

LIBRARY
DELAWARE
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
13351

1974

ANNUAL REPORT

DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
DELAWARE

CONTENTS

COUNCIL LIAISON	1
DIVISION OF HIGHWAYS	1
ADMINISTRATIVE ENGINEER	1
PUBLIC INFORMATION OFFICE	1
COMMUNITY LIAISON	1
PROJECT SCHEDULING AND SUPPORT	2
MANAGEMENT SYSTEMS	3
ROADSIDE CONTROL	3
SUBDIVISION ZONING & DESIGN	3
HAULING PERMITS	3
RIGHT OF WAY	4
SPECIAL ASSIGNMENTS	4
SUPPORT	4
MATERIALS & RESEARCH	4
SAFETY SECTION	5
TRAFFIC	5
PLANNING	8
PROJECT PLANNING	8
SAFETY PLANNING	9
ENVIRONMENTAL STUDIES	10
DESIGN	10
REVIEW	10
UTILITIES	11
ROAD DESIGN	11
BRIDGE	12
SPECIFICATIONS	12
BRIDGE CONTRACTS	13
CONSTRUCTION	14
MAINTENANCE	16

DIVISION OF TRANSPORTATION	16
AVIATION SECTION	18
OFFICE OF ADMINISTRATION	19
PERSONNEL	19
FINANCE	20
FEDERAL-AID AND AUDIT	20
COMPUTER SUPPORT	20
FINANCIAL STATEMENTS	21
OFFICE SERVICES	22
ADMINISTRATIVE SERVICES	22
UNIFIED SYSTEMS PLANNING	22

DEPARTMENT OF HIGHWAYS & TRANSPORTATION

The Department of Highways & Transportation is involved in meeting the total transportation needs of the State of Delaware.

As the needs of our State vary in that direction, so do the many functions of the Department in striving to reach that goal. From the very basic concept of a roadway, to appropriate accommodations for an air terminal this Department keeps pace with the State's need to move people and goods vital to the economy of Delaware.

On the Administrative level the Public Information Office keeps Delawareans informed of Departmental affairs and responds to requests for pertinent information. The newly formed Community Liaison Office directs its efforts towards managing the process of community involvement in highway planning. The Project Scheduling Section schedules projects by use of the critical path method network and monitors each project from date of authorization through all the activities necessary for the project to be available for advertising. Project Scheduling will have 28 projects available for bids in Fiscal Year 1975. Appropriations of funds for the implementation of the Sign Removal Program, enabled the Roadside Control Section to survey all primary routes in Kent and Sussex Counties, and approximately 75 percent of New Castle County. In Fiscal Year 1974, 130 Land Use plans were reviewed by Subdivision Zoning & Design and 116 of those plans were approved.

Under Support, the Bureau of Materials and Research has been working towards improving the quality and effectiveness of materials used in highway construction. The Safety Section monitors work area traffic control procedures used in highway projects, and is also responsible for the overall safety of personnel in the field, shop, yard or office. The Bureau of Traffic instituted various changes, in order to achieve greater flexibility with the minimum staffing currently available.

In Planning, the Action Plan has been completed, accepted, and is being implemented. Safety Planning has published an improved version of "Hazardous Spot Locations, 1972". The Environmental Studies Office began its operations this year, and is studying and advising on the environmental impacts associated with the transportation system.

In Design, the Review Section is responsible for the supervision of the preparation of contract plans and specifications for major highway and bridge projects.

A total of 40 projects were under design during the past fiscal year, with a combined construction cost of over thirty million dollars. The Department awarded contracts for fifteen bridge and other structures in FY 74, with a total construction cost of 17 million dollars. This year an additional 525 utility franchises added 954 miles to the existing lines.

During FY 1974 the Relocation Section gave assistance to 41 families. The new Standard Specifications for road and bridge construction were also completed this year.

In Operations, the Construction Section final inspects and accepts million dollars worth of projects. Maintenance operates with a large number of inadequate equipment and a shortage of material and manpower.

The Division of Transportation received UMTA's approval of the second report in a series of three, entitled "Short Range Transit Improvements Program". The report describes in detail the recommended proposals developed by DART, the Division of Transportation, and the Governor's Transit Task Force to expand DART's service over the next five years. Design work to implement the recommendation was begun, as soon as UMTA's approval was received. In conjunction with the Division of Highways, work continued on the development of a Unified 1995 transportation plan for New Castle County. The plan will utilize both highways and mass transit.

DART increased its ridership (6%) for the fifth straight year. Ridership in the previous four fiscal years increased by five percent annually. DART provided increased service to senior citizens through three new programs. The beach bus continued, in what proved to be a successful innovation for Delaware.

The Division's efforts assisted in the reopening of the Summit Rail Bridge, after the collision which completely shut down all rail traffic to the north.

Contingency plans to cope with the State's fuel crisis became operational in FY 74.

The Division of Transportation, working closely with other groups, postponed all rail abandonments by the bankrupt Penn Central Railroad. Efforts to encourage the continuation of commuter rail service in the Wilmington to Philadelphia corridor were actively pursued in Fiscal Year 1974.

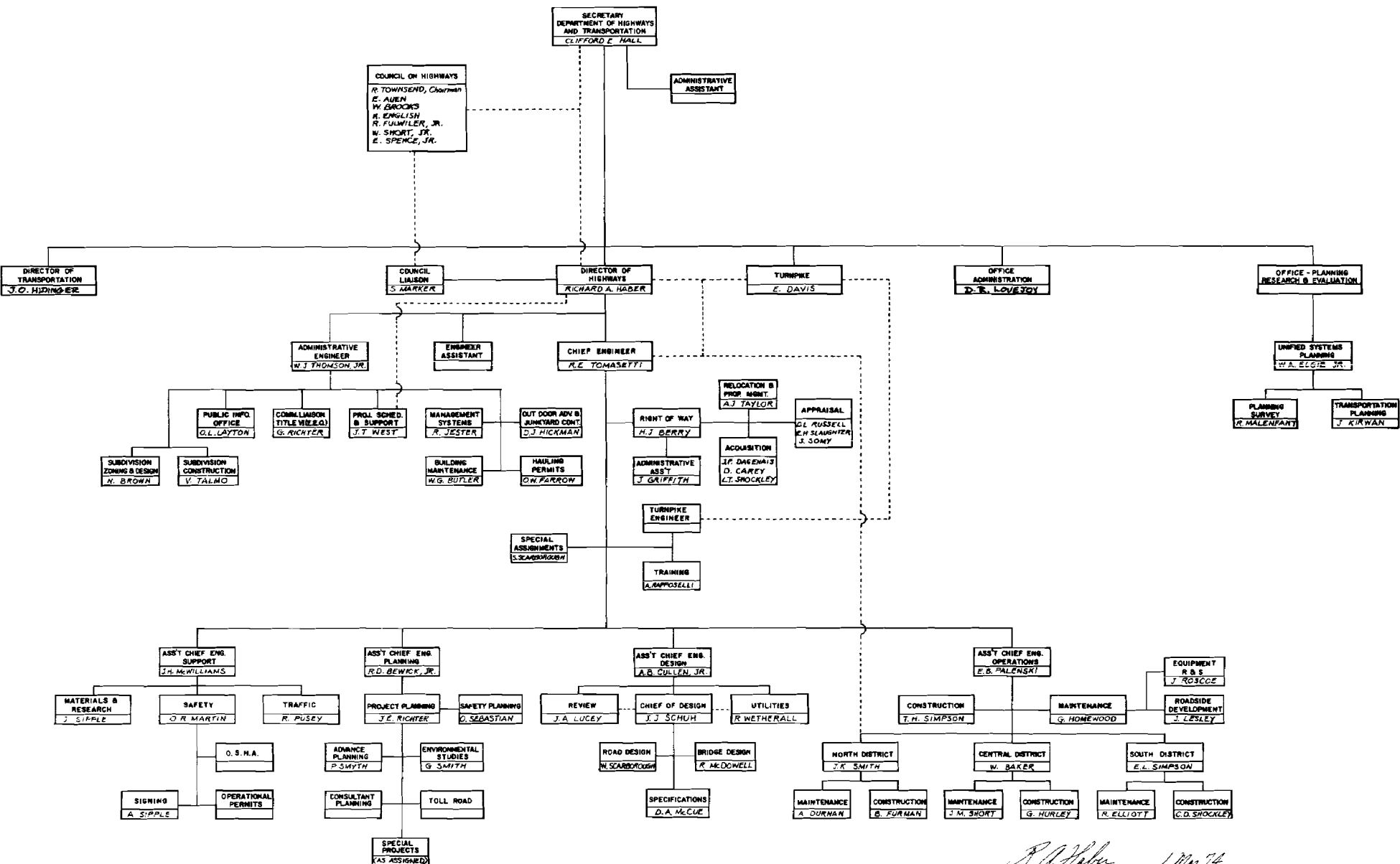
In Aviation, the Division assisted Air Exec, Inc. in establishing air commuter passenger and cargo service for Kent and Sussex Co., and has been negotiating with companies interested in doing the same for Kent County. Work continued on the preparation of the State of Delaware Aviation & Airport System Plan.

In the Office of Administration, employment was primarily confined to maintenance personnel. The hiring freeze was adhered to all but critical areas of the Department. Minority employment was stressed in accordance with the Department's Equal Employment and Affirmative Action Programs. No employee position relocations or reclassifications were accomplished as a result of FY 74 Budget Appropriations Act. The Finance Section made refinements on the Computerized Highway Accounting System. The Computer Support Section has continued Data Processing assistance to the Engineering, as well as other Sections.

Unified Systems Planning is furthering its process in establishing and maintaining optimum, comprehensive, region wide, multi-modal forecast transportation plans.

As the multi-modal transportation systems planning component, of the Wilmington Metropolitan Area Planning Coordinating Council, Unified Systems Planning has made every effort to maintain internal and external agency coordination in appropriate areas.

More detailed information pertaining to Unified Systems Planning and other topics touched upon in this summary, can be found in other parts of this Report.



R. A. Haber 1 Mar 74
RECOMMENDED DIRECTOR OF HIGHWAYS DATE
Clifford E. Hall 22 Mar 74
APPROVED SECRETARY DATE

COUNCIL LIAISON

A Liaison Office is provided by the Department of Highways and Transportation and is responsible for coordinating and scheduling Council meetings, which are held monthly, and all other matters pertaining to the Council.

The Council on Highways serves at the pleasure of the Governor. The Council serves in an advisory capacity to the Governor, Secretary of the Department of Highways and Transportation and the Director of Highways.

The Council on Highways is responsible for the following functions:

1. Problems relating to highways and highway construction within the state.
2. Study, research, planning and advisement on matters it deems appropriate to enable the Department to function.
3. Final approval of and adoption of the six-year Highway Capital Improvement Program (CIP) which is submitted annually.
4. Final approval of and adoption of all corridor route projects in connection with new road alignments.

The Council on Highways is made up of seven members appointed by the Governor. The membership of the Council is composed of: two residents from Sussex County, one resident from Kent County, and four residents from New Castle County, one of those a resident from the City of Wilmington. A chairman of the Council is chosen by the members of the Council and serves in that capacity for a term of one year.

DIVISION OF HIGHWAYS

ADMINISTRATIVE ENGINEER

PUBLIC INFORMATION OFFICE

Informing Delaware's populace in respect to construction projects, maintenance operations, design procedures, traffic patterns, and total transportation systems throughout the state, are but a few of the goals this section strives to achieve. The Public Information Office not only disseminates information pertinent to the Department, but responds to requests for specific information from the citizenry.

Letters of inquiry, telephone queries along with guided tours of the Department play an important part in such interactions. When dealing with the

public as a whole, written news releases accompanied by inhouse produced photographs are supplied to magazines and newspapers.

In order to further the scope of total information, news releases are made available for radio and television, along with interviews for these mediums as well as the written press.

Fiscal Year 1974 has been successful in extending the scope of the Public Information Office by the gathering of information along with slides, which are presently being compiled to form slide presentations of Department facets, soon to be offered to the public for informative showings.

In addition members of the Public Information Office and other volunteers will work along with the Bureau of Traffic in staffing Operation Beach Traffic.

Operation Beach Traffic will utilize radio stations in informing beach travelers of traffic and weather conditions on the beach routes during peak hours every weekend of the summer.

COMMUNITY LIAISON

Fiscal Year 1974 has been the first year of operation of the Community Liaison Office. The office has the responsibility of managing the process by which the community participates in highway planning.

During the past year numerous meetings have been coordinated by the Community Liaison Office between citizens' associations and Department Staff. These meetings have not only increased public awareness of the Department's plans for highway improvements, but also improved those plans by helping them be more responsive to the needs and desires of the communities they are intended to serve.

Community Liaison Public Meetings In Fiscal Year 1974

Public Hearings	9
Formal Public Meetings	11
Informal Public Meetings	<u>32</u>

TOTAL 52

Fiscal Year 1974 saw the official adoption of the Delaware Action Plan by the Governor of Delaware and the Federal Highway Administration. This document outlines a decision making process which will help insure that highway and transportation decisions in Delaware are made in the best interest of the social and physical environment of our state. Progress has been made in the implementation of the Action Plan. The Federal Highway Administration requires that the Action Plan be fully operational by November 1, 1974.

January 1974 was the first meeting of the Citizen Participation Advisory Council. The Action Plan calls for this group to be a citizens review body for the development of plans for the state's highway system. It also monitors project planning and design studies in order to make sure that the community has been properly involved in all decisions emerging from that process. The CPAC is made up of representatives of community oriented groups from all three counties. Dr. George F. W. Haenlein has been chosen CPAC Chairman. He represents the Civic League for New Castle County, the WILMAPCO Citizen's Council and the Suburban Newark Civic League. The Community Liaison Office provides executive staff for this organization.

In March 1974, the Community Liaison Office was given the responsibility of coordinating the Department's civil rights program. Draft guidelines for the administration of the civil rights program, in compliance with the Federal Highway Administration regulations, have been prepared. These are meant to assure that the Department of Highways and Transportation programs from Systems Planning to Highway Maintenance are operated fairly for all the citizens of Delaware. In addition to this, the Community Liaison Office has been charged with monitoring the equal employment performance of construction contractors.

PROJECT SCHEDULING AND SUPPORT

Planning Support and Mapping

The Planning Support Section was engaged largely in the day to day duties of administration involving control and general services, purchases, payrolls, budgeting, and fiscal matters for Engineering Administration, Project Planning, Design and Unified Systems Planning.

Mapping and drafting work included preparing and revising various maps in our County General Highway Series in conjunction with the Federal Highway Administration. The Delaware Official Highway Map was revised. The pictorial side of this map was prepared by the Department of Community Affairs and Economic Development along with the Department of Natural Resources and Environmental Control. A total of 140,000 copies of this map was printed. Various incorporated city and town maps of Delaware were revised. Work has been accomplished on the new Orthophotomap of New Castle County.

A large amount of time was spent on maps, charts and graphics. The majority of these were used in connection with various projects for Sections such as Unified Systems Planning, Project Planning and Safety Planning.

Project Scheduling

The section continues to schedule projects by use of a broad version of the Critical Path Method Network and to monitor each project from the date of authorization through all the activities necessary for the project to be available for advertising. Data relative to finance and personnel are displayed by graphic presentations on 5 charts in the Department's Chart Room and the Office of the Chief, Project Scheduling and Support.

The following 28 projects will be available for advertising for bids during fiscal year 1975.

CONTRACT NO.	DESCRIPTION	COST ESTIMATE (CONST.)
71-02-012	Sussex Co. Intersection Imps.	130,000
72-04-001	Kent Co. Intersection Imps.	340,000
72-08-001	U.S. Rt. 13, Safety Imps. (Llangollen)	700,000
72-01-001	Lancaster Pike & Yorklyn Rd., Hockessin	120,000
-----	I-495 - Paving	5,000,000
72-09-007	Woodland Beach Rd. Stab.	220,000
73-10-013	I-495 Christina River to Edgemoor Rd., Three Structures over Sanitary Sewer	600,000
67-01-015	Rt. 14, Rehoboth Bypass	4,600,000
73-10-014	I-495, Christina River to Edgemoor Rd., 12th St. over I-495 Struct. & 12th St. over Penn Central Railroad Struct.	2,000,000
72-10-009	Moore's Lane - Del. Rt. 9 to Landers Lane	1,000,000
71-05-004	Rt. 113 - Frederica to Little Heaven	1,500,000
72-08-002	I-495 at Manor Ave. - Pedestrian Overpass	220,000
72-11-004	U.S. 13 Safety Imps. - Smyrna to Tybouts Corner	1,000,000
71-11-006	Ott's Chapel Rd. - Elkton Rd. to I-95	5,900,000
72-12-006	Ott's Chapel Rd. - I-95 to Old Baltimore Pike	200,000
69-02-003	Prices Corner - Phase III	4,000,000
73-11-004	Drainage in Sussex Co. - Columbia Avenue	300,000
74-03-005	Pedestrian Overpass at Knollwood	225,000
71-10-001	3rd Street Bridge	4,750,000
74-04-003	Indian River Inlet Bridge	2,500,000
74-03-008	Marrows Road Bridge	1,200,000
74-03-007	Drainage & Improvements - Claymont & Hollyoak Sts.	723,000
74-03-007	Drainage & Improvements - N.C. Co., Pennsylvania Ave.	100,000
73-11-003	Upper Marsh Road - 1 block between Naamans & Zebley	60,000
65-11-003	Swanwyck Connector	500,000
-----	Church Street (Bridgeville)	50,000
74-01-004	New Road (Elsmere)	100,000
73-08-013	Relocation of Rd. 107 at U.S. 113	100,000

It is the responsibility of the section to insure that all the above projects, where appropriate, meet the requirements of the U.S. Department of Transportation, Federal Highway Administration.

MANAGEMENT SYSTEMS

The Highway Maintenance Management Program is on-line and producing monthly reports that are being analyzed at the Districts and Maintenance Headquarters. To complement the program, the FHWA management training series, "Managing Highway Maintenance" is being given to the management level personnel. Maintenance Work Standards have been developed and in conjunction with a closer field monitor, the fruition of the program is being evidenced.

An Equipment Maintenance Management Program is coincidentally under development. The reporting system has been implemented and the system design and programming should be completed by the end of 1974.

ROADSIDE CONTROL

Receipts for fiscal year 1974 were as follows:

Outdoor Advertising Sign Permits	\$15,758.00
Junkyard Licenses	1,050.00
TOTAL	\$16,808.00

With the appropriation of funds for the implementation of the Sign Removal Program, we were able to complete the survey of all primary routes in Kent and Sussex Counties and approximately 75 percent of New Castle County.

Two junkyard operators in Sussex County were convicted for violation of the Delaware Code, Title 17, Chapter 12. These operators are now in compliance with the law. At present, we have a case in Kent County which is pending in court. Due to

the lack of funds and personnel, additional warrants or surveillances have not been initiated.

The Abandoned Vehicle Program is limited to the persons who request that a vehicle be removed from their premises. In turn, a licensed salvage yard operator is contacted to proceed with the removal operation.

SUBDIVISION ZONING & DESIGN

This year there were 130 land use plans reviewed and 116 land use plans approved covering 3,593 acres and including 8,390 living units. Forty-seven Performance Bonds, representing 10% of estimated construction costs, were received and approved. These Bonds covered 16.918 miles of roadwork totaling \$265,058.00 which represents the 10% amount held by the Department until the streets have been completed to specifications. Four Voluntary Completion Bonds in the amount of \$31,035.00 representing 150% of the uncompleted construction costs were received and approved. There were 16.051 miles of subdivision streets accepted into the state maintenance system. In addition to these accomplishments, numerous meetings were attended coordinating with other governmental agencies, consultants, developers, contractors and the public.

The past year has been a very prosperous year for land development which directly reflects good coordination and higher standards. The Subdivision Zoning & Design Section is striving every year to improve the suburban development standards, and improve coordination so that we may better serve the needs of the public with respect to intra and inter-state travel.

HAULING PERMITS

COUNTY	NO. OF PERMITS	NO. OF BLOCK VALIDATIONS	VALUE	BLOCK RECEIPTS	TOTAL VALUE
New Castle	1,424	-----	\$ 8,271.88	-----	\$ 8,271.88
Sussex	1,232	-----	6,929.17	-----	6,929.17
Kent	22,303	12,697	69,311.13	\$ 63,199.40	132,510.53
TOTALS	24,959	12,697	\$ 84,512.18	\$ 63,199.40	\$ 147,711.58

SUMMARY OF RECEIPTS

Total Value -----	\$ 147,711.58
Transferred to Accounts Receivable -----	60,276.49
Daily Deposits -----	87,430.09
Received on Account -----	60,425.03
Overpayments -----	-----
TOTAL DEPOSITS -----	\$ 147,855.12

BREAKDOWN BY TYPE OF PERMIT

7,983 Heavy Hauls
10,224 Mobile Homes
503 Piling (30-day)
22 Piling (Trip)
283 Buildings
753 Boats
4,421 Construction Equipment (Private)
712 Construction Equipment (Government)
1 Construction Equipment (Highway)
57 Void
24,959 TOTAL

RIGHT OF WAY

During fiscal year 1974 the Relocation Section gave assistance to 41 families, businesses and organizations displaced by highway construction.

Total Right of Way expenditures for the year were \$3,141,045.09. Relocation payments accounted for \$120,440.73 of the total expenditures.

The Federal Relocation and Acquisitions Policies Act of 1970, implemented by state enabling legislation in May of 1972 guarantees that all property owners from whom the state acquires property will be treated equitably and will not suffer undue hardship. Persons who have to relocate must be given adequate time to relocate, and this presents many difficult and time-consuming problems.

This year \$144,707.42 revenue was received from the sale of buildings, land, equipment and rentals of excess lands and buildings.

The Bureau of Right of Way has been performing relocation and acquisition work for the Department of Natural Resources and Environmental Control under a contract agreement.

The right-of-way was acquired for 22 miles of dirt road improvements in Sussex County and 9 miles in Kent County, all of which were placed under contract this year.

The Bureau of Right of Way was actively engaged in formulating acquisition policies and procedures necessary for the implementation of the Federal 1965 Highway Beautification Act and State Law as they relate to sign and billboard removal from State Highways. Many meetings and seminars were held by the Federal Highway Administration, which were attended by Right of Way personnel, in an effort to fully explain the program with all of its complexities.

SPECIAL ASSIGNMENTS

The rewriting of the 1970 Standard Specifications for Road and Bridge construction was started in January 1972, with the writer as chairman of the Specifications Committee. A target time of 2 years was set, and completed within that time.

The format and all basic printing was done in the Word Processing Center. This enabled us to do all proof reading and make corrections inhouse.

Bids were received October 9, 1973, and the low bid of \$5,430 for 3000 books was approximately \$4,000 under the estimate.

All books were received on December 6, 1973, and 847 were mailed or distributed by December 28, 1973. To date, 1,390 books have been issued.

Prequalification of Contractor

Until May 31, 1974, 206 contractors had prequalified to bid as prime contractors for projects advertised for the Division of Highways. These 206 contractors represented a net worth of \$7,312,237,391.00. Fifty-eight of the 206 contractors were Delaware firms with a net worth of \$40,075,102.00.

Departmental rules require that a contractor must prequalify every two years with the prequalification good until May 31, of the second year.

This year (June 17, 1974) 44 prequalifications expired on May 31, and have not been renewed.

Eleven of the 44 contractors (expired 1974) are Delaware contractors with a net worth of \$2,804,477.00.

Although Warren Brothers Company has a branch office and plant in Delaware and a net worth of \$447,675,470.00, was not considered in the number of Delaware contractors or the amount of net surplus.

Authority and Responsibility

This assignment was started in May of 1973 and consists of fixing the authority and responsibility for all categories of employees of the Department of Highways and Transportation in accordance with general guidelines of the Federal Highway Administration and is a part of their requirements. This work has progressed slowly for various reasons; writing 1974 Specifications, prequalification of contractors but mainly there were not any suitable guidelines. This is a large undertaking and will take some time to complete.

Organization Charts

In the past two months this section has endeavored to complete organization charts showing every employee of the Division of Highways. This task has progressed very well and the Bureau of Design is putting them in final form and should be done by July 12, 1974.

SUPPORT

MATERIALS & RESEARCH

The Bureau of Materials and Research maintains a laboratory with complete testing facilities in Dover at the Administration Center, as well as, a project field control office and soils testing laboratory in Wilmington to inspect, sample and test all engineering materials used in the construction of highways and bridges throughout the state. Materials and Research personnel are primarily responsible for maintaining quality control of all construction materials through a rigorous sampling, testing, and inspection program.

While most of the activities of this section were directed towards testing and quality control, numerous research projects and special studies were also undertaken. An example of this is our skid testing program. Pavement surfaces throughout the state are continually tested and evaluated with respect to slipperiness. Testing is accomplished through the use of a specially designed, highly instrumented skid test unit which enables the section to detect and monitor pavement surfaces which may be deficient in skid resistance and possibly present a safety hazard to the driving public. The accumulation and evaluation of skid test data will enable the Department to eliminate those materials from pavement surfaces that are found to be unsatisfactorily polish resistant.

In cooperation with the Federal Highway Administration, Materials and Research personnel are assisting in the development and evaluation of a special open-graded bituminous wearing surface which will be placed on U.S. Route 13 south of Dover. This special mix has been designed to improve pavement skid resistance, prevent hydroplaning and tire splash and reduce tire noise. Successful performance of this material may lead to its use throughout the state on heavily traveled roadways where such characteristics are very desirable.

Evaluation of new construction products is a continuing process with this section. With asphalt emulsions rapidly replacing the use of asphalt cut-backs in the highway construction industry, it has been necessary to evaluate the use of various emulsified asphalt products as substitutes for cut-backs. The expanding use of epoxy coating systems has necessitated investigations of performance capabilities of these materials.

The bulk of personnel effort in Fiscal Year 1974 was expended in the testing of soils, aggregates, bituminous materials, cement, concrete and paints. Other necessary functions included hot mix and concrete production inspection as well as quality control testing on active construction projects. The soils engineering staff has continued to provide Road and Bridge Design personnel with the subsurface data essential to project planning and design. Inspect, sample, test, and evaluate are the key words with personnel from Materials and Research. Field technicians, laboratory technicians and the engineering staff of Materials and Research continue to strive towards assuring the use of quality materials in the construction of Delaware highways and bridges.

SAFETY SECTION

In March of this year the reorganization of the Division of Highways resulted in removal of the Safety Section from the Bureau of Maintenance and the establishment of it as a separate section with a

complement of five men under the Assistant Chief Engineer - Support. The establishment of safety as an independent section is resulting in increased emphasis being placed on both Work Area Traffic Control and Personnel Safety. This section is also responsible for the enforcement of the Occupational Safety and Health Act (OSHA) Regulations as they pertain to highway construction and maintenance operations.

The Safety Section is presently in the process of revising the Safety Manual as well as developing and preparing training courses. These training courses will comprise material for both personnel safety and work area traffic control. The revised addition of the Safety Manual will be ready for distribution by January 1, 1974.

The primary responsibility of the Safety Section is to monitor the work area traffic control procedures being used on highway construction projects, utility projects, county and municipal projects performed on state maintained roads and streets, as well as all other work performed within the rights of way of the state's highway systems. It is also responsible for the proper signing of all Division of Highway's operations as well as the safety of all personnel performing their assigned task, whether it be in the field, shops, yards, or offices.

TRAFFIC

Reorganization

Early in September, the Bureau of Traffic instituted various changes in job assignments within the organization. It was necessary to change certain facets of our operations in order to achieve greater flexibility with the minimum staffing currently available.

Under this reorganization the positions provided for statewide supervision of signs and markings, and statewide Operations Engineer have been eliminated and a second Operations Engineer has been added.

The position of Contract Control Engineer has also been eliminated. All contract matters are handled by the two Operations Engineers.

Permanent assignments to signing and markings have been withdrawn and all activities within these areas are assigned strictly on a priority basis. Personnel are assigned among the priorities so that key operations are not hindered by sporadic absences of a few employees.

While it is recognized that this system introduces the undesirable side effect of reduced specialization and different supervisors on different days, it is necessary that we have this flexibility of operation if we are to retain any semblance of a programmed and effective operation.

Beach Routes

In the late spring of 1973, the Bureau of Traffic was instructed by the Governor to carefully study the beach routes and to attempt to develop the most practical remedial methods to relieve the severe congestion which was occurring during weekends at Smyrna, Dover, and Little Heaven.

As a result of studies, field observations and traffic counts throughout these areas, it was decided to undertake the following measures:

1. Prohibit parking on the shoulders in the area from Little Heaven to Frederica at all times and thru Smyrna on Route 13 during certain hours.
2. Signal personnel to monitor the signals at Dover and Smyrna and to be immediately available to service any signal malfunction which should occur.
3. Install additional signing and pavement markings at Frederica to alert the motorists to conditions ahead.
4. Installation of additional signalization at Little Heaven.
5. Use the arrow board truck to direct traffic into a single lane.
6. Close the three crossovers just south of Smyrna and restrict the use of the first crossover north of Town Limits by prohibiting left turns.

The implementation of these weekend activities was begun on the last weekend in June 1973 and continued through the summer.

These areas were patrolled with a crew consisting of two supervisors and seven employees until August 12th when it was decided that the situation had improved to the point where we could reduce the force to one signal man and one sign man on Friday and Saturday and two on Sunday.

It is estimated that the labor costs to perform these functions was in the excess of \$6,500.00 thru the end of August.

As a result of the abovementioned activities Smyrna and Dover no longer experience long delays. While these areas are congested and the traffic does not flow at high speeds, the traffic moves consistently and it is now unusual for an individual vehicle not to clear any signal which it must stop for on the next green.

Due to the fact that the capacity degradation is so extensive at Little Heaven, it has not responded fully

to our procedures but much improvement in the situation has been noted. When delays do occur in this area they are of much shorter duration.

The credit for much of the success of these accomplishments must go to the employees who sacrificed their weekends and summer activities to do this work.

Maryland Avenue Highway Lighting

In July of 1973, representatives of the Bureau of Traffic and the New Castle County Department of Public Works met to review the existing highway lighting system on Maryland Avenue between the Wilmington City limits and the limits of the town of Newport to determine if the most value was being obtained from the monies expended.

The upgrading of this 15 year old system was completed in November of 1973 providing more light intensity at less cost and making the area safer for pedestrians, vehicles, and public transit.

Bicycle Safety Devices

During the past few months certain individuals, groups, agencies and manufacturers have brought to our attention various types of safety devices for nighttime bicycle riding which they felt to be superior to those currently in use.

In order to determine which if any of these new devices can be adequately seen at night, it was decided to actually field test these materials during hours of darkness.

As a result of this testing effort it was concluded that while some of the devices were found to be somewhat valid, further research in this area will be necessary.

Reduction of Speed Limit

In compliance with orders issued by the Governor, the Bureau of Traffic adjusted the speed limit on all four (4) lane highways within the state to a maximum speed of 50 miles per hour.

With the exception of the Interstate where 50 MPH placques were installed to cover the existing signs all other signs produced were new facings on recycled metal.

Sign erection crews in New Castle, Kent and Sussex Counties completed the installation of more than 240 of these signs in less than 24 hours. All work involved on this project was accomplished during normal working hours.

Later, the Federal Government mandated that the speed limit on four (4) lane highways nationally to be increased to a maximum speed of 55 miles per hour.

This of course necessitated still another change in signs from 50 MPH to 55 MPH. Again our sign erection crews were able to accomplish this change in the same brief period.

Highway Lighting Reductions

A series of field reviews of all highway lighting units which are under the jurisdiction of the state was undertaken to determine if certain highway lighting installations could be removed from service without unreasonably reducing the level of safety at these locations.

Each review was based upon typical current volumes of pedestrian and vehicular traffic. Summer resort areas and any other seasonal activities will have to be reviewed on a regular basis.

All decisions were based upon actual before and after views of the individual situations. Since we have never had an extensive lighting program, we have rarely gotten above the critical level of lighting. Therefore, extensive reductions were not made.

Four Day Work Week at Sign Shop

During the month of February, the sign production employees at the Sign Shop took part in a four day work week test program.

This one month experiment was undertaken to determine if the following objectives could be obtained:

1. Production as great as during the normal 5 day week.
2. Operations be conducted with the same regard for level of safety.
3. Lost time not increased.
4. Employee morale be maintained.
5. Employees reduce consumption of energy in commuting to their job.

At the conclusion of the month all employees who took part in this program were polled as to their opinion of the new system. Each person stated that they were 100% in favor of the program and unanimously voted to continue the new system permanently.

Department approval was granted for this request and the Sign Shop has permanently converted to the four day work week.

Signal Maintenance

As a result of field observations, it was indicated that

a number of traffic signals had reached the point of presenting critical hazards, both from a physical failure, and an operational point of view.

Due to the serious need for maintenance and the uncertainty of the availability of fuel for vehicles, it was decided in January to temporarily suspend, except for contract obligations, the installation of new traffic signals for a period of 8 to 12 weeks and to utilize all signal field personnel in maintenance activities.

This program is still in operation and thus far in proving to be successful. In addition to their regular maintenance chores the signal group has averaged 8 signal overhauls per month.

Pavement Marking Problems

Prior to the beginning of the 1973-1974 painting season, a proposed pavement marking program was produced with marking installations scheduled at the following levels:

Centerlining	-	2111 miles
Edgelineing	-	1976 miles

It was recognized that a painting program consisting of approximately 4100 miles of installed markings is extremely marginal. It was a practical program which could be accomplished with a small number of personnel.

As a result of employee attrition during the season, and with no authority to hire sufficient replacements, our pavement marking crews became woefully understaffed and it was necessary to discontinue the use of one of the two paint machines.

A review of the markings installed through December 31, 1973 indicates that a total of 778 miles of centerlining and 390 miles of edgelineing was installed. This means that only a mere 29% of the scheduled work was completed.

The lack of pavement markings on many of our roadways has created dangerous conditions with a number of curves being no longer sufficiently marked and many straightaways not delineated up to standard.

Due to the lack of sufficient personnel to fully man the crews necessary to perform the scheduled pavement marking work for the 1974-75 season, it has become necessary to temporarily suspend a number of traffic signal and signing activities in order to utilize the personnel in the application of pavement markings.

It is estimated that this reallocation of manpower has reduced our signing activity in Kent and Sussex Counties by at least 25%, and 90% in New Castle.

Signal construction activities on a statewide basis have been reduced by 90%.

While it is recognized that the postponement and reduction of certain signal and signing activities will cause much heavier work loads in future months, it is necessary that these reductions in operation take place. Without them, there will be no markings program for this season.

Since it was necessary to train the signal and signing personnel in the usage of the pavement marking equipment, the results of the first 30 days of the current marking season were not quite up to the anticipated levels.

During the month of May 1974 an additional 5 employees from the labor force resigned, 4 of which were involved in the North District markings program. As a result of this action the current pavement markings situation has become severely acute.

It was necessary to disband the North District pavement marking crew on May 21st due to the lack of sufficient manpower to adequately man the crew. We are having to send South District personnel up to New Castle County to paint the detour routes and new hot mix jobs. Any semblance of a formal painting schedule has had to be abandoned.

South District pavement markings have had to be suspended temporarily while the crew is working in New Castle County and as a result have lost approximately 200 lane miles of divided highway painting in 10 working days.

Unless this situation can be reversed and sufficient manpower be obtained to adequately staff the crews the current markings program is doomed to be even more disastrous than last year's program when only 29% of the schedule was completed.

PLANNING

PROJECT PLANNING

The Action Plan has been completed, accepted and is now being implemented. The Citizens Participation Advisory Council is established to oversee the application of the Action Plan.

To insure proper input in the project planning process, individual citizen and technical (multi-disciplinary) advisory committees are being established.

The following is a list of Project Planning projects completed:

1. The N-S Extension of the Delaware Turnpike
The study to determine the recommended

alignment is complete, including numerous public meetings held in Kent and New Castle Counties.

2. Wilmington Boulevard
The study that developed revised the Old South Wilmington Connector concept. Close coordination with the city and the local community involved all ramifications.
3. Middletown Bypass
This study is completed and will soon be forwarded to Design. It involved a north-south bypass of Delaware 896 around the town.
4. Marsh-Veale-Silverside Roads Intersection
This study of a heavily used intersection in Brandywine Hundred has been completed, and will be forwarded to Design.
5. Bikeway Study
Project Planning staff have been active in the development of the Bikeway Study in conjunction with the Governor's Bicycle Task Force. The report contains recommendations in the areas of bicycle safety and legislation, and bikeway design and location. A bikeway bill has been signed by the Governor. A specific bikeway system has been recommended for construction in fiscal year 1975.

The following is a list of projects presently under study.

1. I-95, Route 40 Corridor

The Action Plan is getting an excellent test with this study. The study is evaluating all the transportation elements within this area in New Castle County as a joint study with the county. This area has been designated to receive the bulk of the additional population for New Castle County. The study will recommend specific concept and location plans for these various transportation elements in this corridor.

This study of this corridor, or subarea, is a first-of-its-kind. Information gained may well be used elsewhere in New Castle County or the State.

2. Studies for bypasses of Bridgeville and Georgetown.
These bypasses would serve as links in a east-west corridor across the State utilizing the existing Delaware 404 - Delaware 18 alignments.

3. Route 26 Corridor

Similar to the Delaware 404 - Delaware 18 corridor, this project is investigating a new link between U.S. 113 at the Dagsboro - Frankford

area across to Delaware 14 (Delaware 9) and the developing Delaware and Maryland Atlantic Coast.

4. Various studies in the Newark area.

- a. Newark Circuit Collector Road (the old Newark Ring Arterial) from Delaware 2 to Delaware 896 (New London Road). As its name suggests this link would be a two-lane collector road.
- b. Delaware Route 273 - upgrading this route from Newark over into Ogletown. Current thinking is a four-lane divided highway.
- c. Delaware Route 4 - upgrading the Ogletown to Stanton Road (new alignment in part).
- d. Pike Creek Connector - concept to be downgraded to lessen impact on the environmentally sensitive Pike Creek Valley. Project begins at Ogletown, goes north crossing Kirkwood Highway through Pike Creek Valley to tie into Delaware 7 (Limestone Road).
- e. Ogletown - this is the hub of Delaware 4, Delaware 273, Pike Creek Connector, and possibly an extension to the North-South Toll Road.

5. 12th Street Connector

This project connects 12th Street in Wilmington with I-495. It entails new alignment through a dense section of the city and an intense community involvement program will become part of the study.

6. Dover East-West Connector or Ring Road

The Department is working with the city to solve the East-West traffic problem in Dover. An alignment using the South Street corridor has been abandoned.

SAFETY PLANNING

Under the Highway Planning and Research Program, an improved version of the "Hazardous Spot Locations, 1972" book was published. Access to the Combined Highways/State Police Accident File enabled more details of each accident to appear in the book.

The "Intersection Accident Summary for 1972" was compiled by total use of electronic data processing.

Location suspected to be highly hazardous were programmed into computers to list details of accidents occurring there at. Ten such locations were investigated as a result of input from the public.

The accident printouts provided a listing of five hazardous locations with annually repeated accident experience. One involved fatalities and was immediately scheduled for design and early implementation of corrective action.

Evaluation was effected and reports were written on completed projects including seven TOPICS projects. The overall safety improvement programs of the Division of Highways was also evaluated and a report submitted to FHWA.

With the cooperation of the Computer Support Section, an intersection numbering system was developed, which was immediately applied to the new Intersection Accident Summary Book.

The 1974 Annual Work Program for the Three-plus Safety Standards provided for the continuation for photologging operations using mostly federal funds. This was widely publicized by demonstrations in three counties, TV interviews and newspaper articles. To date 4,880 miles have been photologged in both directions at a cost of approximately \$5.00 per mile. 28,000 feet of film are available for viewing.

Community groups have been viewing completed films. Engineers have been making requests for photologging certain roads and when the film was available, they studied the highway on the viewer. The convenience, speed, and economy of this method of study has become very encouraging.

When an inventory of exposed bridge parapets or faulty guard rail connections to a bridge was required, films were used to accurately locate and describe each location at a fraction of the time it took to conduct an on-site survey for roads not yet photologged.

Skid testing continued on the 1,433 miles of road that are tested yearly, to observe the deterioration of pavement friction thru traffic action. Tests were also continued on special sections on which resurfacing materials had been controlled.

The 3+ standards also funded the replacement of non-standard signs on non-federal aid roads. This fiscal year, 1,069 such signs were replaced by the Bureau of Traffic in 33 towns.

In FY 74, Highway Safety funds from federal sources enabled multilevel personnel to attend seminars and courses to keep them up to date on latest trends in their respective expertise. Thirty-two employees attended Highway Research Board Sessions.

The Safety Planning Section was designated to implement Standard 18, "Accident Investigation and Reporting". This consisted of conducting research for compiling a procedural manual, setting guidelines for an accident investigation team composed of experts from State Police, Highways, Health Services and Motor Vehicles. The manual was completed in time and has been submitted to the Governor's Representative on Highway Safety.

The Highway Safety Act of 1973 provided federal funds for implementing safety improvements under various categories. An inventory of eligible locations was conducted by accident study, considering both actual crashes and potential hazardousness. Deliberations during staff meetings and Highway Safety Committee conferences resulted in deciding upon safety improvements as follows:

Section 203, "Rail/Highway Crossings"
15 locations - \$332,000.00
Section 205, "Pavement Marking Demonstrations"
370 miles - \$18,000.00
Section 209, "High Hazard Locations"
18 locations - \$667,800.00
Section 210, "Elimination of Roadside Obstacles"
235 locations - \$521,950.00
Section 230, "Safer Roads Demonstration"
90 locations - \$504,130.00

Utility poles found to be repeatedly hit were relocated.

Trees constituting hazards were identified, but public sentiment is generally against tree removal. A publicity program informing the public of the hazards that trees present and the benefits that could be realized by replacing trees with bushes or other greenery, was decided by the Highway Safety Committee to be the first step in softening public opinion against tree cutting.

ENVIRONMENTAL STUDIES

The Environmental Studies Office began operation in March 1973. Prior to that time the functions of this Office were conducted within the Office of Planning, Research and Evaluation which became defunct. The Environmental Studies Office has become part of the Project Planning Section about six months ago but the prime responsibility remains to study and advise on the environmental impacts associated with the transportation system. In conjunction with this arrangement were made for several training films to be shown and a week long noise training school to be conducted for Department staff members by the National Highway Institute.

There have been several changes within the past year that reflect themselves in a more detailed analysis of

impacts. Air and noise pollution impacts are now assessed for both Federal and non-Federal projects. When this office was initially conceived, noise and air impacts were assessed only on the Federal projects. In the conjunction with more detailed assessments, an air pollution analysis is now required for the entire transportation system in the northern metropolitan area. The initial system analysis was made for air pollution using the Sapollot Computer Program.

In addition to environmental assessments and statements prepared, this office also was involved in the review of and contribution to certain consultant projects such as the South Wilmington Boulevard, the Delaware Turnpike Phase II Widening, The North-South Toll Road, Frederica to Woodside, the Newark Ring Arterial, etc. The final Environmental Impact Statement was submitted and approved for Ruthby Road. A report was prepared for the Middletown Bypass. The final statement for Frederica to Little Heaven will be submitted sometime in August. Follow ups on noise pollution were made for Ott's Chapel and South Chapel Street. There were about ten negative declarations prepared and submitted for safety projects, such as small bridge replacements and railroad crossing priorities.

DESIGN

REVIEW

The Review Section is responsible for the supervision of the preparation of contract plans and specifications for major highway and bridge projects prepared by Consulting Engineers for the State of Delaware. Eleven Consulting Firms were actively engaged in design projects for the fiscal year.

During the past fiscal year six projects were completed. Twenty-eight other projects are under design. Construction cost of the projects completed was 26.6 million dollars and those under design is 106.1 million dollars. A summary of projects awarded and under design are as follows:

AWARDED

71-02-009	Rt. 141, Depressed Section thru Newport Greggo & Ferrara	\$ 6,034,890.79
71-02-008	Rt. 141, Superstructure thru Newport James Julian, Inc.	10,768,346.25
73-09-001	Structures Penn Central Mainline over I-495, Edgemoor Edgemoor Rd. over I-495 Greggo & Ferrara	6,039,784.40
73-09-002	I-495 Structure I-495 over Penn Central Branch Track, Edgemoor I-495 over Shellpot Creek James Julian, Inc.	2,256,942.40

AWARDED (Cont.)

70-08-009	B&O Railroad Bridge over Rt. 2 James Julian, Inc.	\$ 1,444,993.54
72-11-005	Boring Contract, Third St. Bridge Sprague & Henwood	11,767.00
	TOTAL	\$26,556,724.38

UNDER DESIGN

Grading & Paving, Christina River to Edgemoor Road	\$ 3,700,000
I-495 Structures	2,300,000
(1) 12th St. over I-495	
(2) 12th St. over Penn. Central	
Three Structures over 84' Sanitary Sewer	700,000

ROUTE 141

69-02-003	Phase III, Prices Corner Int.	4,600,000
71-09-006	Grading & Paving, Sta. 294 to Brandywine Creek	3,900,000
71-09-007	Grading & Paving, Reading R.R. Bridge to Kennett Pike	3,100,000
71-09-008	Grading & Paving, Lancaster Pike to Reading R.R.	2,200,000
70-08-003	Brandywine Creek Bridge Superstructure	2,500,000
70-08-003	Brandywine Creek Bridge Superstructure	6,000,000
70-08-003	Grading & Paving, Brandywine Creek Bridge to Rockland Road	3,000,000

OTHER

70-06-005	Naamans Rd. - Rt. 202 to Rt. 13	
	Part 1 Rt. 13 to Cooper's Rd.	3,000,000
	2 Carpenter's Rd. to Fouik Rd.	2,000,000
	3 Fouik Rd. to Rt. 202	3,000,000
69-02-021	U.S. Rt. 13, Frederica to Penn Central	
	Part 1 U.S. 13 to Rd. 368	3,800,000
	2 Rd. 368 to Rd. 31	3,025,000
	3 Rd. 31 to U.S. 113	5,200,000
70-12-003	Newark Arterial, Ogletown to Elkton Rd.	
	Part 1 Augusta Drive to E. of Ogletown	2,200,000
	2 Del. Rt. 72 to Augusta Drive	5,500,000
	3 Rt. 896 to Rt. 72	3,000,000
	4 Rt. 12 to Rt. 896	5,300,000
67-10-015	Rehoboth Bypass	4,350,000
72-12-002	Savannah Rd. Bridge & Approaches	2,000,000
70-04-012	Lore Avenue	300,000
71-10-001	Third St. Bridge Replacement	7,500,000
69-11-002	Wilmington Blvd., I-95 to Jefferson Street	12,000,000
72-04-005	Wilmington Blvd., Jefferson Street to 4th Street	6,000,000
68-08-002	Relocated DuPont Rd.	5,000,000
74-03-007	Claymont Street	900,000

TOTAL \$106,075,000

UTILITIES

Annually hundreds of miles of utility lines-gas, water, telephone, sewer and electric are added to the thousands of miles of existing utility lines that are located within Delaware highway's rights-of-way. This year 525 additional utility franchises added 954 miles.

Coordinating the relocation and adjustments of those lines is a function of the Utility Section. This coordination is not only with the utility companies but on an interdepartmental basis as well.

The Utility Section also reviews and approves all changes, prepares costs figures, processes preliminary and final estimates and arranges for payments in cases where the Department is financially responsible. During FY 74, over \$400,000 was paid to utility companies for adjustments to their facilities on highway construction projects.

"Miss Utility" of Delmarva, a new one call concept to help eliminate utility disruptions opened officially on March 18, 1974.

The purpose of this organization is to help eliminate costly and dangerous disruptions to existing utility lines. This type of operation has been in operation in various locations in the United States for the past few years. The unit is located in Dover and is operated by several utility companies, the City of Dover and the Delaware Division of Highways. It is hoped that many more organizations will join in this operation.

The Utility Section is continuing its program for improvements to various railroad crossings. At the present time, there are 12 contracts under design for either installation of automatic flashing light protection or improvements to the crossing surface. The design and construction of these projects will be done by the railroad companies involved.

Major utility installation work is continuing on Relocated Route 141 from just east of Newport to the Brandywine River Bridge near the Dupont Experimental Station at Rising Sun. The cost of the utility installation work is approximately \$4,500,000. The utility companies will be responsible for a large portion of this cost since their utilities are located on our existing highways.

ROAD DESIGN

Road Design is responsible for in-house engineering procedures in the preparation of complete plans for contract letting: developing preliminary plan layouts, design criteria and detailed construction plans.

A total of 40 projects were under design during the past fiscal year with a combined construction cost of over thirty million dollars. These projects are located all over the state and vary in complexity from simple dirt road resurfacing to the intricacies of freeway design.

Safety and safety related projects have accounted for almost one third of all projects under design giving support to our goal of making Delaware's highways as safe as possible.

Project Under Design

Othoson Avenue	\$ 60,000
Rt. 113 - Frederica to Little Heaven	1,750,000
Indian River Inlet Bridge Approaches	253,000
Banning Place	13,000
New Castle Motor Vehicle Lane Improvements	12,000
Schoolview Drainage	200,000
Centerville Road	500,000
Wilmington Manor Gardens Drainage	40,000
Drainage Improvement - Liftwood	130,000
U.S. 13 Safety Improvements Smyrna to Tybout Corner	2,500,000
U.S. Route 40 & Del. 72 Intersection Improvements	35,000+
Stanley Manor	96,000
Intersection Improvement New Castle Ave. & Cherry Lane	350,000
Upper Marsh Road - Naamans Rd. to Zebbley Road	100,000
Moore's Lane	1,000,000
Red Mill Road (Ruthby Road)	3,357,000
Otto's Chapel Road (Elkton Road to I-95)	5,900,000
Kirkwood Highway Imp. St. James Church to Red Mill Rd.	3,000,000
Swanwyck Connector	500,000
Oak Drive - Millsboro Subdivision	160,000
R.D. & D. Project S.C.S. U.S.D.A. Del. Hwy. Critical Area Treatment	150,000
Drainage & Imp. - Hollyoak (Stockdale & Cathedral Dr.)	200,000
Red Mill Road - Darwin Drive to Kirkwood Highway	250,000
U.S. Route 13 Safety Improvements (Llangollen)	700,000
Bay Vista - Development	250,000
Concord Pike	2,000,000
Wilmington Topics	425,000
Denney's Road	220,000
Sandy Brae Development	40,000
Henderson Road - Kirkwood Highway to Road 322	150,000
Basin Road and University Avenue	22,000
Drainage Improvement Possum Park and Chapel Hill	129,000
South Chapel Street Relocated	5,000,000
South Chapel Street and Cleveland Ave. - Newark	50,000
Drainage Improvements Del. 896 and 301	25,000
Intersection Improvements - Kent County	340,000
Relocation of Rd. 107 at U.S. 113 & Barkers Landing	100,000
Columbia Avenue Drainage	320,000
New Road - Elsmere	200,000
Ruthar Drive	200,000
TOTAL	\$ 30,727,000

Projects Advertised

Delmar Streets	\$ 94,775.98
Road No. 64 - Sussex County	299,949.00
Rt. 52 - Hazlettville to Wyoming	327,984.00
Smyrna Sidewalks	10,439.71
Killens Pond State Park Entrance	55,039.00
Road 432- Mt. Pleasant to Maryland Line	235,820.00
Willow Grove Drainage	24,104.95
Rt. 896, Maryland Line to Newark	1,577,870.31
Greenbank Road	396,222.30
New Linden Hill Road - Drainage	7,626.20
TOTAL	\$ 3,029,831.45

BRIDGE

The Department awarded contracts for fifteen bridge and other structures between July 1, 1973 and June 30, 1974 with a total construction cost of \$17,098,732.65.

The Bridge Section actually prepared the complete design on thirteen projects with a dollar value of \$9,618,848.32. The remainder of the designs were prepared by consultants with review and approval by the Bridge Section.

In the report summary are included other structures such as roadway fill protection near Port Mahon, overhead sign supports and others, requiring extensive hydrological studies and structural analysis for roadway projects, (six each).

The largest single structure project was the I-495 construction in Wilmington, north of the Christina River Bridge, and the structures over Edgemoor Road and the mainline of the Penn Central Railroad.

Several small bridge replacement or maintenance projects were completed, some are still under design (16 each).

Plans are ready for more projects awaiting future funding, (11 each).

The Bridge Section continued bridge inspection and rating programs to carry out National Bridge Inventory and Inspection Program as required by the Federal Highway Administration. The inventory and operational rating for bridges of 20 feet spans or longer, including appraisal, has been completed for primary and secondary roads.

SPECIFICATIONS

The Specifications Section prepared special provisions for construction contracts involving highway and bridge construction, drainage, repairs, demolition, materials, etc. The functions of the section are allied to the design sections, and require direct contact with squad leaders of bridge and road design, and with review section engineers, to insure that items of work on contract plans are covered with respect to description, construction methods, type of materials, and payment for required work.

Contract operations must be performed within the framework of the Standard Specifications. Where new or special construction methods may be required, or where the use of new or up-dated materials need clarification, the information is directed to the contractor through the contract documents relevant to each contract.

Specifications include the contractual requirements under which the contractor shall perform the work, and contain the detailed requirements for the work to be accomplished. They complement the plans which delineate the extent and nature of the work to be done.

BRIDGE

STRUCTURAL CONTRACTS - BIDS RECEIVED **JULY 1st, 1973 - JUNE 30, 1974**

<u>Contract</u>	<u>Description</u>	<u>Cost</u>
<u>New Castle County :</u>		
73-08-007	Repair Parapet - South Wilmington Viaduct	\$ 6,105.00
70-08-009	Kirkwood Highway 0.257 Mi. at B&O R.R.	1,444,993.54
72-09-011 & 72-12-003	Rehabilitation of Br. #127 & Br. #112	69,547.50
70-10-018 & 73-08-001	Reconstruction of Br. #314 & Br. #221	28,705.34
72-11-006	I-95 - Sign #12 - Rehabilitation	17,500.00
71-02-009	Rt. 141 through Newport - Depressed Section	6,034,890.79
71-11-004	Replacement of Br. #256 - Churchman's Road	412,561.05
72-10-007 & 72-10-008	Br. #556 & Br. #522 - Deerhurst	129,825.68
72-11-005	Subsurface Exploration - Third Street Bridge	11,767.00
73-09-001	I-495 over Edgemoor Rd. & Penn Central Mainline	6,039,784.40
73-09-002	I-495 over Branch of Penn Central & Shellpot Creek	2,256,942.40
<u>Kent County</u>		
73-08-010	Overhead Sign Support Repairs - Dover Bypass	\$ 9,200.00
73-12-003	Port Mahon Stabilization	504,457.75
72-09-010	Replacement of Bridge #430A	103,754.20
<u>Sussex County</u>		
72-09-014	Bridge #242 - Seaford - Repairs	\$ 28,698.00
TOTAL		\$ 17,098,732.65

CONSTRUCTION

CONTRACTS COMPLETED AND ACCEPTED - JULY 1, 1973 THRU JUNE 30, 1974

<u>Contract No.</u>	<u>Contract Description</u>	<u>Final Cost</u>
<u>New Castle County</u>		
65-02-003	Grading, Marsh Road to Harvey Road	\$ 1,663,733.38 *
65-07-011	New Castle Avenue	843,466.24
67-08-009	Centerville Road	765,896.04
68-04-003	Rt. 9, Rd. 381 to Washington Street	1,018,853.24
68-10-018	Casho Mill Road	151,380.77
69-12-002	Apple Road Extension	455,805.80
70-04-005	Harmony Road, Phase II	1,764,048.08
70-04-008	Newark Topics Intersection	433,233.98
70-04-010	Elmhurst Area	470,510.02
70-06-009	Fennimore Bridges 391 & 392	790,812.80
70-07-002	Replacement of Bridges 401 & 402	90,933.63
70-08-004	Colonial Heights	339,833.50
70-08-008	Relocated Reading R.R. Bridge over Rt. 141	880,549.24
70-09-003	Kiamensi Road Garage	129,500.00
70-12-002	Pedestrian Bridges over US 13	157,771.59
71-02-010	Intersection Improvements	249,562.43
71-07-001	F.Y. 73, Hot Mix Resurfacing Program	337,800.46
72-02-006	Brookside Connector	46,374.71
72-03-010	Suburban Development, Brandywine Hundred	204,656.49
72-03-011	Suburban Development Improvements, New Castle	227,224.74
72-07-003	Hot Mix Resurfacing Program 1972-73	345,881.91
72-07-004	Concrete Patching Program 1972-73	236,489.78
72-07-006	Curb & Gutter Replacement Program 1972-73	72,632.28
72-09-013	Resurfacing Rts. 13 & 40	426,963.72
72-09-016	S.D. Improvements, Brandywine Hundred	98,924.59
72-09-017	Suburban Development Imp., New Castle, Mill Creek Hunds.	105,087.47
72-09-019	Canby Park Wall Replacement	30,841.24
72-10-002	Demolition of Buildings	13,822.00
73-06-006	Demolition of Buildings	19,750.00
73-08-007	Repairing of Parapets, So. Wilmington Viaduct	6,105.00
<u>Kent County</u>		
07-72-001	Dover Lane Auto Storage & Parking Imps.	\$ 22,302.00
71-07-008	Hot Mix Asph. Conc. Resurfacing Program 1972-73	186,477.17
72-07-002	Hot Mix Resurfacing Program 1972-73	255,284.00
73-07-002	So. Little Creek Rd. Sidewalk	5,775.31
73-08-014	Resurfacing Entrance to Killen's Pond	55,039.22
<u>Kent & Sussex Counties</u>		
67-08-008	Milford Bypass	\$ 5,738,706.30
<u>Sussex County</u>		
70-10-004	High Street, Seaford	\$ 323,622.38
72-02-011	Painting, Indian River Inlet Bridge	79,894.27
72-06-003	Bituminous Surface Treatment Program 1972-73	138,138.32
72-07-001	Hot Mix Resurfacing Program 1972-73	354,452.71
72-07-005	Concrete Patching Program 1972-73	88,949.55
72-09-005	Surf Avenue, Rehoboth	58,194.84
72-09-014	Bridge 242, High Street, Seaford	31,999.40
72-09-015	Woodland Ferry Repairs	32,680.69
73-01-002	Craigs Pond Dam & Bridge Replacement	48,153.45
73-02-004	Modifications to Entrances & Crossovers, Rehoboth	27,618.57
73-05-005	Woodland Ferry Slips & Dolphin Repairs	23,774.32
		\$ 19,849,507.64

*Estimated Final Cost

ACTIVE CONSTRUCTION CONTRACTS AS OF JUNE 30, 1974

<u>Contract Number</u>	<u>Contract Description</u>	<u>% Completed</u>	<u>Bid Price</u>
<u>New Castle County</u>			
65-01-004	I-495 from Penn Central R.R. to N.C. Ave.	69	\$ 16,876,227.81
67-10-012	12th St., Washington St. to Walnut St., Wilmington	98	426,153.41
67-12-001	Rt. 896, Maryland Line to Newark	2	1,577,870.31
68-08-004	Silverside Road	98	980,460.17
69-02-001	Prices Corner Interchange, Phase I	98	3,890,000.00
69-02-002	Prices Corner Interchange, Phase II	65	3,879,895.14
69-06-006	I-495 Grading & Paving	90	11,907,352.08
70-06-003	I-495 Grading, Stabilization & Drainage	93	11,934,361.25
70-08-009	Kirkwood Highway	4	1,444,993.54
70-10-001	11th St., Adams St. to Jefferson St., Wilmington	98	238,945.70
70-10-011	Kirkwood Hwy., Possum Park Rd. to Red Mill Rd.	98	328,710.70
70-10-018	Reconstruction of Bridges 314 & 221	54	28,705.34
71-02-007	Relocated Rt. 141 thru Newport, Substructure	81	4,399,884.15
71-02-009	Relocated Rt. 141 thru Newport	2	6,034,890.79
71-05-003	I-495 from New Castle Ave. to Christina River	98	3,156,652.30
71-05-007	Christina River Bridge, Superstructure	93	9,155,623.50
71-09-005	Kennett Pike Relocation	23	2,967,924.74
71-11-004	Churchman's Road Bridge 256	0	412,561.05
72-09-011	Rehabilitation Bridges 127 & 112, N.C.	5	69,547.50
72-09-018	Greenbank Road, New Castle	0	396,222.30
72-10-007	Bridges 556 & 522, Deerhurst	1	129,825.68
72-11-005	Subsurface Exploration, Third St. Bridge	0	11,767.00
72-11-006	Rehabilitation Overhead Sign on I-95	0	17,500.00
73-05-009	Bituminous Surface Treatment Program 1973-74	0	104,237.92
73-08-004	Hot Mix Asphaltic Conc. Resurf. Program 1973-74	64	332,373.50
73-08-009	Minor Repairs to Bridge 685	94	5,600.00
73-09-001	I-495 over Edgemoor Rd. & P.C.T. Railroad Mainline	0	6,039,784.40
73-09-002	I-495 over Edgemoor Branch of P.C.T. Co. & Shellpot Creek	0	2,256,942.40
73-11-008	Rd. 432, Mt. Pleasant to Maryland Line	0	235,819.52
73-11-013	Improvements, Brandywine Hundred	33	194,933.45
73-11-014	Improvements to Developments, New Castle	29	188,890.25
73-12-002	New Linden Hill Road Drainage	0	7,626.20
74-02-005	Relocating Fire Hydrants. So. Chapel St. Ext.	10	2,940.00
<u>Kent County</u>			
70-10-005	Safety Imprvs., US 13, Rt. 10 to Coopers Corner	75	\$ 919,912.41
71-11-007	Hazletville to Wyoming	68	327,984.24
72-02-003	Camden & Webbs Lane Connector	95	434,646.19
72-09-010	Bridge 430A on Road 430	10	103,754.22
73-04-002	Improvements to Kent County Roads	11	338,190.82
73-05-011	Bituminous Surface Treatment Program 1973-74	0	140,684.60
73-08-005	Hot Mix Asphaltic Conc. Resurf. Program 1973-74	0	245,060.25
73-08-011	Smyrna Sidewalk, Main St. to State Hospital	94	10,439.71
73-10-002	Rehabilitation & Protection Bridge 12B, Leipsic	1	13,650.00
73-11-015	Improvements to Developments, Kent	20	41,870.00
73-12-003	Port Mahon Stabilization	1	504,457.75
74-02-003	Willow Grove Drainage	0	24,104.95
<u>Sussex County</u>			
68-03-001	Rt. 14, Rt. 16 to Milford Bypass	74	\$ 4,837,508.88
71-03-007	Delmar Streets	40	94,775.98
73-04-003	Improvements to Sussex County Roads	22	378,751.03
73-05-010	Bituminous Surface Treatment Program 1973-74	0	142,967.87
73-08-006	Hot Mix Asphaltic Conc. Resurf. Program 1973-74	74	237,022.16
73-11-007	Co. Rd. 64 from Co. Rd. 26 to Co. Rd. 62	28	299,949.00
73-11-016	Improvements to Developments, Sussex	0	58,032.00
74-04-004	Improvements to Sussex Roads	0	314,810.60

TOTAL Bid Price All Active Construction Contracts

\$ 99,103,824.76

MAINTENANCE

During the past year, the Bureau of Maintenance has been reorganized and no longer directly responsible for either equipment or road maintenance. Organized as a staff section reporting to the Assistant Chief Engineer for Operations, the Bureau acts in an advisory capacity in all matters pertaining to maintenance.

The prime areas for which the Bureau of Maintenance is directly responsible are: Roadside Development, to include the Smyrna Safety Rest Area, procurement of new and surplus vehicles and equipment, inventory control of maintenance assets (statewide), contract preparation for maintenance projects and material needs and management of the Statewide Component Repair Shop.

Maintenance employees have been attending classes, in conjunction with the continuing program of implementing of Highway Maintenance System. The intent of this program is to improve skills of supervisory personnel in various phases of maintenance management, such as, organizing, planning, and controlling operations. Weekly tests were given to supervisors and records of those individuals were compiled and reviewed.

Maintenance forces have been improving dirt roads, in a progression that is aimed at keeping pace with the rapid development along our secondary road system. As development takes place, increased maintenance services are required. The dirt road improvements include, reshaping the roadside ditches, widening the road, installing entrance pipes, adding sections to crossroad pipes, cleaning out lateral ditches and hauling borrow to build up low sections.

A manpower shortage in all Districts has greatly hampered the effectiveness of the overall maintenance force.

Outdated equipment and higher costs of material has further complicated this perplexing situation.

The replacement of uneconomically repairable and obsolete equipment, which accounts for well over 50% of the maintenance fleet, was accelerated to an acceptable level during the past year. Funds were available to finance the purchase of over \$1,350,000 worth of vehicles and equipment.

By continued support of the update program, the present inefficient/unreliable maintenance fleet will be replaced within a few years. The resultant fleet will greatly assist the Department in meeting and maintaining the standards expected by the public.

DIVISION OF TRANSPORTATION

TRANSPORTATION PLANNING

The second of three reports describing the role of mass transit in the overall transportation picture for the Wilmington Metropolitan Area was received and approved by the Urban Mass Transportation Administration (UMTA) in fiscal year 1974. The report, entitled "Short-Range Transit Improvements Program," describes in detail the recommended proposals developed by DART, the Division of Transportation, and the Governor's Transit Task Force to expand DART's service over the next five years. The major recommendations included in this report were: new transit routes, improvements to service on existing routes, the purchase of new buses, the construction of passenger shelters and Park-N-Ride, and the initiation of bus service to Dover.

As soon as UMTA's approval was received, design work to implement the recommendation was begun. Completed during fiscal 1974 was the design and location of almost 60 shelters and eight Park-N-Ride facilities, new routings, and a route design and cost estimate for service within the Dover Metropolitan Area. Working with the Kent County Levy Court, the Division succeeded in obtaining the Secretary's approval to initiate a Kent County Transit Authority. Efforts by the Division continued throughout fiscal 1974 to seek the City of Dover's concurrence with the authority.

The Division also actively participated in an advisory capacity to both Kent County and the City of Dover in the planning and implementation of both governments' Demand-Responsive transit services for senior citizens. Both systems became fully operational during fiscal 1974.

In conjunction with the Division of Highways, work continued on the development of a Unified 1995 transportation plan for New Castle County. The plan will include both highways and mass transit. In anticipation of the long-range plan, the Division, during fiscal 1974, joined in the Urban Corridor study project for New Castle County.

Necessary to the Urban Corridor participation was the complete realignment of a proposed 17 mile long Rapid Transit System to serve the expected population densities in the Corridor.

During the latter part of fiscal 1974, work was begun on a long range multi-modal systems plan to coordinate rail, transit, and toll facilities within the state.

DART

The Delaware Authority for Regional Transit (DART) increased its ridership for the fifth straight year during fiscal 1974. A total of 350,000 more riders were carried on DART buses than during fiscal 1973. Total ridership on the DART system throughout fiscal 1974 reached 5,600,000, the highest ever since public ownership and the highest since 1966. This climb in ridership represents a percentage increase of almost 6% or an increase of approximately three times the national experience for annual ridership increases on other systems.

Ridership the previous four fiscal years increased by approximately 5% annually. Last fiscal year's additional increase of 1% over normal was largely attributable to the surge in ridership during the fuel shortage. By and large, DART has continued to retain those riders who began using DART during the crisis. By purchasing 20 used transit buses well before the fuel crisis crested, DART was able to cope with the surge in ridership throughout and following the fuel shortage.

Also during fiscal 1974, DART updated and revised the complete system schedule. The new run designs, together with the additional vehicles, increased DART's level of service to the public by 31%.

During the fiscal 1974, DART provided increased service to senior citizens through three new programs. In addition to DART's ongoing Senior Citizen Fare program, the authority was active in promoting the use of DART to serve the Title VII Nutrition in Wilmington; contracting with the Town of Elsmere to provide free transportation to the town's senior citizens, with the town underwriting the cost of the service; and, the Wilmington to Rehoboth Beach Bus.

The Beach Bus was a successful innovation for Delaware. It marked the first time that the publicly-owned authority operated regularly scheduled weekend buses from virtually one end of the state to the other. Although not established to exclusively serve the elderly the Beach Bus route was designed to load and unload at or near senior citizen centers where possible.

Progress also moved sharply ahead on the Division's Amended Grant Application for DART. Approval of the Amended Grant Application was received April 2 from the Urban Mass Transportation Administration. The Amended Grant request, which will provide DART with a new operations center, and related shop and office equipment, is for 1.6 million; \$.3 million of which includes state matching funds (Federal participation 80% - State 20%).

The Division also prepared the preliminary and final applications for another UMTA Capital Grant with the final submission June 3. This request is for 45 transit buses and 3 minibuses, service vehicles,

communications systems and other transit related equipment to supplement the existing DART system. The Grant Application is for \$3.7 million dollars with federal participation (80%) \$3 million and state participation (20%) \$.7 million. Approval of the Grant Application should be sometime in August of this year.

Even with the encouraging increases in ridership, DART still operated at a deficit of \$664,800 in fiscal 1974. Double-digit inflation, higher labor costs, and the emergency refurbishing of the Wilson Lines garage, exacerbated this increase beyond the \$564,813 deficit experienced during fiscal 1973. The deficit was made up by appropriations of \$350,000 from the State; \$220,000 from New Castle County, and \$93,920 from the City of Wilmington. An additional \$279,000 was appropriated by the State to repay a loan that was necessary during fiscal 1974.

TRI-STATE EMERGENCY BOARD

Fiscal 1974 saw the successful completion of the Division's efforts to re-open the Summit Rail Bridge after a ship collision completely shut down all rail traffic to the north. The Division not only provided staff assistance during the emergency but represented the Department at all of the Board's meetings. The Division supplied technical expertise to various Delmarva industries to enable them to find alternative transportation resources throughout the emergency.

FUEL CRISIS

The state's fuel crisis in fiscal 1974 triggered the Division's crisis contingency plans drawn up during the previous fiscal year with the cooperation of the Delaware Energy Emergency Board, a study group formed to evaluate the effects of a crisis on Delaware.

The Division's contingencies, which automatically became operational last January, included a beefed-up bus fleet, car pool advisories, fuel availability for DART, decreased staff travel, and contingency means for moving large numbers of people and goods if it became necessary. Because of the brief period of fuel shortfall not all contingencies came into effect. In this regard, the Division is continuing to keep its plans updated for the coming fiscal year.

RAIL OPERATIONS

Throughout fiscal 1974, the Division of Transportation, working closely with the Delmarva Advisory Council, the Interstate Commerce Commission, and the states of Maryland and Virginia, postponed, indefinitely, any rail abandonments by the bankrupt Penn Central Railroad.

The Division has acted as the primary staff for the Secretary's office in the state's dealings with the entire northeast railroad situation. Working in

conjunction with the Governor's office and the office of the Attorney General, the Division has prepared several depositions for Congress and other federal bodies.

In mid-May, the Division sponsored a day-long rail services planning session, attended by representatives from the United States Railroad Administration, the U.S. Department of Transportation, Maryland Department of Transportation, the Virginia Port Authority, Delaware Department of Labor, the State Department of Community Affairs and Economic Development, and the Governor's Office.

Efforts to encourage the continuation of commuter rail service in the Wilmington to Philadelphia corridor were actively pursued in fiscal 1974. At the present time, more than 1,000 persons commute to work each day between Wilmington and Philadelphia. Close cooperation has been maintained with SEPTA and the Penn Central in the matter. SEPTA has threatened to discontinue the service if some of the deficits of the service are not picked up by the state.

PORT OPERATIONS

During the latter part of fiscal 1974, the Division of Transportation, in keeping with its growing multi-modal philosophy, became deeply involved in the Governor's Port of Wilmington Study Commission staff. Working alongside staff representatives from the public, the port, the university, and industry, all efforts were aimed at determining the full development potential for the port, not only as an important trade center, but also as a major intermodal goods movement node. The study, which is expected to be completed early in the coming fiscal year, will attempt to recommend an optional array of revenue-intensive commodity throughputs, an institutional structure conducive to increased productivity, and an investment program designed to realize the potential of the port. The study involves no federal funds.

Further, it is managed and staffed entirely with in-state resource people and funded by state, New Castle County, and Wilmington governmental contributions.

AVIATION SECTION

In the 1974 fiscal year the programs of planning, design and education were continued by the Aviation Section of the Division of Transportation. A new program of assisting the state's political subdivisions in securing adequate scheduled air commuter passenger and cargo service was initiated. Highlights of these programs are individually described below.

Scheduled Air Commuter Passenger and Cargo Service

The Division of Transportation assisted Air Exec, Inc.

of Ocean City, Maryland in establishing scheduled air commuter passenger and cargo service for Kent and Sussex Counties. Air Exec, a privately owned company, began scheduled service during the fiscal year from the Sussex County Airport, Georgetown, Delaware and the Delaware Airpark, Cheswold, Delaware to Philadelphia, Pennsylvania, Baltimore, Maryland, and Washington, D.C. The Sussex County Council and Diamond Aviation, Inc. were instrumental in assuring the establishment of these needed public services at Georgetown and Cheswold, respectively.

In cooperation with the Kent County Levy Court, the Division has been negotiating with nine private companies interested in providing scheduled air commuter passenger and cargo service for Kent County. This proposed service would originate from the Kent County civilian airport facilities planned for Dover Air Force Base, Dover, Delaware. These facilities are scheduled for construction during the 1975 fiscal year.

Aviation Planning and Design

Work continued during the fiscal year on the preparation of the State of Delaware Aviation and Airport System Plan. This study, which began in December 1972 with the financial assistance of the Federal Aviation Administration, consists of the following planning work elements: (1) Study Organization; (2) Airport and Aviation Inventories; (3) Airfield Capacity Analysis; (4) Forecast of Aviation Demand; (5) Preliminary Alternative Systems Planning; and (6) Final Aviation and Airport System Plan Selection. When completed the plan will detail the needed airport development required in Delaware through 1995 and suggest other aviation related programs that should be established for public benefit, convenience and safety.

Acting as project manager for the Kent County Levy Court, the Division filed a grant application for \$8,000 with the Federal Aviation Administration (FAA) to prepare an airport master plan for the proposed Kent County civilian airport facilities at Dover Air Force Base. FAA approval of the planning project was secured in December 1973. The master plan, detailing the proposed airport development through 1995, was completed in April 1974. The Division has subsequently completed and filed with the FAA a request for airport development aid in the amount of \$306,240. If approved by the FAA, these federal funds will be matched by Kent County Levy Court funds of \$274,920 to be used in constructing the initial development phase of the Kent County civilian airport facilities at Dover Air Force Base.

In February 1974 the Division received a grant offer of \$17,033 from the FAA to prepare the Rehoboth Beach, Delaware Area Airport Site Selection and Master Plan Study. Work on this planning project to

select an adequate public use, public owned airport site to serve eastern Sussex County began in May 1974. Local representatives of the Rehoboth Beach Chamber of Commerce, the City of Rehoboth Beach, and the Sussex County Council are assisting the Division with this planning study.

The Division provided technical assistance to the Sussex County Council with airport operations and planning at the Sussex County Airport.

Aviation Education

For the second consecutive year the Division participated with the National Association of State Aviation Officials (NASAO) in sponsoring the "Delta Dart" program at seventeen public schools throughout Delaware. Through the "Delta Dart" program, students of all age levels are able to learn more about how aircraft fly.

Assistance was continued by the Division to the Southern Branch of the Delaware Technical and Community College with its aviation ground school.

Specialized Transportation Services

With the passage of SB330, in fiscal 1974, the Division of Transportation became responsible for the planning and eventual implementation of a transportation system to serve the mentally, physically, and economically handicapped. To help meet this mandate, the Division applied for federal funds, shortly after passage of the Bill on May 4, with which to complete a technical study.

OFFICE OF ADMINISTRATION

PERSONNEL

EMPLOYMENT

A total of 1,281 employees were on the active payroll on June 30, 1974, as opposed to 1,322 employees on July 1, 1973. Employment was primarily confined to maintenance personnel who are responsible for basic day to day upkeep of the state's road system. The hiring freeze was closely adhered to in all but critical areas of the Department. An overall loss of 41 employees resulted from strict compliance with the freeze.

Separations included 92 resignations, 13 dismissals, 33 retirements, 57 leaves of absence (mostly medical), four deaths and five transfers out. Accessions included 100 new hires, 46 leaves of absence, nine transfers in and eight reinstatements. Separations averaged 17 per month and accessions averaged 13.6. The median employee count for the year was 1,302.

Minority employment was again stressed in accordance with the Department's Equal Employment and Affirmative Action Programs. Unfortunately, the Public Service Careers Program and the Neighborhood Youth Program were both discontinued due to cut-off of federal funds. These programs had been very successful in the employment and retention of members of the minority communities. The Department remains active in the Emergency Employment Program and maintains close contact with the State Personnel Office and State Human Relations Commission to further effect established Affirmative Action goals.

The Department has recently entered into an agreement with the Division of Adult Corrections to obtain the services of inmate labor through participation in the Work Referral and Work Release Programs.

EMPLOYEE AND LABOR RELATIONS

Negotiations were successfully concluded with Locals 837, 879, 1026 and 1443 of the State, County and Municipal Workers Union (A.F.L. - C.I.O.). Agreements were ratified and signed with the four Locals. Grievances were held to a minimum largely by means of a high and continued level of communications with the Union. No arbitration cases were required during the past year.

The United Fund Drive resulted in the highest amount of contributions yet pledged by Department personnel. The Blood Bank membership and Blue Cross/Blue Shield participation rate were also increased. Participation in the High Risk Factor screening provided by the Heart Association was unusually high. Slightly over 100 employees took advantage of the revised Tuition Reimbursement Program to further their formal education.

No employee position reallocations or reclassifications were accomplished as a result of restrictions in the F.Y. 1974 Budget Appropriations Act. Double increment wage and salary increases for outstanding performance were also completely restricted. Promotions were held to a minimum and were awarded only to employees filling permanent vacancies created by attrition. Effective employee relations were hampered by these limitations and restrictions.

RECRUITING

Six civil engineers completed the Engineering Training Program and were given permanent assignments within the Department. During F.Y. 1974, engineering turnover was high with 14 resignations. In the same period, only three engineers

were recruited. Visits were made to the University of Delaware, Delaware State College, Virginia State University of Delaware, Delaware State College, Virginia State University, Widener College, the University of West Virginia and Northeastern University. Competition for civil engineers is extremely high as evidenced by the fact that a total of 23 offers were made--with only three acceptances. The college recruiting program was established in line with the Department's policy of accomplishing more in-house work and relying less on outside consultants.

TRAINING

Two oral and written communication seminars for upper management were held in separate eight week sessions. A Safety and Driver's Education course was held in all Districts and made available to all employees. District Engineers and Maintenance Engineers attended a Sanitary Landfill Operations seminar and a course in Engineering Application in Highways and Traffic Operations. A Maintenance Management seminar, a non-engineer construction school, a Portland Cement seminar, a Bridge seminar, a Noise seminar, a Human Factors symposium and a Management and Labor Relations seminar rounded out the formal training programs for the year. Informal training classes were also held on the proposed Merit Rule revisions, the new labor contracts and the Budget Act of 1974.

FINANCE

Refinements were made in the computerized Highway Accounting System. The single input system instituted in Fiscal Year 1973 was changed to a daily extract for the State Accounting System thereby speeding up the flow of documents. A major revision of the Payroll Distribution System is 90% complete.

Approximately \$23 million in cash was received from the Federal Government from billings through the Federal Aid Claim. Detailed financial statements are included in this report.

FEDERAL-AID AND AUDIT

During fiscal year 1974 a considerable number of Final Reimbursement Vouchers were submitted to the Federal Highway Administration. These vouchers claimed a substantial amount of dollars as the Federal share of the projects costs.

The External Audit function encountered difficulty in attempting to overcome a heavy backlog of final billings from railroads, utility companies, and consulting engineers, which had accumulated in an earlier period when audit activity was either sporadic or inactive. This difficulty is further complicated

because of inadequate manpower in the audit area and increased audit responsibility.

The External Audit function has completed several in-house reviews as part of its monitoring procedure for partial payments to railroads, utility companies, and consulting engineering firms.

COMPUTER SUPPORT

The Computer Support Section has continued data processing assistance to the Engineering and other non-financial sections of the Department.

We have developed the capability and are performing virtually all systems network planning support in-house, which was formerly contracted to an out-of-state consultant. Savings may approach 50% of former costs.

New and more efficient programs have been developed and installed which assist the engineering staff in the Bridge and Road Design, and Materials Section. The Maintenance Management System has been streamlined by consolidating files, cutting passes required for report generation, and improving report content.

At the beginning of July 1974, Central Data Processing upgraded the "Batch" 360/40 computer which Computer Support uses for O.S. processing. The increased core available will allow the Department to operate new federally sponsored systems, including: 1) "RDS" - the Roadway Design System - which is a sophisticated geometry and earthwork system, 2) "UGS" - or Urban Cogo - which is a powerful planning tool used to store, operate on, and retrieve planning data in areal or linear form, and 3) a multi-project CPM system which can assist Department management at all levels in monitoring progress in preconstruction or construction projects.

The Section will be obtaining a rental tape-drive plotter replacement for our former card input machine. The new machine will be faster, cheaper, easier to operate, more widespread, and more reliable than our previous card machine.

The Section has participated in several training courses over the past year including a Roadway Design System workshop seminar in Charleston, West Virginia; a HEEP (Highway Engineers Exchange Program) Area I conference in Providence, Rhode Island; and an Urban Transportation Planning battery workshop in Baltimore.

The Section is starting the current fiscal year with two vacancies in its staff - an engineer, and a programmer trainee. We hope to be able to recruit two well trained people to fill these vacancies.

SCHEDULE A-1

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
COMPARATIVE STATEMENT OF TOTAL FUNDS AVAILABLE, EXPENDITURES AND UNEXPENDED BALANCES-
ALL FUNDS
FOR THE YEARS ENDED JUNE 30, 1974 & 1973

	<u>YEAR ENDED JUNE 30</u>		<u>INCREASE/ (DECREASE)</u>
	<u>1974</u>	<u>1973</u>	
Funds Available	\$ 114,982,820.82	\$ 100,332,960.85	\$ 14,649,859.97
Expenditures	<u>70,811,889.57</u>	<u>62,863,310.11</u>	<u>7,948,579.46</u>
Unexpended Balances	44,170,931.25	37,469,650.74	6,701,280.51

DISPOSITION OF UNEXPENDED BALANCES

	<u>YEAR ENDED JUNE 30</u>		<u>INCREASE/ (DECREASE)</u>
	<u>1974</u>	<u>1973</u>	
Continuing	\$ 36,501,247.58	\$ 31,112,770.52	\$ 5,388,477.06
Encumbered	7,449,606.01	5,939,139.45	1,510,466.56
Reverted	<u>220,077.66</u>	<u>417,740.77</u>	<u>(197,663.11)</u>
Unexpended Balances	44,170,931.25	37,469,650.74	6,701,280.51

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
CONDENSED STATEMENT OF APPROPRIATIONS, TRANSFERS, AVAILABLE FUNDS,
EXPENDITURES AND UNEXPENDED BALANCES - ALL FUNDS
FOR YEAR ENDED JUNE 30, 1974

	CONTINUING BALANCES JUNE 30, 1974	ENCUMBERED BALANCES JUNE 30, 1973	ORIGINAL APPROPRIATIONS AUTHORIZATIONS	SUPPLEMENTAL APPROPRIATIONS	REVENUE	TRANSFERS
GENERAL FUNDS						
Office of Secretary 55-01		\$ 1,637.98	\$ 108,196.00			
Office of Administration 55-02		3,849.92	348,182.00			\$ 6,478.31
Division of Highways 55-04	\$ 8,500.00	588,934.00	27,677,304.00	\$ 44,505.86		566,281.33
Division of Transportation 55-06	70.75	833.73	399,723.00	433,000.00		3,392.30
TOTAL-GENERAL FUNDS	\$ 8,570.75	\$ 595,255.63	\$ 28,533,405.00	\$ 477,505.86		\$ 576,151.94
SPECIAL FUNDS						
Construction Funds						
FUND 10 U.S. Grant-Federal Aid	\$ 96,987.00					
11 U.S. Grant- Advance Right of Way		\$ 12,300.00				
40 Highway Improvements 1959	562,522.56	2,590.09			\$ 3,781,728.98	
41 Hard Surfacing Dirt Roads 1955	1,461.01					
42 Highway Construction Fund 1961	730,264.72	5,988.54			2,105,438.51	
43 Highway Construction Fund 1964	1,059,241.51	448,578.76			8,493,705.20	
44 Garrison's Pond Dam	3,175.23					
45 Delaware River & Bay Authority						
46 Capital Improvements 1966	73,382.60	119,719.63			124,872.34	
47 Capital Improvements 1967	1,867,493.93	602,393.05			350,485.63	
48 Capital Improvements 1968	2,309,981.09	400,722.20			943,259.26	
49 Capital Improvements 1969	4,202,542.83	445,138.45			605,008.30	
51 Special Construction Funds	12,468.57	19,805.01				
52 Capital Improvements 1970	2,441,123.78	414,030.53			470,986.79	
53 Capital Improvements 1971	1,839,547.79	555,436.47			866,909.86	
72 Capital Improvements 1972	3,266,177.50	895,029.67			668,936.79	
73 Capital Improvements 1973	12,474,833.73	1,447,673.19			4,156,390.11	
74 Capital Improvements 1974			\$ 25,540,000.00		103,320.25	
TOTAL-SPECIAL FUNDS	\$ 30,945,103.85	\$ 5,370,405.54	\$ 25,540,000.00		\$ 22,672,042.02	
OTHER SPECIAL FUNDS						
FUND 10 U.S. Grant-National	\$ 8,471.32	\$ 28.00				
11 Transportation Needs Study				\$ 75,000.00		
12 Emergency Employment Act						
12 Federal Aviation Adm. Grant	2,416.00				\$ 35,070.01	
80 Liquidated Damages					3,222.00	
81 Fire Loss Damage					10,884.95	
86 Escrow Account	91,204.27				52,117.93	
86 Sussex County Motor Pool	28.45	2,891.46				
88 Traffic Planning	56,976.13	19,831.80			62,669.91	
TOTAL-OTHER SPECIAL FUNDS	\$ 159,096.17	\$ 22,751.26		\$ 75,000.00	\$ 163,964.80	
TOTAL ALL SPECIAL FUNDS	\$ 31,104,200.02	\$ 5,393,156.85	\$ 25,540,000.00	\$ 75,000.00	\$ 22,836,006.82	
TOTAL ALL FUNDS	\$ 31,112,770.77	\$ 5,988,412.48	\$ 54,073,405.00	\$ 552,505.86	\$ 22,836,006.82	\$ 576,151.94

EXHIBIT A

OTHER TRANSACTIONS	TOTAL AVAILABLE FUNDS	EXPENDITURES	UNEXPENDED BALANCES	DISPOSITION OF FUNDS		
				ENCUMBERED	CONTINUING	REVERTED TO GENERAL FUND
	\$ 109,833.98	\$ 81,760.25	\$ 28,073.73	\$ 977.10		\$ 27,096.63
	358,510.23	283,145.87	75,364.36	7,416.42		67,947.94
\$ (182,973.03)	28,702,552.16	27,635,600.78	1,066,951.38	906,428.87	\$ 36,409.00	124,116.51
	837,019.53	820,358.81	16,660.72	744.14	15,000.00	916.58
\$ (182,973.03)	\$30,007,915.90	\$ 28,820,865.71	\$ 1,187,050.19	\$ 915,563.53	\$ 51,409.00	\$ 220,077.66
	\$ 96,987.00		\$ 96,987.00		\$ 96,987.00	
	16,200.00	\$ 16,200.00				
	4,346,841.63	3,928,164.93	418,676.70		418,676.70	
	1,461.01		1,461.01		1,461.01	
	2,842,691.77	2,561,941.58	280,750.19	\$ 5,033.88	275,716.31	
	10,001,525.47	8,893,720.24	1,107,805.23	828,853.00	278,952.23	
	3,175.23		3,175.23		3,175.23	
	317,974.57	54,685.65	263,288.92	99,940.36	163,348.56	
\$ 3,725.00	2,824,097.61	1,359,388.29	1,464,709.32	114,935.43	1,349,773.89	
1,000.00	3,654,962.55	2,095,160.00	1,559,802.55	165,201.73	1,394,600.82	
	5,253,689.58	2,423,165.72	2,830,523.86	252,825.74	2,577,698.12	
	32,273.58	23,610.89	8,662.69		8,662.69	
	3,326,141.10	1,703,999.22	1,622,141.88	271,618.33	1,350,523.55	
2,365.50	3,264,259.62	1,982,769.15	1,281,490.47	351,220.44	930,270.03	
2,751.23	4,832,895.19	2,957,592.59	1,875,302.60	438,235.47	1,437,067.13	
16,699.50	18,095,596.53	10,766,316.05	7,329,280.48	1,492,499.35	5,836,781.13	
	25,643,320.25	2,978,781.94	22,664,538.31	2,468,502.83	20,196,035.48	
\$ 26,541.23	\$84,554,092.69	\$ 41,745,496.25	\$ 42,808,596.44	\$ 6,488,866.56	\$35,319,729.88	
	\$ 8,499.32	\$ 7,878.97	\$ 620.35	\$ 28.00	\$ 592.35	
	75,000.00	70,253.68	4,746.32		4,746.32	
	37,486.01	28,929.40	8,556.61		8,556.61	
	3,222.00	3,120.55	101.45		101.45	
	10,884.95	9,948.00	936.95	936.95		
	143,322.20	48,523.27	94,798.93		94,798.93	
	2,919.91	2,852.88	67.03		67.03	
	139,477.84	74,020.86	65,456.98	44,210.97	21,246.01	
	\$ 420,812.23	\$ 245,527.61	\$ 175,284.62	\$ 45,175.92	\$ 130,108.70	
\$ 26,541.23	\$84,974,904.92	\$ 41,991,023.86	\$ 42,983,881.06	\$ 6,534,042.48	\$35,449,838.58	
\$ (156,431.80)	\$114,982,820.82	\$ 70,811,889.57	\$ 44,170,931.25	\$ 7,449,606.01	\$36,501,247.58	\$ 220,077.66

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
DETAILED STATEMENT OF AVAILABLE FUNDS, EXPENDITURES AND UNEXPENDED BALANCES
FOR YEAR ENDED JUNE 30, 1974

	CONTINUING BALANCES JUNE 30, 1973	ENCUMBERED BALANCES JUNE 30, 1973	ORIGINAL APPROPRIATIONS	SUPPLEMENTAL APPROPRIATIONS	REVENUE	TRANSFERS
<u>OFFICE OF SECRETARY (55-01)</u>						
Salary-Secretary			\$ 29,000.00			
Salaries Casual Seasonal			500.00			
Salaries & Wages-Employees			71,496.00			
Travel		\$ 6.50	1,200.00			
Contractual Services		1,631.48	5,000.00			
Supplies & Materials			1,000.00			
TOTAL-OFFICE OF SECRETARY		\$ 1,637.98	\$ 108,196.00			
<u>OFFICE OF ADMINISTRATION (55-02)</u>						
Salary, Chief of Administration			\$ 22,000.00			\$ 3,151.91
Salaries & Wages-Employees			253,982.00			3,326.40
Salaries-Overtime			500.00			
Personnel Services			2,500.00			
Travel			150.00			
Contractual Service		\$ 3,469.17	50,000.00			
Supplies & Materials		380.75	5,900.00			
Capital Outlay			13,150.00			
TOTAL-OFFICE OF ADMINISTRATION		\$ 3,849.92	\$ 348,182.00			\$ 6,478.31
<u>DIVISION OF HIGHWAYS (55-04)</u>						
Salary-Director			\$ 27,000.00			
Salaries & Wages			5,904,542.00			\$ (81,926.67
Salaries-Overtime			120,000.00			125,000.00
Resurfacing Contracts		\$ 52,637.29	473,000.00			
Capital Outlay		1,300.24	400,000.00			
Debt Service-Principal			12,628,050.00			
Debt Service-Interest			5,929,012.00			402,208.00
Operations	\$ 8,500.00	445,840.08	1,960,700.00			121,000.00
Lines Center & Edges		62,187.97	105,000.00			
Emergency Funds						
Highway Lighting		7,557.46	15,000.00			
Bridge Repainting						
Highway Signing			25,000.00			
Roadside Grass & Growth Control		4,058.47	90,000.00			
A.I. DuPont Sidewalk Const.		59.00				
Contingency Borrow Pits						
Overhead Walkway				\$ 25,000.00		
Traffic Signal-Cranston Hgt..				1,955.00		
Traffic Signal-Millville				4,629.00		
Traffic Signal-Bridgeville				4,825.00		
Firelights-Middletown		6,016.58				
Flashing School Lights-Rich. Pk.		25.31				
Traffic Lights-Clayton		9,084.75				
Traffic Lights-St. Matthews		166.85				
Excesses Employees				8,096.86		
TOTAL-DIVISION OF HIGHWAYS	\$ 8,500.00	\$ 588,934.00	\$ 27,677,304.00	\$ 44,505.86		\$ 566,281.33
<u>DIVISION OF TRANSPORTATION (55-06)</u>						
Salary of Director			\$ 21,000.00			\$ 3,392.30
Salaries & Wages			22,623.00			
Personal Services			1,000.00			(672.00
Travel			400.00			
Contractual Services		\$ 833.73	4,200.00			672.00
Supplies & Materials			500.00			
Contingency Dart			350,000.00			
Salary HSIHB 239 (03/15)	\$ 70.75					
Railroad Commission				\$ 15,000.00		
Dart Grant				418,000.00		
TOTAL-DIVISION OF TRANSPORTATION	\$ 70.75	\$ 833.73	\$ 399,723.00	\$ 433,000.00		\$ 3,392.30
TOTAL-GENERAL FUNDS	\$ 8,570.75	\$ 595,255.63	\$ 28,533,405.00	\$ 477,505.86		\$ 576,151.94

EXHIBIT B

OTHER TRANSACTIONS	TOTAL FUNDS AVAILABLE	EXPENDITURES	UNEXPENDED BALANCES	DISTRIBUTION OF FUNDS		
				ENCUMBERED	CONTINUING	REVERTED TO GENERAL FUND
	\$ 29,000.00	\$ 18,554.67	\$ 10,445.33			\$ 10,445.33
	500.00	434.50	65.50			65.50
	71,496.00	56,212.02	15,283.98			15,283.98
	1,206.50	801.37	405.13			405.13
	6,631.48	4,757.69	1,873.79	\$ 977.10		896.69
	1,000.00	1,000.00				
	\$ 109,833.98	\$ 81,760.25	\$ 28,073.73	\$ 977.10		\$ 27,096.63
	\$ 25,151.91	\$ 24,235.09	\$ 916.82			\$ 916.82
	257,308.40	193,900.64	63,407.76			63,407.76
	500.00	174.73	325.27			325.27
	2,500.00	3.50	2,496.50			2,496.50
	150.00	129.67	20.33			20.33
	53,469.17	50,260.12	3,209.05	\$ 2,814.26		394.79
	6,280.75	4,493.34	1,787.41	1,406.66		380.75
	13,150.00	9,948.78	3,201.22	3,195.50		5.72
	\$ 358,510.23	\$ 283,145.87	\$ 75,364.36	\$ 7,416.42		\$ 67,947.94
	\$ 27,000.00	\$ 23,400.00	\$ 3,600.00			\$ 3,600.00
	5,822,615.33	5,814,739.62	7,875.71			7,875.71
	245,000.00	238,109.59	6,890.41			6,890.41
\$ (73,000.00)	452,637.29	48,256.11	404,381.18	\$ 394,284.60		10,096.58
	401,300.24	297,783.70	103,516.54	103,199.46		317.08
	12,628,050.00	12,604,349.20	23,700.80			23,700.80
	6,331,220.00	6,331,220.00				
(109,973.03)	2,426,067.05	2,051,958.71	374,068.34	303,340.50		70,767.84
	167,187.97	96,648.73	70,539.24	70,115.25		423.99
	22,557.46	11,405.47	11,151.99	\$ 11,151.07		.92
	25,000.00	18,564.49	6,435.51	6,190.37		245.14
	94,058.47	83,812.67	10,245.80	10,047.76		198.04
	59.00	59.00				
	25,000.00		25,000.00		\$ 25,000.00	
	1,955.00		1,955.00		1,955.00	
	4,629.00		4,629.00		4,629.00	
	4,825.00		4,825.00		4,825.00	
	6,016.58	6,016.58				
	25.31	25.31				
	9,084.75	9,084.75				
	166.85	166.85				
	8,096.86		8,096.86	8,096.86		
\$ (182,973.03)	\$ 28,702,552.16	\$ 27,635,800.78	\$ 1,066,951.38	\$ 906,425.87	\$ 36,409.00	\$ 124,116.51
	\$ 24,392.30	\$ 24,392.30	\$ 556.25			\$ 556.25
	22,623.00	22,066.75	556.25			
	328.00	22.53	305.47	\$ 305.47		4.39
	400.00	395.61	4.39			258.20
	5,705.73	5,105.05	600.68	342.48		27.24
	500.00	376.57	123.43	96.19		
	350,000.00	350,000.00				
	70.75		70.75			70.75
	15,000.00		15,000.00		\$ 15,000.00	
	418,000.00	418,000.00				
	\$ 837,019.78	\$ 820,358.81	\$ 16,660.97	\$ 744.14	\$ 15,000.00	\$ 916.83
\$ (182,973.03)	\$ 30,007,916.15	\$ 28,820,865.71	\$ 1,187,050.44	\$ 915,563.53	\$ 51,409.00	\$ 220,077.91

DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
DIVISION OF HIGHWAYS
DETAILED STATEMENT OF AVAILABLE FUNDS, EXPENDITURES AND UNEXPENDED BALANCES
FOR YEAR ENDED JUNE 30, 1974 - GENERAL FUND APPROPRIATIONS

	CONTINUING BALANCES JUNE 30, 1973	ENCUMBERED BALANCES JUNE 30, 1973	ORIGINAL APPROPRIATIONS	SUPPLEMENTAL APPROPRIATIONS	REVENUE	TRANSFERS
<u>DIVISION OF HIGHWAYS (55-04)</u>						
<u>OFFICE OF THE DIRECTOR (010)</u>						
Salary- Director			\$ 27,000.00			
Salaries & Wages			26,079.00			\$ 169,063.00
Capital Outlay		\$ 1,300.24	377,500.00			2,766.66
Dept Service-Principal			12,628,050.00			
Dept Service-Interest			5,929,012.00			402,208.00
Operations	\$ 8,500.00	19,465.82	118,000.00			(1,100.00)
Expenses-Employees				\$ 8,096.86		
TOTAL - OFFICE OF THE DIRECTOR	\$ 8,500.00	\$ 20,766.06	\$19,105,641.00	\$ 8,096.86		\$ 572,937.66
<u>CONSTRUCTION HEADQUARTERS (012)</u>						
Operations		\$ 400.28	\$ 1,500.00			
TOTAL-CONSTRUCTION HEADQUARTERS		\$ 400.28	\$ 1,500.00			
<u>MAINTENANCE HEADQUARTERS (015)</u>						
Salaries & Wages			\$ 285,750.00			\$ (8,250.00)
Salaries-Overtime			500.00			2,865.00
Capital Outlay			2,500.00			(1,347.67)
Operations		\$ 1,890.50	23,200.00			11,600.00
Emergency Funds						
Bridge Repainting						
Roadside Grass & Growth Control		4,058.47	90,000.00			
Contingency-Borrow Pits						
TOTAL-MAINTENANCE HEADQUARTERS		\$ 5,948.97	\$ 401,950.00			\$ 4,867.33
<u>NORTH DISTRICT (016)</u>						
Salaries & Wages			\$1,469,713.00			\$ (81,501.62)
Salaries-Overtime			47,500.00			60,200.00
Resurfacing Contracts		\$ 3,886.60	108,000.00			
Capital Outlay			5,000.00			(3.61)
Operations		135,438.70	591,200.00			35,756.00
Emergency Funds						
A.I. DuPont Sidewalk Const.		59.00				
Overhead Walkway				\$ 25,000.00		
Traffic Signal-Cranston Hgt.				1,955.00		
TOTAL-NORTH DISTRICT		\$ 139,384.30	\$2,221,413.00	26,955.00		\$ 14,450.77
<u>SOUTH DISTRICT (017)</u>						
Salaries & Wages			\$2,020,000.00			\$ (132,372.42)
Salaries-Overtime			30,000.00			34,550.00
Resurfacing Contracts		\$ 48,750.69	182,000.00			
Capital Outlay			5,000.00			(221.18)
Operations		226,058.04	535,700.00			23,430.00
Emergency Funds						
Traffic Signal-Millville				\$ 4,629.00		
Traffic Signal-Bridgeville				4,825.00		
TOTAL-SOUTH DISTRICT		\$ 274,808.73	\$2,772,700.00	\$ 9,454.00		\$ (74,618.60)
<u>CENTRAL DISTRICT (018)</u>						
Salaries & Wages			\$1,385,000.00			\$ (12,865.63)
Salaries-Overtime			22,000.00			26,360.00
Resurfacing Contract			183,000.00			
Capital Outlay			5,000.00			(1,190.82)
Operations		\$ 19,612.34	438,300.00			40,214.00
Snow Removal						
TOTAL-CENTRAL DISTRICT		\$ 19,612.34	\$2,033,300.00			\$ 52,517.55
<u>TRAFFIC (030)</u>						
Salaries & Wages			\$ 675,000.00			\$ (26,700.00)
Salaries-Overtime			19,500.00			1,025.00
Capital Outlay			5,000.00			(3.38)
Operations		\$ 39,637.37	222,200.00			16,000.00
Lines, Center & Edges		62,187.97	105,000.00			
Highways Lighting		7,557.46	15,000.00			
Highway Signing			25,000.00			
Fire Lights- Middletown		6,016.58				
Flashing School Lights-Rich. Pk.		25.31				
Traffic Light - Clayton		9,084.75				
School Lights-St. Matthews		166.85				
TOTAL TRAFFIC		\$ 124,676.29	\$1,066,700.00			\$ (9,678.38)
<u>MATERIALS & RESEARCH (032)</u>						
Salaries & Wages			\$ 11,000.00			5,700.00
Salaries-Overtime			500.00			
Operations		\$ 42.03	9,600.00			1,100.00
TOTAL MATERIALS & RESEARCH		\$ 42.03	\$ 21,100.00			\$ 6,800.00
<u>PLANNING SUPPORT (045)</u>						
Salaries & Wages			\$ 32,000.00			\$ 5,000.00
Operations		\$ 3,295.00	21,000.00			(6,000.00)
TOTAL PLANNING SUPPORT		\$ 3,295.00	\$ 53,000.00			(1,000.00)
TOTAL-DIVISION OF HIGHWAYS	\$ 8,500.00	\$ 588,934.00	\$27,677,304.00	\$ 44,505.86		\$ 566,281.33

EXHIBIT C

OTHER TRANSACTIONS	TOTAL FUNDS AVAILABLE	EXPENDITURES	UNEXPENDED BALANCES	DISTRIBUTION OF FUNDS		
				ENCUMBERED	CONTINUING	REVERTED TO GENERAL FUND
	\$ 27,000.00	\$ 23,400.00	\$ 3,600.00			\$ 3,600.00
	195,142.00	194,493.89	648.11			648.11
	381,566.90	278,157.56	103,409.34	\$ 103,092.26		317.08
	12,628,050.00	12,604,349.20	23,700.80			23,700.80
	6,331,220.00	6,331,220.00				
	144,865.82	118,591.07	26,274.75	20,624.09		5,650.66
	8,096.86		8,096.86	8,096.86		
	<u>\$19,715,941.58</u>	<u>\$19,550,211.72</u>	<u>\$ 165,729.86</u>	<u>\$ 131,813.21</u>		<u>\$ 33,916.65</u>
	\$ 1,900.28	\$ 1,900.15	\$.13			\$.13
	<u>\$ 1,900.28</u>	<u>\$ 1,900.15</u>	<u>\$.13</u>			<u>\$.13</u>
	\$ 277,500.00	\$ 276,597.46	\$ 902.54			\$ 902.54
	3,365.00	1,802.70	1,562.30			1,562.30
	1,152.33	1,045.13	107.20	\$ 107.20		
	36,690.50	32,989.48	3,701.02	2,901.02		800.00
	94,058.47	83,812.67	10,245.80	10,047.76		198.04
	<u>\$ 412,766.30</u>	<u>\$ 396,247.44</u>	<u>\$ 16,518.86</u>	<u>\$ 13,055.98</u>		<u>\$ 3,462.88</u>
	\$ 1,388,211.38	\$ 1,387,964.58	\$ 246.80			\$ 246.80
	107,700.00	107,594.63	105.37			105.37
	111,886.60		111,886.60	\$ 108,000.00		3,886.60
	4,996.39	4,996.39				
\$ (307.34)	762,087.36	641,573.54	120,513.82	99,275.38		21,238.44
	59.00	59.00				
	25,000.00		25,000.00		\$ 25,000.00	
	1,955.00		1,955.00		1,955.00	
\$ (307.34)	<u>\$ 2,401,895.73</u>	<u>\$ 2,142,188.14</u>	<u>\$ 259,707.59</u>	<u>\$ 207,275.38</u>	<u>\$ 26,955.00</u>	<u>\$ 25,477.21</u>
	\$ 1,887,627.58	\$ 1,885,940.32	\$ 1,687.26			\$ 1,687.26
	64,550.00	61,524.63	3,025.37			3,025.37
\$ (36,400.00)	194,350.69	48,256.11	146,094.58	\$ 145,600.00		494.58
	4,778.82	4,778.82				
(82,360.69)	702,827.35	584,631.98	118,195.37	85,488.88		32,706.49
	4,629.00		4,629.00		\$ 4,629.00	
	4,825.00		4,825.00		4,825.00	
\$ (118,760.69)	<u>\$ 2,863,588.44</u>	<u>\$ 2,585,131.86</u>	<u>\$ 278,456.58</u>	<u>\$ 231,088.88</u>	<u>\$ 9,454.00</u>	<u>\$ 37,913.70</u>
	\$ 1,372,134.37	\$ 1,370,212.22	\$ 1,922.15			\$ 1,922.15
	48,360.00	48,154.85	205.15			205.15
\$ (36,600.00)	146,400.00		146,400.00	\$ 140,684.60		5,715.40
	3,809.18	3,809.18				
(27,305.00)	470,821.34	417,826.18	52,995.16	45,257.89		7,737.27
\$ (63,905.00)	<u>\$2,041,524.89</u>	<u>\$ 1,840,002.43</u>	<u>\$ 201,522.46</u>	<u>\$ 185,942.49</u>		<u>\$ 15,579.97</u>
	\$ 648,300.00	\$ 645,896.29	\$ 2,403.71			\$ 2,403.71
	20,525.00	18,779.03	1,745.97			1,745.97
	4,996.62	4,996.62				
	277,837.37	232,263.47	45,573.90	\$ 43,255.25		2,318.65
	167,187.97	96,648.73	70,539.24	70,115.25		423.99
	22,557.46	11,405.47	11,151.99	11,151.07		.92
	25,000.00	18,564.49	6,435.51	6,190.37		245.14
	6,016.58	6,016.58				
	25.31	25.31				
	9,084.75	9,084.75				
	166.85	166.85				
	<u>\$1,181,697.91</u>	<u>\$ 1,043,847.59</u>	<u>\$ 137,850.32</u>	<u>\$ 130,711.94</u>		<u>\$ 7,138.38</u>
	\$ 16,700.00	\$ 16,693.71	\$ 6.29			\$ 6.29
	500.00	253.75	246.25			246.25
	10,742.03	9,883.31	858.72	\$ 849.73		8.99
	<u>\$ 27,942.03</u>	<u>\$ 26,830.77</u>	<u>\$ 1,111.26</u>	<u>\$ 849.73</u>		<u>\$ 261.53</u>
	\$ 37,000.00	\$ 36,941.15	\$ 58.85			\$ 58.85
	18,295.00	12,299.53	5,995.47	\$ 5,688.26		307.21
	<u>\$ 55,295.00</u>	<u>\$ 49,240.68</u>	<u>\$ 6,054.32</u>	<u>\$ 5,688.26</u>		<u>\$ 366.06</u>
<u>\$ (182,973.03)</u>	<u>\$28,702,552.16</u>	<u>\$27,635,600.78</u>	<u>\$1,066,951.38</u>	<u>\$ 906,425.87</u>	<u>\$ 36,409.00</u>	<u>\$ 124,116.51</u>

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
COMPARATIVE STATEMENT OF EXPENDITURES BY DIVISIONS
AND SPECIAL FUNDS
FOR THE YEARS ENDED JUNE 30, 1974 & 1973

	<u>YEAR ENDED JUNE 30</u>		<u>INCREASE/ (DECREASE)</u>
	<u>1974</u>	<u>1973</u>	
SPECIAL FUNDS			
Office of Secretary	\$ 81,760.25	\$ 101,049.44	\$ (19,289.19)
Office of Administration	283,145.87	646,982.82	(363,836.95)
Division of Highways	27,635,600.78	8,584,400.38	19,051,200.40
Division of Transportation	820,358.81	488,099.83	332,258.98
SUB TOTAL	<u>28,820,865.71</u>	<u>9,820,532.47</u>	<u>19,000,333.24</u>
 SPECIAL FUNDS			
Construction Funds			
U. S. Grant-Advance Right of Way	\$ 16,200.00	\$ 327,700.00	\$ (311,500.00)
Highways Improvements 1969	3,928,164.93	1,366,863.00	2,561,301.93
Highway Construction Fund 1961	2,561,941.58	2,169,564.96	393,376.62
Highway Construction Fund 1964	8,893,720.24	14,755,416.54	(5,861,696.30)
Garrison's Pond Dam	-	33.98	(33.98)
Delaware River & Bay Authority	-	34,611.18	(34,611.18)
Capital Improvements 1966	54,685.65	483,883.20	(429,197.55)
Capital Improvements 1967	1,359,388.29	1,662,002.24	(302,613.95)
Capital Improvements 1968	2,095,160.00	2,534,374.13	(439,214.13)
Capital Improvements 1969	2,423,165.72	1,980,131.92	443,033.80
Special Construction Funds	23,610.89	28,019.94	(4,409.05)
Capital Improvements 1970	1,703,999.22	1,826,410.69	(122,411.47)
Capital Improvements 1971	1,982,769.15	7,109,602.41	(5,126,833.26)
Capital Improvements 1972	2,957,592.59	6,298,697.29	(3,341,104.70)
Capital Improvements 1973	10,766,316.05	12,197,918.52	(1,431,602.47)
Capital Improvements 1974	2,978,781.94	-	2,978,781.94
TOTAL CONSTRUCTION FUNDS	<u>41,745,496.25</u>	<u>52,774,230.00</u>	<u>(11,028,733.75)</u>
 OTHER SPECIAL FUNDS			
Transportation Needs Study	\$ 70,253.68	\$ -	\$ 70,253.68
U.S. Grant- Natl. Transportation	7,878.97	18,780.18	(10,901.21)
Emergency Employment Act.	-	11,969.96	(11,969.96)
Fed. Aviation Adm. Grant	28,929.40	7,199.01	21,730.39
Escrow Account	48,523.27	86,198.66	(37,675.39)
Sussex County Motor Pool	2,852.88	26,989.34	(24,136.46)
Traffic & Planning	74,020.86	117,410.49	(43,389.63)
Liquidated Damages	3,120.55	-	3,120.55
Fire Loss Damage	9,948.00	-	9,948.00
TOTAL OTHER	<u>245,527.61</u>	<u>268,547.64</u>	<u>(23,020.03)</u>
SUB TOTAL SPECIAL FUNDS	\$41,991,023.86	\$53,042,777.64	\$ (11,051,753.78)
TOTAL	\$70,811,889.57	\$62,863,310.11	\$ (7,948,579.46)

OFFICE SERVICES

The Office Services Section provides support for the Department. The Records Center, a unit of this section, microfilms the files and records of the Department and also maintains a complete file of all legislation. The Word Processing Center, with its telephone dictation system, magnetic tape selectric typewriters, and composer, furnishes service efficiently and more economically than through conventional methods. The magnetic selectric typewriters (MT/ST's) have allowed us to store the enormous amount of repetitive data that must go into letters, agreements, reports, contracts, and other documents on magnetic tape. This eliminates the necessity for keyboarding it more than once.

ADMINISTRATIVE SERVICES

Activities for the Administrative Services Section are summarized as follows:

Summary of Contracts Advertised:

TYPE	NO.	CONTRACT AMOUNT
<u>Construction</u>		
Federal Participating	6	\$ 20,934,394.64
Toll Road	2	304,579.50
100% State	40	12,941,180.76
Rejected	8	
No Bids Received	1	
TOTAL Construction	57	\$ 34,180,154.90
<u>Material</u>		
Materials & Supplies	41	\$ 1,089,284.07
Equipment	24	1,066,215.29
Rejected	2	
No Bids Received	2	
TOTAL Material	69	\$ 2,155,499.36
TOTAL Construction & Material	126	\$ 36,335,654.26
<u>Receipts</u>		
Contract Sales		\$ 11,660.70
Map Sales		2,591.23
Books & Misc. Sales		1,006.50
Collections from Traffic, Adm. & Misc. Bills		290,154.06
TOTAL Receipts		\$ 305,412.49

During this Fiscal Year, the library was transferred to this section. This is a collection of publications on highway and transportation technology which has been sorted, classified and catalogued. Materials are also available through interlibrary loans.

UNIFIED SYSTEMS PLANNING

Systems Planning is the process defined to establish and maintain optimum, comprehensive, regionwide, multi-modal forecast transportation plans. The term Unified is applied to indicate a sincere concern with the public transportation mode as well as with that

of the automobile and truck.

Because forecast planning must be conducted with an acute awareness of existing conditions and trends, Unified Systems Planning work also encompasses the traffic counting program and the road sufficiency and inventory studies.

In addition to the Professional Studies Section which coordinates the Department Capital Improvements Program, and researches road acceptance validity, Unified Systems Planning is composed of two other major sections: Transportation Studies and Planning Survey:

A. Transportation Studies

The Transportation Studies Section is responsible for the maintenance of 20-year regional forecast travel demands. Project design data, as provided the Department design sections, are components of the comprehensive regional transportation system and so are extracted from same.

The Transportation Studies Section also evaluates the impact of proposed land platform developments on the existing and forecast transportation systems.

1. New Castle County:

As the multi-modal transportation systems planning component of the Wilmington Metropolitan Area Planning Coordinating Council, Unified Systems Planning has made every effort to maintain internal and external agency coordination in appropriate areas. These areas incorporate the Division of Highways and of Transportation as well as other State, County and Municipal Agencies and private interest citizen groups.

A major land use and transportation plan re-evaluation is being conducted for New Castle County. This time consuming procedure has been necessitated by the desire for a major reallocation of development in the forecast County Comprehensive Plan and for the placing of greater technical emphasis on public transportation.

Federal law mandates that the Wilmington Standard Metropolitan Statistical Area have a comprehensive, coordinated, continuing transportation process if the State is to receive Federal transportation monies for expenditure within the SMSA.

2. Kent and Sussex Counties:

The Kent and Sussex Study is the regional, comprehensive, coordinated, forecast transportation study for Kent and Sussex Counties.

Because of the increasing densities in shoreline development and because of the Dover growth rate, this plan is being subjected to a major review and update. The State Planning Office is providing the socio-economic data necessary for calculation of present and forecast travel generations.

Surveillance of new development trends and of traffic volume patterns has been maintained.

3. Impact Studies:

The following development proposals were evaluated for their impact on the existing and forecast highway systems:

Brandywine Fashion Square; Commercial
Camp Delmora; Recreational Vehicle Park
Caravel East; Commercial and Residential
Cokesbury Village; Retirement Community
Delaware Technical & Community College
Carvel West
French Park; Residential
Heritage Towers; Residential
Heritage Plaza; Commercial
K-Mart; Commercial
Salt Pond Development; Residential
Summer Hill; Residential
Taylor Towne; River's End; Centennial
Village; Residential
Twin Lakes East; Residential
Wilson Farms; Residential and Commercial
Woodshade South; Residential and
Commercial
Zabenko Estates; Residential

B. Planning Survey

1. Road Inventory Studies:

Notes were updated throughout the year on the physical characteristics of all State Maintained Roads, Suburban Developments and Municipal Streets. This updating occurred quarterly as reports on changes were received from the Bureaus of Construction and Maintenance.

The annual distribution for Municipal Street Aid Monies was accomplished.

The Sufficiency Study initiated in 1973 continued throughout the entire year when the field crews were not involved with varied special projects. Field work is complete for New Castle and Kent Counties, leaving about six months of complete Sussex County. The result of this study is a rating of the condition, ridability, alignment consistency, safety, and varied other roadway characteristics. The rating is based on a 100 point maximum score, therefore, problem sections of roadway are easily identifiable. The

ultimate use of this study is one input to condition, capacity and safety improvements studies.

2. Traffic Accident Coding:

As in the past, copies of all reported accidents, statewide, are sent to this office where they are coded for Electronic Data Processing. The results of this process is a listing by county, road number and milepost of all accidents. This listing shows, at a glance, the areas of high accident locations, as well as giving many of the particulars of each accident. Some of this specific data includes condition of roadway, time of day, and driver condition (whether or not the accident was alcohol or drug oriented).

The final output is utilized mainly by the Bureau of Traffic, and the Highway Safety Section of this Department.

3. Traffic Volume, Vehicle Classification, and Truck Characteristics Studies:

As in the past 30 or more years, the State of Delaware, in cooperation with the Federal Highway Administration, has done traffic volume and classification counts throughout the entire State.

The output of this traffic counting procedure is a valuable tool in the Transportation Planning Process. By maintaining surveillance on the main arteries of the State, checks can be made on validity of projections, and patterns of traffic movement. Many times, projections have been reached far before the expected time, and thus can be further refined.

The Planning Survey Section reports traffic volumes at 18 permanent surveillance locations (3 of these being the toll facilities at the Delaware Memorial Bridge, Kennedy Turnpike and Cape May-Lewes Ferry). The remaining 15 locations are traffic counters owned and maintained by this Section. These counters, placed in strategic locations statewide gather data every hour, and the results are made available to the Department and the public.

The portable traffic counter schedule is designed to cover all the locations not involved with the above mentioned permanent locations, and requires about a 3-year cycle to complete.

More traffic counters of varied capabilities were purchased this past year along with the installation of additional inductive traffic counting loops in the pavement.

The quarterly seasonal counting schedule on the

Interstate, U.S. and State Routes and at selected important locations continued in the months of February, May, August and November.

Vehicle Classification Counts were formerly done manually but are now also done with the assistance of two new automatic traffic classifiers. The output of both the manual and machine process gives a percentage of all type vehicles, and is an adjunct to the Truck Weight Study mentioned below.

The Annual Truck Weight Study was conducted as in the past. This study gives a sample of the vehicle type, weights and commodities being carried on main arteries in the State, and is valuable data for the design of pavement and bridges.

