifying all bidders supplying goods.

At the present time, administrative services has approximately 4,000 bidders on the master mailing list. In addition to these 4,000 vendors, purchases are made from local farmers for items such as straw, fence posts, etc. The present policy does not require Virginia companies doing business with the Department to be registered or prequalified. However, out-of-state companies are required to furnish a Bidder's Mailing List Application.

The Division cites the following reasons for not changing the policy to require the prequalifying of all vendors:

- 1. The cost benefits received will not justify the expenditure required to maintain the system. It is estimated that in order to maintain the prequalifying section for all of our bidders would require a minimum of two additional employees. These additional employees are not available within our present organization and would have to be brought in from outside.
- 2. It will contribute to a reduction in the amount of business that is done with minorities and small businesses.
- 3. It will add considerable "red tape" for local suppliers doing business with the Highway Department.

Senate Document No. 7 - Recommendation No. 25: (Continued)

c. "All bidders should be required to sign a statement that the bid is being made without any collusion."

# Status:

Effective January, 1983, the Department included the following statement on the bid proposal concerning collusion: "CERTIFICATION: Pursuant to Virginia Code 18.2-498.4, this firm hereby certifies that its bid, or any portion thereof, on Inquiry Number was not the result of, or affected by, any act of collusion with another person engaged in the same line of business or commerce; or any act of fraud punishable under the Virginia Governmental Frauds Act." Senate Document No. 7 - Recommendation No. 25:

d. "The procedure for awarding contracts when bids are tied should be revised. The department should consider referring identical bids to the Attorney General for review, as does the Division of Purchase and Supply."

# Status:

The Administrative Services Division has changed its procedure for awarding contracts. Tie bids are decided in the following manner:

- 1. In the case of a tie bid, preference shall be given to goods, services, and construction provided in Virginia by a Virginia person, firm, or corporation if such a choice is available.
- 2. If a bid is technically superior to another, the award will be made to that firm considered to be in the best interest of the Department.
- 3. If neither of the above alternatives apply, the tie shall be decided by drawing lots.

Senate Document No. 7 - Recommendation No. 27:

"DHT should improve on the existing equipment information system by developing lifetime cost profiles for each age group of all major equipment classes. These profiles should be used as budget and management guide. DHT should also consider a separate budget activity for equipment maintenance."

# Status:

VDHT's Equipment Division is currently receiving exception reports on equipment utilization quarterly. Effective July 1, 1983, a new quarterly report will be generated. It will include a cost per hour operating statement and miles per gallon fuel consumption report and exception reporting. In addition, special reports will be developed by District as required about equipment units or class codes to supplement previous reporting procedures for effective management decisions.

Senate Document No. 7 - Recommendation No. 28:

"The right-of-way division should complete its residue parcel listing and place a higher priority on disposing of large or valuable parcels. Random inspections of residue parcels should be conducted by district right-of-way staff to guard against improper use of DHT property. State agencies located near residue parcels should be notified and provided an opportunity to acquire such property."

# Status:

VDHT's Right of Way Division is directing its efforts towards resolution of the issues associated with this recommendation.

Senate Document No. 7 - Recommendation No. 28: (Continued)

Status: (Continued)

Progress has been attained in areas concerning the identification and disposal of surplus land, residue parcel listing, and the exchange of properties with the Department of Corrections. The residue parcel list is now available on the District terminals and provides the capability to sort through the listing for residues of specific size.

From July 1, 1982 through June 23, 1983, 275.7871 acres were conveyed for a total consideration of \$1,827,551.48 including several parcels of significant size and value. This is an increase of 185.9181 acreas and \$1,012,875.60 from the 1981-82 fiscal year. Also, during this period, the Central Office staff processing these conveyances was reduced to a level of four (4) full-time employees.

# Information Processing

Senate Document No. 7 - Recommendation No. 31:

"Steps should be taken to review and modernize DHT's present data processing system with the objective of providing the department's managers with information that is accurate, up-to-date, and meaningful. The Department of Management Analysis and Systems Development should conduct a comprehensive assessment of DHT data processing, looking specifically at information needs, timing of reports, data accuracy, level of detail in reports, and improved use of exception reports. Such assessments should be conducted every two to three years."

# Status:

A comprehensive study of VDHT information system needs was completed in the fourth quarter of FY 1983. This study utilized the services of a consultant with major VDHT staff involvement. MASD assisted as a participant in the preparation of the consultant proposal request and also as a Steering Committee member during the entire study preparation stage. MASD, also, conducted a post-study review of the methods used and results obtained. The study resulted in a three-volume report including a "1983 Management Information System Plan". This report specifically identifies VDHT information needs and establishes priorities for meeting the needs. The former VDHT Data Processing Division has been restructured as the Information Systems Division and is currently addressing the specific data system needs in priority order.

Senate Document No. 7 - Recommendation No. 32:

"DHT should explore with MASD the feasibility of a data base management system for organizing its data files and computer programs. A staff position of data base manager should be considered in order to facilitate the integration of the department's computer systems and program. Every effort should be used to recruit a person who is educated and trained in the computer sciences." Senate Document No. 7 - Recommendation No. 32: (Continued)

# Status:

Representatives of VDHT have worked closely with other state agencies in the development and review of the specifications for a series of Data Base Administrator positions for use in a number of agencies. This matter is currently being reviewed by the Department of Personnel and Training with early action anticipated.

The recent VDHT Information Systems Study recommended certain staffing changes. As a result of that study, the VDHT has received permission for and subsequently filled a Data Processing Manager position which will have data base and data base management responsibilities. The position will also have telecommunications, systems software, standards, documentation, training and hardware/ software selection responsibilities. The Department's Data Base Administrator will report directly to this manager.

VDHT has also, in conjunction with the Department of Computer Services and the Division of Motor Vehicles, reviewed several Data Base Management systems. A final determination of the DBMS has been made and VDHT will participate in the necessary training and begin implementation of the data base concepts during the first quarter of FY 1984. This will be done in conjunction with the recommendation included in the 1983 Management Information Systems Plan.

# Organization Structure and Communication

Senate Document No. 7 - Recommendation No. 33:

b. "Create a policy research and statistics team in the management services division to conduct policy studies at the request of the commissioner and deputy commissioner. The divisions' responsibilities should also include value engineering, methods improvement, and engineering research."

# Status:

The Management Review Division (formerly Management Review and Audit Division) has added one full-time position to the Division to perform policy analysis work.

It has established a formal program of Value Engineering Workshops to assess construction projects in the design stage. Since November 1982, this has resulted in savings of approximately \$300,000.

Additionally, the Division has embarked on a program of maintenance reviews which look closely at methods, and it is anticipated this will be means of effecting improvements and technology transfer.

Senate Document No. 7 - Recommendation No. 33: (Continued)

c. "Establish an internal audit unit which reports to the highway commissioner. All financial and internal audit-related reports should be transmitted to the Highway and Transportation Commission. The commission should actively participate in selecting topics and endorsing recommendations."

# Status:

In response to a JLARC recommendation, the Department requested the State Internal Auditor (SIA) to perform a survey of VDHT internal auditing. This survey was completed August 31, 1982. The Department has fully implemented the SIA's recommendations that relate to this.

Specifically, the Department has established the Internal Audit Division, effective January 1, 1983. This Division reports administratively to the Director of Administration and functionally to the Highway and Transportation Commission - Internal Audit Committee. All Internal Audit Division reports have been transmitted to the Highway Commissioner, the Highway and Transportation Commission, and its Internal Audit Committee. The Internal Audit Committee's authority has included, and will continue to include, selecting topics and endorsing recommendations.

Senate Document No. 7 - Recommendation No. 33: (Continued)

d. "Clarify the reporting relationship between the rail division and the Secretary of Transportation. Rail policy matters should be reviewed by the secretary prior to department review. In addition, expansion of the division's scope of activities should be considered."

# Status:

The reporting relationship between the Rail Transportation Division and the Secretary of Transportation has been clarified by no longer having the Division report to the Secretary on rail policy matters. This action, however, conflicts with this Recommendation in that rail policy matters should be reviewed by the Secretary prior to Department review, but is consistent with the wishes of the Secretary of Transportation.

The Rail Transportation Division's scope of activities has been expanded by virtue of the recent assignment of the rail/highway grade crossing program (formerly in the Right of Way Division) and the grade crossing inventory program (formerly in the Traffic and Safety Division). Senate Document No. 7 - Recommendation No. 33: (Continued)

g. "Change the reporting relationship of the public relations division to the director of administration."

# Status:

Effective July 1, 1982, the former Public Relations Division was renamed the Information Services Division as one of a number of organizational changes implemented by the Commissioner. Effective January 1, 1983, the Division began reporting to the Director of Administration.

Senate Document No. 7 - Recommendation No. 35:

"Before creating a ninth district, the department should review boundaries of the existing eight districts and make necessary adjustments. Adjustments should be made to reduce workload disparity and to achieve operating efficiencies through consolidation of facilities. A separate Northern Virginia construction district should be considered. This should be accomplished by realigning the eight existing districts without adding a ninth district."

# Status:

Senate Joint Resolution No. 46 mandated the VDHT to examine the number and alignment of the construction districts to better serve the Virginia Highway and Transportation needs.

In order to comply with SJR No. 46 and this Recommendation, a study was initiated to address the above noted issues. This study was completed in March 1983.

On June 16, 1983, the Highway and Transportation Commission, after considering the subject study and other pertinent information, directed VDHT to seek authority from the 1984 General Assembly to: (1) increase by one the number of Commission Members and (2) increase the number of Construction Districts to nine by the establishment of a Northern Virginia District. This would necessitate the amending of Section 33.1-1, 33.1-2, and 33.1-23.2 of the Code of Virginia.

Senate Document No. 7 - Recommendation No. 36:

The maintenance division should thoroughly assess the need for existing area headquarters. Criteria such as workload and travel time should be consistently applied during the review. Priority should be placed on consolidating areas and on eliminating timekeeper positions."

# Status:

In conjunction with the Maintenance Division's original study of "maintenance areas" and the continued monitoring of consolidation possibilities, five areas

Senate Document No. 7 - Recommendation No. 36: (Continued)

Status: (Continued)

have been eliminated. The Highway Research Council plans to make an independent evaluation of the maintenance areas.

W<sup>2</sup> th regard to the timekeeper positions, our studies are incomplete in this area, and VDHT is continuing to monitor these positions.

Senate Document No. 7 - Recommendation No. 38:

"Although the dual reporting structure is viable for district preconstruction sections, the roles and responsibilities of the central office division and the district should be better defined. Procedures for resolving conflict between division and district staff should be developed, and responsibility for ensuring compliance with design standards on minimum- and no-plan projects should be specified."

# Status:

The Assistant Chief Engineer, in collaboration with the Management Review Division, Division Administrators, and District Engineers, has completed a study in the preconstruction divisions which addressed decentralization or centralization of functions, the amount of work to be performed in the Field and in the Central Office, along with the specific responsibilities of the District Engineers and appropriate Division Administrators.

This effort resulted in instructional memorandums to the District Engineers, Division Administrators in the Bridge, Location and Design, Right of Way, Materials, and Environmental Divisions, clarified where the functions were to be performed and the responsibilities of both the District Engineers and the Division Administrators. Issues which cannot be resolved directly between District Engineers and Division Administrators will be arbitrated by the Assistant Chief Engineer to obtain resolution.

Senate Document No. 7 - Recommendation No. 41:

"Representation of resident engineers and of field staff from regions outside the Richmond area on committees should be increased. For example, the departmental committees on resident engineer selection and equipment should include field staff."

# Status:

The Department agrees with this recommendation. Changes in the Promotion Selection Committees, effective June 16, reflect the following:

Senate Document No. 7 - Recommendation No. 41: (Continued)

Status: (Continued)

The Committee for selecting the Assistant Resident Engineers will include a District Engineer as Chairman and the gaining Resident Engineer, members to be rotated annually. The Selection Committee for Resident Engineers and Assistant District Engineers will include two District Engineers. District Section Heads will be selected by the District Engineer involved and the appropriate Division Administrator.

The Department recognizes the need for widespread participation on a statewide basis from our Field Engineers.

# Staffing

Senate Document No. 7 - Recommendation No. 42:

"Guidelines for identifying surplus positions should be developed. Each division should identify potentially surplus positions and their impact on workload. A series of options for further staff reductions should then be developed for each division."

# Status:

Guidelines for identification of surplus positions will result from the validation of the standards for each activity. As validation takes place, each division's human resource coordinator will have information on performance and workload adequate to identify surplus positions. The balancing of workload and available positions was performed in accordance with the Human Resource Planning System guidelines. In addition, the assessment of the feasibility of reducing Central Office staffing to not more than 900 positions identified options for accomplishing work with reduced personnel.

Senate Document No. 7 - Recommendation No. 45:

"The training section and the district trainers should survey the organization to determine priority areas where skills need to be improved. An appropriate skills program should then be developed."

# Status:

The survey of tasks performed by Equipment Operators A, B, and C has been completed. The results point out significant differences in need based primarily on geographical locations. Further steps are being taken to include the Equipment Operators, Timekeepers, Foremen, and Maintenance Superintendents in a training and career development program as part of the Department's response to the Consent Decree. A prototype is expected to be in place by September 1983. The prototype, to be installed in at least one Residency, will provide an opportunity to troubleshoot the program before full implementation in the Department. Senate Document No. 7 - Recommendation No. 46:

"All DHT managers should be required to participate in management training on a regular basis."

# Status:

The Department continues to offer its Management Training Seminar at Natural Bridge (currently scheduled for July 24-28, 1983). Eligibility for participation has been expanded. The Styles of Management program has again been presented for both the Central Office and the Field and is scheduled for additional presentations in FY '84. Other presentations attended by management included Strategic Planning, Statistics and Quantitative Measurements for Decision Making, and Program Evaluation.

Senate Document No. 7 - Recommendation No. 50:

"Better training should be provided to DHT employees who supervise or accompany inmates. A modified version of the training course provided by DOC to new guards should be considered for the DHT employees.

# Status:

All Districts have completed a training course developed by the Department of Corrections for employees who work with D.O.C. inmates. Additional courses will be offered as needed for new employees.

# HIGHWAY CONSTRUCTION, MAINTENANCE AND TRANSIT NEEDS IN VIRGINIA

#### Senate Document No. 8 - Recommendation No. 2:

"Workload standards used to develop routine maintenance budgets should be reviewed to ensure that they accurately reflect potential workload. The inventory of maintainable items now being developed can provide the basis for the review. Either closer adherence to the standards by field managers should be required or the value of maintaining and updating the standards should be reconsidered."

#### Status:

The comments presented under Recommendation No. 5 of Senate Document No. 7 are applicable to this recommendation.

#### Senate Document No. 8 - Recommendation No. 3:

"DHT should place a high priority on full implementation of a pavement management system for Virginia. Using appropriate sampling procedures, the system should be able to provide analytically based data on pavement condition on all of the highway systems. The preliminary information should be incorporated in the maintenance program described earlier for a 1983 status report to the General Assembly."

#### Status:

The comments presented relative to status under Recommendation Nos. 6 and 7 of Senate Document No. 7 are applicable to this recommendation.

Senate Document No. 8 - Recommendation No. 5:

"The management services division should take the lead in developing a methods improvement program for DHT aimed at reducing costs and improving efficiency. The management services division, in conjunction with the maintenance engineer, should undertake a comprehensive review of the various methods used by residencies to perform maintenance activities and the conditions under which methods can be transferred to improve productivity. When productivity improvements are feasible and appropriate, maintenance managers should ensure that they are fully implemented.

#### Status:

The comments presented under Recommendations No. 5 and No. 33 of Senate Document No. 7 are applicable to this recommendation.

Senate Document No. 8 - Recommendation No. 8:

"The General Assembly may wish to create a special joint committee to review State policies regarding public transportation. The committee should be directed to review the financial needs of public transit, ride-sharing programs, and other mass transportation activities in light of changing federal aid policies . . . The public transportation division should take the lead role in providing the General Assembly with information, analysis, and options for consideration in policy development as provided for in law."

# Status:

House Joint Resolution 34 established a Joint Subcommittee to study the financial needs of public transit ridesharing programs and other mass transportation activities. The staff of the Public Transportation Division has met with the Joint Subcommittee and is providing information, analysis, and options for consideration in policy development.

In addition, the Department hired the consulting firm of Richard Grefe' and Associates to perform a study of financing public transit, ridesharing, and other transportation activities to assist in carrying out its mission as set forth in Section 33.1-391 of the Code of Virginia. The final draft of the study and an executive summary have been printed and distributed to the members of the HJR-34 Committee. The study findings will be formally presented to HJR-34 Committee on July 7, 1983.

# Senate Document No. 8 - Recommendation No. 9:

"The public transportation engineer should take the lead in developing uniform financial and operating report formats which provide comparable information on all transit systems. As a part of a technical assistance program to local transit systems, the public transportation engineer should aggressively pursue identifying ways of reducing operating costs and evaluating transit services.

"Finally, the public transportation engineer should prepare a biennial report on public transportation in Virginia which includes the results of efficiency reviews carried out under statute as well as a detailed assessment of public transportation needs of the Commonwealth. This report should have wide distribution and be provided to the appropriate committees of the General Assembly."

# Status:

In regard to the first portion of this recommendation, the Virginia Department of Highways and Transportation has contracted with Littleton C. MacDorman to develop uniform financial and operating report formats which can be used to assess transit system effectiveness and efficiency. In order for this to be useful to the Virginia Department of Highways and Transportation and the local transit operators, a steering committee of representatives from cross-sections of transit operators in the Commonwealth has been established to assist the Department and the consultant in the conduct of the study. It is anticipated that this study will be completed by December, 1983. Senate Document No. 8 - Recommendation No. 9: (Continued)

Status: (Continued)

In regard to the second portion of this recommendation, a biennial reporting on efficiency and effectiveness will be forthcoming after the previously discussed study effort is completed and its recommendations implemented.

# Highway Financing in Virginia

# Truck Weight Regulation

Senate Document No. 14 - Recommendation

"With the intent of eliminating the van and driver now required for transportation of older scales, DHT should expedite the purchase and use of compact portable scales for the mobile weight units."

# Status:

The Department has secured a total of eighty (80) replacement scales which are now operational. These scales are consistent with the low profile, lighter weight requirements recommended in Senate Document No. 14. An additional fiftyfive (55) scales will be obtained in the near future after more detailed assessment of the two (2) types of scales currently marketed has been made under actual field conditions.

The acquisitions of these scales will have no impact on the number of employees currently assigned to each mobile crew because personnel assignments have no relationship to the types of scales available to conduct this activity. The potential for van replacement has been carefully investigated and found to be inappropriate due to the necessity for the cargo-carrying capacity only available in the type vehicle currently in use.

# PROCESS FOR ANNUAL UPDATE OF TRANSPORTATION IMPROVEMENT PROGRAM



201

APP ENDI X

# JLARC STAFF

# RESEARCH STAFF

**Director** Ray D. Pethtel

**Deputy Director** Philip A. Leone

> **Division Chiefs** Susan Urofsky, Division I Kirk Jonas, Division II

#### Section Managers

Gary T. Henry, Research Methods & Data Processing John W. Long, Publications & Graphics

#### **Project Team Leaders**

John M. Bennett Joseph H. Maroon Barbara A. Newlin Walter L. Smiley Glen S. Tittermary Mark D. Willis

# **Project Team Staff**

Suzette Denslow Lynn L. Grebenstein Stephen W. Harms Clarence L. Jackson R. Jay Landis Sarah J. Larson Cynthia Robinson Robert B. Rotz Mary S. Kiger E. Kim Snead Ronald L. Tillett R. Shepherd Zeldin

# ADMINISTRATIVE STAFF

#### Section Manager

Sharon L. Harrison Business Management & Office Services

Administrative Services

Joan M. Irby

# Secretarial Services

Deborah A. Armstrong Rosemary B. Creekmur Betsy M. Jackson Patricia L. Jordan

# SUPPORT STAFF

**Technical Services** 

David W. Porter, Graphics William E. Wilson, Computers

# Interns

Anthony T. Hebron Martha M. Ragland William H. Scarborough Geraldine A. Turner

Indicates staff with primary assignment to this project.

# RECENT REPORTS ISSUED BY THE JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

The Virginia Community College System, March 1975 Virginia Drug Abuse Control Program, October 1975 Working Capital Funds in Virginia, February 1976 Certain Financial and General Management Concerns, Virginia Institute of Marine Science, July 1976 Water Resource Management in Virginia, September 1976 Vocational Rehabilitation in Virginia, November 1976 Management of State-Owned Land in Virginia, April 1977 Marine Resource Management Programs in Virginia, June 1977 Sunset, Zero-Base Budgeting, Evaluation, September 1977 Use of State-Owned Aircraft, October 1977 The Sunset Phenomenon, December 1977 Zero-Base Budgeting? December 1977 Long Term Care in Virginia, March 1978 Medical Assistance Programs in Virginia: An Overview, June 1978 Virginia Supplemental Retirement System, October 1978 The Capital Outlay Process in Virginia, October 1978 Camp Pendleton, November 1978 Inpatient Care in Virginia, January 1979 Outpatient Care in Virginia, March 1979 Management and Use of State-Owned Vehicles, July 1979 Certificate-of-Need in Virginia, August 1979 Report to the General Assembly, August 1979 Virginia Polytechnic Institute and State University Extension Division, September 1979 Deinstitutionalization and Community Services, September 1979 Special Study: Federal Funds, December 1979 Homes for Adults in Virginia, December 1979 Management and Use of Consultants by State Agencies, May 1980 The General Relief Program in Virginia, September 1980 Federal Funds in Virginia, October 1980 Federal Funds: A Summary, January 1981 Methodology for a Vehicle Cost Responsibility Study. An Interim Report, January 1981 Organization and Administration of the Department of Highways and Transportation: An Interim Report. January 1981 Title XX in Virginia, January 1981 Organization and Administration of Social Services in Virginia, April 1981 1981 Report to the General Assembly Highway and Transportation Programs in Virginia: A Summary Report, November 1981 Organization and Administration of the Department of Highways and Transportation, November 1981 Highway Construction, Maintenance, and Transit Needs in Virginia, November 1981 Vehicle Cost Responsibility in Virginia, November 1981 Highway Financing in Virginia, November 1981 Publications and Public Relations of State Agencies in Virginia, January 1982 Occupational and Professional Regulatory Boards in Virginia, January 1982 The CETA Program Administered by Virginia's Balance-of-State Prime Sponsor, May 1982 Working Capital Funds in Virginia, June 1982 The Occupational and Professional Regulatory System in Virginia, December 1982 Interim Report: Equity of Current Provisions for Allocating Highway Construction Funds in Virginia December 1982 Consolidation of Office Space in the Roanoke Area, December 1982 Staffing and Manpower Planning in the Department of Highways and Transportation, January 1983 Consolidation of Office Space in Northern Virginia, January 1983 Interim Report: Local Mandates and Financial Resources, January 1983 Interim Report: Organization of the Executive Branch, January 1983 The Economic Potential and Management of Virginia's Scafood Industry, January 1983 Follow-Up Report on the Virginia Department of Highways and Transportation, January 1983 1983 Report to the General Assembly, October 1983 The Virginia Division for Children, December 1983 The Virginia Division of Volunteerism, December 1983 State Mandates on Local Governments and Local Financial Resources, December 1983 An Assessment of Structural Targets in the Executive Branch of Virginia, January 1984