

Department of Highways and Transportation



annual report 1972

A. KIRK MEARNS, JR.  
SECRETARY



DOVER, DELAWARE 19901

October 15, 1972

TO: The Honorable Russell W. Peterson, Governor of Delaware  
and Members of the State Senate and House of Representatives

It is a pleasure to submit the 1972 Annual Report for the Department of Highways and Transportation, covering the period July 1, 1971 through June 30, 1972.

With another year as background for the Department, the move toward a total transportation system took a more definite direction with studies underway for short and long-range Statewide transportation plans. Highways, park and ride provisions, bike trails and aviation are now an integral part of the total transportation picture.

Community input has fashioned transportation that is responsive to the people.

With the support the Department has experienced in the past two years, we will keep pace with the transportation needs of our State.

Respectfully,

  
A. KIRK MEARNS, JR.

AKM/g

Enclosure

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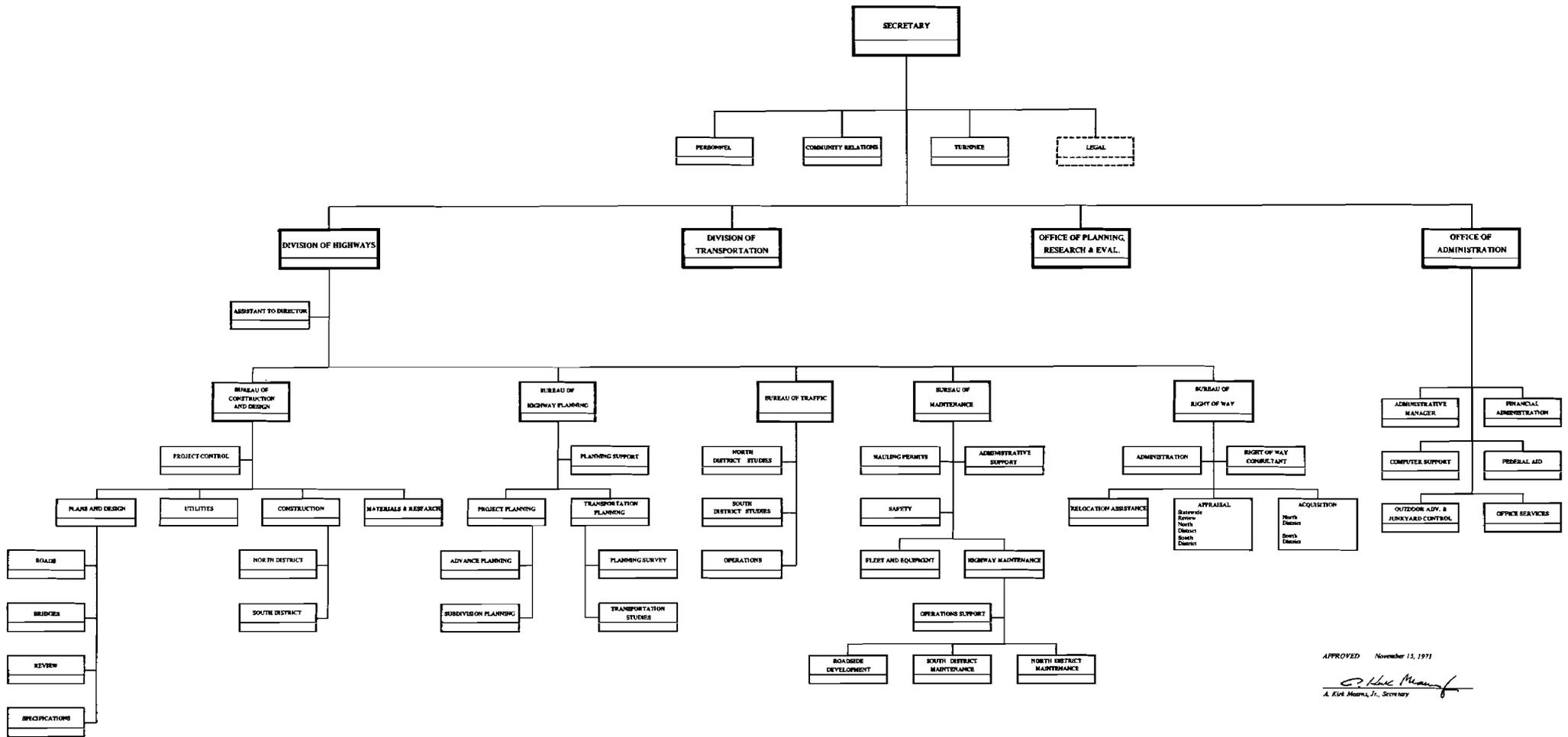
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# STATE OF DELAWARE

## DEPARTMENT OF HIGHWAYS AND TRANSPORTATION



APPROVED November 15, 1971  
*A. Kirk Martin, Jr.*  
 A. Kirk Martin, Jr., Secretary

## PERSONNEL

### EMPLOYMENT

A total of 1,311 employees were on the payroll June 30, 1972, as opposed to 1,404 on July 1, 1971. Accessions amounted to 171 employees during the year but the separation rate was 264 - of which 71 were retirements and 32 were terminations for cause. Terminated employees were replaced only when absolutely necessary and few new positions were created.

### EMPLOYEE RELATIONS

Negotiations continued with Union Local 837 and agreement was reached on a new contract on November 23, 1971. A representative election was held for Delaware Turnpike employees in the Labor and Trades Branches of the classified service. The Department of Labor certified the bargaining unit and negotiations have commenced with this new Union Local.

A changeover in life insurance carriers (Mutual of Omaha to Metropolitan) was successfully carried out. The new insurance package is essentially the same as the previous policy. However, meetings were held for all employees to insure a full understanding and enrollment under the new policy.

Unemployment Compensation coverage was extended to all employees effective October 1, 1971. Prior to that date, only unionized employees were covered.

The Tuition Reimbursement Program gave aid to approximately 40 employees for studies in the engineering, technical and administrative fields.

### RECRUITING

The college recruiting program amounted to half of last year's total. Eight recent graduates were recruited as opposed to 16 in 1971. Visits were made to the University of Delaware, Delaware State College, Northeastern University, Virginia Institute of Technology, Howard University and Purdue University. Applicants were successfully recruited from the University of Delaware, Delaware State College, Northeastern University, and Purdue University. Graduate level contacts were made with students from Virginia Institute of Technology which should bear fruit in the upcoming recruiting year. Plans have been made to visit these same institutions for 1973 graduates. All but one of the 1972 graduates that were employed are Civil Engineers. The continued aim of this program is to accomplish more in-house work with less reliance on consultants and contractors.

## DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

Of all agencies of the state government, the Department of Highways & Transportation most directly affects the day-to-day activities of Delaware's half-million residents.

The Department was created August 5, 1970 with the merging, under the cabinet form of government, of the State Highway Department and the State Department of Transportation.

Headed by Secretary A. Kirk Mearns, Jr. and advised by a six-man Council on Highways, the Department is organized in four general operating divisions: Highways, whose Director is Ernest A. Davidson; Transportation, John O. Hidinger; Administration, David R. Lovejoy; and a recently formed Office of Planning, Research and Evaluation, Christian F. Davis.

Members of the Council are:

Charles S. Eller, Chairman  
Franklin N. Butler  
Robert A. Fulwiler, Jr.  
L. Donald McKnatt  
Charles H. West  
William F. Brooks  
William Philip Short, Jr.

The average monthly turnover rate fell to a low of 1.6%. All terminations, including resignations, discharges, retirements, leaves of absence and deaths, averaged 22 per month. The average employee count for the year was 1,357.

Minority employment is being stressed through all levels of employment and through such special programs as the Emergency Employment Act, the Public Service Careers Program, and the Neighborhood Youth Corps.

Staffing of the Transportation Division was completed early in the year.

#### **TRAINING**

Fifteen Civil Engineers completed the Engineering Training Program and were given permanent assignments. An additional seven have been added to this continuing program.

#### **COMMUNITY RELATIONS**

The Community Relations Section finds its main responsibility with people. Explaining transportation plans of the Department to civic associations, service clubs and private interest groups involves this section in every detail of the Department, from bike trails to freeways, potholes to bridges.

Its personnel are involved in the presentation of departmental matters to the public in an informative, educational and constructive manner. This activity keeps the section in constant contact with the news media, in form of news releases and the HINT (Highway Information News Tip) line.

Technical material and language is transformed into presentations, with emphasis on the effects of proposed projects upon the general populace. Community Relations conducted 7 public hearings, and over 100 public meetings in fiscal 72 as part of the Department's policy of facilitating broader public participation in highway planning.

Other allied items handled for the signature of the Secretary or the Governor in response to queries from the public regarding highways; distribution of road maps and brochures to Delaware tourists; alerting fire companies, police and schools to road closings; preparing speeches and presentations for civic organizations; producing brochures to cover public hearings, right of way and construction projects; and assembling the annual report.

### **DIVISION OF HIGHWAYS**

The Division of Highways is responsible for the planning, construction and maintenance of Delaware's 4,435 miles of state roads and highways.

Keeping these roads in top condition and providing new ones to match the spiraling vehicle registration is the job of 1,311 highway employees.

The hub of the highway system is the Administration Center in Dover where the Division's major functions - planning, design, right of way, traffic, materials and research, construction and maintenance - are headquartered.

It is here that engineers guide highways and bridges from concept to concrete, a task which involves the talents and training of dozens of specialists.

But equally important, especially to the efficient performance of the Division's construction and maintenance functions, are the district offices, each headed by district engineers.

Construction by contract, which includes the bulk of all road building, is for the most part directed from the district offices at Bear, Dover and Georgetown, with construction sites supervised by engineers and inspectors attached to the districts.

And Maintenance, which is a diverse operation handling jobs from patching potholes to plowing snow to picking up litter, has district offices at Bear, Dover and Georgetown and is further subdivided into two regions and 12 areas: at Delmar, Seaford, Ellendale, Gravel Hill, Dagsboro, Harrington, Magnolia, Cheswold, Middletown, State Road, Kiamensi and Foulk Road.

Citizens with questions or problems relating to the Division of Highways should contact their nearest district or maintenance office for assistance.

#### **TRAFFIC**

A review of the events and activities involving the Bureau of Traffic during the past fiscal year have brought to light a number of endeavors which have resulted in many improvements in the areas of highway safety and better methods of production.

As a result of a joint resolution passed by the General Assembly, the Governor's Committee on Safety was given the assignment of comparing the Uniform Vehicle Code with the Delaware Code Rules of the Road for consistency. It was noted that in several cases the existing Delaware Code predated the Uniform Codes' 1971 amendments.

A program to provide adequate statewide lighting at sites where statistics show the highest traffic volumes and greatest rate of nighttime accidents involving pedestrians and vehicles was undertaken.

The implementation of this program will be carried forth to the extent that monies are made available by the Legislature for this specific purpose.

The Bureau of Traffic developed an updated policy which is known as "Policy and Standards for Access to State Highways". This policy is intended to provide for safe, orderly, and rapid movement of traffic both in and out of public and private properties while minimizing safety hazards to drivers and pedestrians.

The General Assembly acting on the recommendations of the National Committee on Uniform Traffic Laws and Ordinances and the Governor's Council on Highway Safety, recently enacted legislation to permit drivers to make right turns on red where signs allow it. This enabled Delaware to become the 27th state in the nation to adopt a right-turn-on-red law.

A total of \$5,394.39 was spent on materials and labor costs on the St. Georges Bridge Detour.

The total mileage involved in the detour routing system was 25 miles, thus, the average cost per mile to bring the signing up to standard amounted to \$215.77.

As a result of the recent issuance of a new manual on Uniform Traffic Control Devices, it was decided that, due to the many changes and revisions which appear in the new manual affecting signing, traffic signals and pavement markings, it would be desirable to develop a presentation to publicize the changes which have been made.

A slide presentation consisting of a series of before and after shots depicting the new types of devices in contrast to the types currently in use has been assembled.

This presentation was developed for use by the Department and other interested agencies, however, it will also be made available to others wishing to make copies for their own use.

#### REVIEW

During the past fiscal year eight projects amounting to \$35,341,008.08 were awarded.

Twenty-one other projects estimated to cost \$114,000,000.00 are presently under design.

#### AWARDED

65-01-006, I-495, Bridge 6-10 to Rogers Road	\$ 16,876,227.81
71-05-003, I-495, Rogers Road to Christina River Bridge	3,156,652.30
70-06-003, I-495, Stabilization, Cherry Island Marsh Area	11,934,361.25
67-08-009, Centerville Road	679,152.95
70-04-005, Phase II, Harmony Road	1,796,723.57
70-04-010, Elmhurst Streets	450,359.95
70-08-004, Colonial Heights	308,819.50
70-10-012, North Hills	138,710.75
TOTAL	\$ 35,341,008.08

#### UNDER DESIGN

Route 141	
69-02-002, Phase II, Prices Corner Int.	\$ 4,000,000.00
69-02-003, Phase III, Prices Corner Int.	3,500,000.00
71-09-005, Kennett Pike Reconstruction and Structure	2,500,000.00
71-09-006, Grading & Paving, Sta. 294 to Brandywine Creek	3,500,000.00
71-09-007, Grading & Paving, Reading RR Bridge to Kennett Pike	1,500,000.00
71-09-008, Grading & Paving Lancaster Pike to Reading Railroad	2,000,000.00
70-08-003, Brandywine Creek Bridge - Substructure	2,500,000.00
70-08-003, Brandywine Creek Bridge - Superstructure	6,000,000.00
70-08-003, Grading & Paving, Brandywine Creek Br. to Rockland Road	3,000,000.00
71-02-007, Substructure thru Newport	4,000,000.00
71-02-008, Superstructure thru Newport	5,700,000.00
71-02-009, Depressed Section thru Newport	3,500,000.00
Route I-495	
Grading & Paving, Christina River to Edgemoor Road	\$ 3,000,000.00
OTHER	
69-02-021, U.S. Rte. 13, Frederica to Penn Central	25,000,000.00
70-12-003, Newark Arterial, Ogletown to Elkton Road	18,500,000.00
67-10-015, Rehoboth Bypass	6,000,000.00
70-04-012, Lore Avenue	300,000.00
70-08-009, Cleveland Ave. - Rte. 2 Intersection Improvement	900,000.00
71-10-001, Third Street Bridge Replacement	600,000.00
69-11-002, South Wilmington Connector, I-95 to Jefferson Street	12,000,000.00
72-04-005, South Wilmington Connector, Jefferson St. to 4th Street	6,000,000.00
TOTAL	\$114,000,000.00

#### 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.

36 projects were under design for the fiscal year, including the West Dover Bypass from Woodside to Road 100, and the dualization of Route 14 from Milford to Route 16. Total estimated construction cost was \$36,500,000.

As more is learned about safety and the causes of accidents, more safety projects will be initiated toward the goal of making Delaware's highways the safest in the nation.

Crash cushions, which are purported to absorb major shock to vehicular impact without causing serious injury to the vehicles occupants are currently under study. As these systems are developed and proven, installation procedures will be undertaken at fixed object locations. Fixed objects are being removed from the roadside wherever possible.

The ultimate aim of the Design Section is to have the capabilities to design 100% of the State's annual highway program. Toward this end, the section is constantly looking for qualified personnel with which to bolster the design force. Innovations in drafting and design are under constant review to assure that the people of the State of Delaware are getting the most from their tax dollar as related to highways.

### **BRIDGE**

The Department awarded contracts for 17 bridge structures with a construction cost of \$6,888,766.00 during fiscal year 1971-72. Of this total the Bridge Section actually prepared the complete design on 14 projects with a dollar value of \$928,398.00. The remainder of the designs were prepared by consultants with review and approval by the Bridge Section.

The largest single project involving structures was the I-495 construction between Penn Central Railroad and New Castle Avenue.

Bids were taken on 14 repair and small bridge replacement projects. This is a continuing program and plans were completed on a number of additional projects which must await future funding.

Beginning with July 1, 1971, the Bridge Section organized a team for bridge inspection and rating to carry out the National Bridge Inventory and Inspection Program. From 494 bridges, falling under this category, 261 or 53% have been inspected, partially coded and rated, which has been accomplished with incomplete engineering personnel. Seventeen of these inspected bridges were placed on the critical bridge list and submitted to the Federal Highway Administration for replacement funds.

### **MATERIALS AND RESEARCH**

The Department maintains a Materials & Research laboratory at the Administration Center, Dover and a field laboratory in Wilmington to test and inspect materials used in construction of roads and bridges.

While most of the activities of the section were directed toward testing, numerous research projects and studies were also in progress. An example of this is the work done with the nuclear density gages. This

work formed a basis on which testing and control procedures for soils and bituminous pavement construction will be referenced. During the past year the first use of these devices for control of actual construction was initiated. Results to date have been very encouraging. In future years the use of this equipment should permit the Department to maintain closer control of construction operations related to density, with fewer personnel.

The data from the skid testing program will also serve as a foundation for future studies. Although the skid testing program has been in progress for only a year, the results have been rewarding since a considerable amount of knowledge about pavements has been accumulated. During the coming year pavements will be continually tested and evaluated, thus slippery areas can be located and corrective measures taken. Results from the study will enable the department to eliminate materials or mixes that are found to be susceptible to skidding. The ultimate goal is to construct pavements on which skidding will not be a problem.

The Milford Bypass was the sight of the first use of Continuously Reinforced Concrete Pavement in the State. This recently developed pavement should provide for longer service life with a significant reduction in maintenance costs. Numerous projects presently under construction use this pavement type. It is anticipated most future primary and freeway type projects will use this type of pavement construction.

During fiscal 1972, evaluations of operating procedures in many areas were made. Some marked changes in operations have already been made. Others, even more significant and departing further from past practices, are planned in order to fulfill the responsibilities of the section properly in the rapidly changing field of highway construction.

### **UTILITIES**

Thousands of miles of utility lines - gas, water, telephone, sewer and electricity are located in Delaware's highway rights of way. 560 additional right of way franchises, for a total of 781 miles were granted this year.

Relocating and adjusting those lines during highway construction and reconstruction is the function of the Utilities Section. Coordinating not only with the utility companies, but on an interdepartmental basis as well, the section reviews and approves all changes, prepares cost figures, processes preliminary and final estimates and arranges for payment.

During the report year, statewide distribution of the Utilities Policy and Procedures Manual and related revised forms was made. 781 miles of utilities were constructed or relocated along highway right of way. \$1,402,400 was paid to utility companies for adjustment to their facilities on highway construction projects.

On relocated Route 141 Freeway from Christina River Bridge to Brandywine River Bridge, a six mile stretch of road, utility work alone will require 45 months of continuous construction, most of which will have to be done simultaneously with highway construction. Since the highway is limited access, all utilities must be moved outside the denial of access lines where ever it is possible. Estimated cost of the utility relocation work is \$4,087,250.00.

### PROJECT CONTROL

This 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 advertisting. These projects in addition to data relative to finance and personnel are displayed by graphic presentations on 20 charts in the Department's Chart Room.

There are 60 projects displayed on the charts and all are in various stages of design. The following 19 projects will be available for Advertisting for bids during Fiscal Year 1973.

<u>CONTRACT NO.</u>	<u>DESCRIPTION</u>	<u>COST ESTIMATE (CONST.)</u>
69-02-002	Prices Corner Interchange - Phase II	\$ 4,400,000
70-06-009	Fennimore Bridges on Rt. 9	860,000
68-03-001	Route 14 - Rt. 16 to Milford Bypass	6,200,000
71-02-007	Route 141 through Newport Viaduct Substructure	4,300,000
70-10-001	11th Street - Adams Street to Jefferson Street	220,000
70-10-011	Kirkwood Highway - Possum Park Road to Polly Drummond Hill Road	350,000
70-10-005	U.S. Route 13 - Del. Rt. 10 to Coopers Corner - Safety Imp.	935,000
72-02-003	Camden and Webbs Lane Connectors	440,000
67-12-001	Route 896, New London Rd.	865,000
71-11-007	Route 52 - Wyoming to Hazletville	250,000
71-09-005	Kennett Pike and Bridge	2,450,000
70-08-009	Route 2 & Cleveland Avenue Intersection Improvements	900,000
71-11-004	Churchman's Road Bridge Replacement	377,000
70-10-004	Rd. 535 - U.S. 13 to Poplar Street, Seaford	300,000
-----	U.S. Rt. 40 - Hot Mix	300,000
-----	U.S. Rt. 13 - NB - Tybouts C Corner to Wilmington Manor - Hot Mix	300,000
70-10-010	Henderson Rd. - Kirkwood Hwy. to Road 322	110,000
-----	Moore's Lane - Del. Rt. 9 to Landers Lane	745,000
-----	U.S. 13 - U.S. Route 40 to Liangollen Estates - Safety Improvements	495,000

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

### RIGHT OF WAY

During fiscal 1972, relocation officers gave assistance to 106 families, businesses and organizations displaced by highway construction.

Total right of way expenditures for the year were \$5,919,966.18. Relocation payments accounted for \$224,856.16 of the total expenditures.

The Federal Relocation and Acquisition 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 hardships. Persons who have to relocate must be given adequate time to relocate, and this presents many difficult and time-consuming problems.

Property values continue to increase, and this, plus the added relocation benefits, will make right-of-way acquisition more costly.

The Bureau is continuing to train its personnel to be more effective and competent in their work. The use of outside fee appraisers is declining to the point where they will only be used in special cases.

The Bureau was called upon by the Department of Natural Resources and Environmental Control to relocate 315 people from Burton's Island. The Relocation Section and other members of the Right of Way staff were successful in accomplishing this task in the allotted time, between March 1, 1972 and June 30, 1972.

This year 53 buildings were sold, moved, or demolished and 5 parcels of land were sold, traded or auctioned. Sales produced a revenue of \$22,610.00 and rental of excess land or buildings earned \$13,885.00.

### PLANNING

The objective of the highway network is to aid local, State and National goals in creating a better total living and working environment. The highway system, as part of the overall transportation system, is a basic force in shaping Delaware's future development.

The highway network should provide for the movement of people and goods with maximum safety, economy, efficiency, convenience and dispatch and result in the minimum disruptive influences in adjacent land utilization, existing neighborhoods and scenic and historic sites. It should do this at the least total expense to the government and highway user.

The principal function of the Bureau of Highway Planning is to develop the long range highway system, program the project priorities and then plan the individual projects to be consistent with the master plan.

#### **TRANSPORTATION PLANNING**

The Transportation Planning Studies Section is responsible for the revision of comprehensive forecast traffic volumes.

As input, it utilizes not only the latest information on vehicular travel trends and traffic generation rates, but also the best projection, land use, economics, transit desires and transportation usage by air, rail and water.

It is therefore, necessary to maintain very close coordination with other State, County, and Municipal agencies.

##### New Castle County Study

This continuing planning process implies continual surveillance of actual development trends so the accuracy of the original forecasts may be progressively evaluated and the 20-Year development, highway and transit plans adjusted to meet any deviations. The present 20-Year plans are being phased so capital improvement priorities may be established and so highway rights of way be reserved.

Proposed developments are reviewed and analyzed to evaluate their impacts on the present, and forecast highway systems.

##### Kent-Sussex Study

All initial inputs to the Kent and Sussex Counties land use and transportation study have been analyzed and alternatives discussed with the interested planning agencies. As an outcome of this cooperative effort, a recommended highway network plan for Kent and Sussex Counties was submitted to the U. S. Department of Transportation for approval.

The Kent and Sussex study is now in the continuing planning process phase, similar to that of the New Castle County program.

The study will provide forecast traffic and corridor alignment data to those sections involved in comprehensive road, bridge and pavement design within the two counties.

It will also provide input and consultation to the State Comprehensive Development Plan being prepared by the State Planning Office.

Similar services will be provided for other comprehensive planning studies being conducted within Kent and Sussex Counties.

#### **PLANNING SURVEY**

##### A. Traffic Volume & Classification Counts

Traffic counting, since first instituted in this State, has blossomed into a tool of immeasurable value. The data assimilated from the thirteen permanent and ninety-nine portable counters has enabled this Department to accurately forecast future fluctuations of traffic and publish an accurate account of existing road use.

In addition to the "round-the-clock" counting on major arteries in the State at the thirteen above-mentioned permanent counters, a very rigorous schedule was designed to make best use of the portable counters. The schedule resulted in 1,782 seasonal control counts, 794 coverage counts and 414 special counts last year.

The addition of new counters and the installation of loops for semi-permanent counters will enable more flexibility for the program and make scheduling for requested special traffic counts more realistic.

The 1971 Truck Weight Survey was performed in June. Trucks were classified as to weight, number of axles, commodity, etc. at eight locations. The results will be forwarded to the Federal Highway Administration for compilation and comparison with other States. With the changing of some traffic patterns, three new stations were selected in order to obtain a more valid truck sampling.

##### B. Road Inventory Studies

Six inventories were worked on in the course of the fiscal year. Updating was done on the Railroad Crossing Inventory, Road Inventory, Suburban Development Inventory, and the annual updating of the Municipal Aid Inventory was conducted. Work on the Municipal Street Inventory continued, and the revision of the existing Federal-Aid System to include an Urban (M) Type road in Upper New Castle was completed.

In conjunction with the Road Inventory, a Sufficiency Study Procedure Manual and all necessary field and coding sheets were published. This Study will begin early in Fiscal Year 1973, and will rate all the State's roads, on a 100 point basis, for sufficiency in pavement width, condition, vertical and horizontal alignment and safety.

### C. Highway Safety Coordination Studies

This activity was started in December of 1971, for the purpose of coordinating the Department's highway safety activities. Incidental to this was the preparation of the Annual Work Program for Fiscal Year 1973, outlining the Department's plans toward improving safety on Delaware's highways and mentioning accomplishments related to this goal during the current year.

Federal funds were granted for projects implementing the several provisions of Highway Safety Act.

Using State funds, Standard 309 was implemented. For the first time, a list was produced, thru Electronic Data Processing, of hazardous locations on Delaware's highways. Each location was a tenth of a mile in length called a "SPOT" in which two or more accidents occurred in the subject year. Accident exposure rates were obtained thru standard computations.

### D. Capital Improvements Program

A capital improvements priority listing is being prepared in 3-year increments to coincide with the Division of Highways' 6-Year Program. National Highway Functional Classification and Needs Study (1970-1990) techniques are being applied, using a 100% road inventory universe in which all road segments are placed within functional grouping for needs evaluation.

The Special Generator Study was detailed and organized for Planning Survey Section implementation (approved as research project by FHWA). After field data is gathered, it is evaluated and regression equations developed.

### **ADVANCE PLANNING**

Three public hearings highlighted the fiscal year. They included the Dover East-West Connector; Delaware Route 9, New Castle Bypass; and Centre Road, Route 141. (Fiscal 1973 appears just as involved with public hearings tentatively scheduled for DuPont Road and the South Chapel Street Relocation projects.)

The Advance Planning Section introduced a first for the Division of Highways during the fiscal year by placing engineering personnel at a location adjacent to a proposed project and for one week discussing the alternates presented at the Centre Road, Route 141 Public Hearing with the people directly affected by the proposed freeway. The method was favorably received and a similar procedure is to be implemented prior to future major projects.

Work this year included the Newark Ring Arterial Studies where the section from New London Road to Ebenezer Church (Polly Drummond Hill Road) was concluded, as well as the section of Delaware Route 4 from Ogletown to Delaware Route 7. Delaware Route 273 from Newark to I-95 has been downgraded in scope and a preliminary configuration for the Ogletown Interchange submitted. The Bay Bridge Connector has been inactive pending a decision on the North-South Toll Road, while the Pike Creek Connector Study has been used to determine right of way acquisition in specific instances.

The U.S. Route 13 Study has been completed. An agreement has been made to develop right of way plans for the Concord Pike Study. The preliminary Centre Road Study and the DuPont Road Study have been received from the consultants with Centre Road Study undergoing major reconsideration as a result of public hearing comments. The DuPont Road Study has been scheduled for a public hearing in late fall.

The Section completed in-house studies for the New Castle Bypass, the South Chapel Street Relocation and the Dover East-West Connector - work was also done on the Georgetown Bypass and the Bridgeville Bypass. It is expected to conclude these studies in the next fiscal year as well as a study for State Road between divided U.S. 13 south to U.S. 40 north.

The forthcoming fiscal year should see the conclusion of our consultant studies for the Outer Wilmington Beltway, Marsh Road and Wilmington 12th Street, as well as some remaining portions coming under the Newark Ring Arterial Agreement.

Along with work completed on in-house projects and coordination with the consultants on the studies they are performing, Advance Planning is involved in school-site investigations; obtaining aerial photography for studies in progress, and dealing with the public, not only through the office, but also, at informational meetings with interested civic associations and community leaders.

### **SUBDIVISION PLANNING**

Rapid growth throughout the suburban areas of Delaware has involved the planning effort not only in the present land use planning stages, but in future growth of these areas. This year, 65 land use plans were approved, covering 1,330 acres and including 5,868 living units. Forty-six Performance Bonds representing 10% of estimated construction cost, were received and approved. These Bonds covered 17.367 miles of roadwork, and \$222,859.32, representing 10% of the estimated construction cost. Seventeen Voluntary Completion Bonds in the amount of \$229,914.82, representing 150% of uncompleted construction cost, were received and

approved. During the year, 18.27 miles of subdivision streets were accepted into the State Maintenance System. In addition to these accomplishments, 200 meetings were attended coordinating with all three counties, other governmental agencies, the public and other planning personnel. Good coordination is essential as it directly reflects all of the land use planning throughout this year.

#### PLANNING SUPPORT

The Planning Support Section was engaged largely in the day to day duties of administration involving personnel records, purchases, control and general services, payrolls, budgeting, and fiscal coding.

Mapping and drafting work included preparing State and County general highway maps in conjunction with the Federal Highway Administration, traffic maps, transportation planning maps and graphic art. In the interest of economy, the Delaware Official Highway map was not printed this year.

A new state map, size 21" x 34", scale 1" = 2 miles, was completed and made available to all interested parties.

#### MAINTENANCE

The most significant change in the Bureau of Maintenance during the year was the division of highway maintenance and equipment maintenance into two separate operational groups.

The operation of the highway shops and the maintenance and repair of all Department equipment, from automobiles and trucks to heavy construction equipment was placed under the supervision of a Fleet & Equipment Manager. A separate budget was allotted to this new section separating expenditures for road maintenance from the cost of maintaining the equipment of the Department of Highways and Transportation. By operating the new Fleet and Equipment group as a service organization to the Department, it is felt that better service, controls, and supervision can be exercised, and more accurate records of the cost of operating equipment can be obtained. Due to the age and resulting condition of the present equipment, it is vital that the management of the fleet be strictly controlled and all means be taken to protect the investment. The first 9 months of operation have paid off in many ways, primarily in the upgradings of mechanics and supervision. Much needs to be done now, and this will depend on funds being made available to replace the majority of the equipment which has been retained well beyond its economical life.

The pilot program for the Daily Maintenance Operations Report was put into effect at the beginning of this report year. There are three basic reports issued on a regular monthly schedule with summaries prepared quarterly. These reports are (1) Average Unit Cost by Function per Work Area, (2) Cost per Road by Function and (3) Manpower Utilization by Function per Work Area. By application of additional programs, a number of special reports can be produced upon request. In the latter part of this year, the Bureau of Traffic's Pavement Marking Section was included in the reporting system, and the Bureau of Maintenance Fleet and Equipment Section's reporting system will be implemented in July. This system will provide a current record of cost for operation and maintenance of each unit of equipment and each vehicle in the Statewide fleet.

The Hauling Permit Section was transferred to the Bureau of Maintenance and their fiscal year report shows that they issued a total of 23,435 permits during the year having a total value of \$139,828.89.

The North and South Maintenance Districts have been greatly hampered in their operations by a shortage of manpower brought on by a hiring freeze which was imposed through much of the year. As a result of this shortage, the nature of their work changes from a preventative maintenance program to one of problem or complaint solving. Considering the manpower shortage and the increasing variety of duties some of the accomplishments for the report year were as follows: 14,825 miles traversed picking up trash, 9,650 miles traversed and 12,091 tons of material used in pothole patching, 14,014 miles of mowing, 859,823 gallons of asphalt and 24,189 tons of aggregate applied to resurfacing roadways.

Maintenance forces reconstructed Road 203 leading to Mispillion Light and dirt Road 498, Sandy Brae Road in northwestern New Castle County and Road 319, Sussex County. 158,270 tons of select material were used building up roads and shoulders, 40,772 gallons of crack filler were used to seal 436 miles of roads. Twelve traffic islands in the South District were stripped of grass and vegetation, which was replaced with borrow and stone treated to retard growth of grass and weeds. 37,000 linear feet of sand fence and thousands of clusters of beach grass were installed on the dunes of the beaches to prevent erosion. A sea wall was built at Indian River Inlet along the north side of Road 50-I using select borrow and concrete rubble. A combined operation involving a contractor on the St. Georges Bridge and maintenance forces, resulted in the complete restoration of an area along the shoreline at Augustine Beach on Road 422 using concrete waste from the bridge.

In anticipation of an increase in manpower a roadway inventory has been initiated to aid in planning maintenance programs.

### **ROADSIDE DEVELOPMENT**

Particular emphasis was placed on, and tests were conducted with a synthetic slope stabilizer called Curasol AE. Work on the recently completed Milford Bypass clearly indicated that this material has tremendous potential, as an amendment to seed slurries as applied through conventional hydroseeding equipment. Additional material is being purchased for experimentation.

Extensive erosion control training seminars were conducted for design, construction and inspection personnel, dealing with the use of various erosion control materials for the establishment of permanent vegetative covers on new construction. These presentations also covered related erosion control structures, and various synthetic slope stabilizers.

A \$46,000 request for erosion controls covering such items as Crownvetch seeding, fertilization and roadside ditch channel stabilization was prepared and submitted to the regional office of the Division of Recreation, Conservation and Development, U.S.D.A. This money is to be appropriated under the guidelines of a Federal "Critical Area Treatments" Program for fiscal year 73-74.

A major stabilization and critical maintenance relief program with 3400 dozen Crownvetch plants was undertaken and completed during the fall along I-95 through Wilmington and Linden Hill Road, New Castle County.

In the general planting phase, \$12,600 in landscaping for the construction of vegetative barriers, headlight glare abatement screens and critical maintenance areas has now been completed in the medians of I-95 through Wilmington and Route 13 in Dover.

During the fall of 1971, a pruning standards manual was completed and made available to permit issuing agents to control and standardize all tree pruning done on state right of way.

Particular emphasis in the future will be placed on implementing the mowing standards manual, issued early last year.

Grass growth inhibitor experiments have been established on the turf plots located at the Magnolia Area 7, maintenance yard. This program will be expanded during the coming year due to tremendous savings that can be realized with the use of such chemicals.

Area wide buffer crews for the full time statewide crew were determined as being necessary due to the volume of work.

Operations of the statewide crew included responsibilities for guardrail abatement spraying programs and control of selective noxious weeds, such as common reed, Canadian thistle and Johnsongrass. These operations represent a materials budget of \$38,000.00.

### **DIVISION OF TRANSPORTATION**

During the past fiscal year, the Division of Transportation has intensified its efforts towards the development of the concept of statewide transportation planning where all modes work together as a balanced transportation system.

The transportation plan presently being developed for the Wilmington Metropolitan Area is the first step in this process. The output from this plan will be a regional transportation system which most efficiently utilizes the highway network, in conjunction with the various modes within the area of public mass transit, in order to provide the region's citizens with a true choice in determining their mode of travel.

### **MASS TRANSIT**

The Delaware Authority for Regional Transit (DART) continued to improve its quality of services by readjusting routes and concentrating service in the peak commuting hours. Annual ridership increased almost 10% during the year due to a number of complementary factors. First, as a result of action by the General Assembly, DART reduced fares for senior citizens over 65 to 15¢ per ride. It is estimated that 150,000 new riders per year have been attracted by the reduced fare. Secondly, DART's information program was stepped up through wider distribution of schedules and introduction of the informational circular "On Target". Increased information attracted additional riders. In addition, programs were initiated with Welcome Wagon and the downtown merchants for specialized riding. Again more patrons were attracted to DART.

### **Financial Status of DART**

At the close of fiscal year 1970-1971 the General Assembly appropriated \$250,000 to DART. This appropriation was used to defray a \$213,000 deficit for that fiscal year and provide a \$27,000 cushion for the next year. This amount, however, was not sufficient to cover projected operating losses. Additional funds to balance the operating budget

were obtained from the following sources: \$50,000 from the Governor's contingency fund, \$50,000 from New Castle County, \$30,000 from the City of Wilmington, and \$193,500 appropriated by the General Assembly. A total subsidy of \$323,500 was provided for fiscal year 1971-1972.

### Mass Transit Planning

In January 1972, the Division of Transportation received approval and Federal funding totaling \$163,905 towards conducting the long and short-range transit plans for Northern Delaware. The transit plan is underway with the guidance of the Governor's Transit Planning Task Force and The Transit Review Committee. The first report of a series of four, "Delaware Public Transit-1972", a status report, has been completed. An additional report, "A Program for Transit", was prepared and submitted to the Governor, the General Assembly, the New Castle County Executive, and the Mayor of Wilmington. This report presented financial projections for the next two years for DART and also presented a transit capital improvements program.

The transit planning program is an inter-agency cooperative effort with valuable services being contributed by the State Planning Office, New Castle County Planning Department, City of Wilmington Planning Department, Wilmington Metropolitan Area Planning Coordinating Council (WILMAPCO), Greater Wilmington Development Council, Inc. and the Division of Highways.

### Legislation

Based on the report "A Program for Transit", the State, County, and City budgeted \$384,480 for transit operations in fiscal year 1972-1973. This was the first time that transit had been included in the budgeting procedure. In addition, the State included \$520,000 for a transit improvement program in the approved bond bill. These State funds will be matched with Federal dollars and the major project to be undertaken will be a new garage and headquarters for DART.

## **AVIATION**

During the 1972 fiscal year the Aviation Section of the Division of Transportation continued or initiated the following aviation related programs.

### Aviation Planning and Design

The Division of Transportation made application to the Federal Aviation Administration for a planning grant of \$90,575 to be used in developing a State of Delaware Aviation and Airport Systems Plan.

Grant approval is expected early during the 1973 fiscal year. The one year study will inventory all existing airports, forecast future aircraft traffic volumes, develop an acceptable and viable plan for either improving or constructing new airports in Delaware as they become needed, and suggest other aviation related programs that should be established.

The Division continued to represent the State of Delaware in negotiations with the Department of the Air Force for civilian joint-use of Dover Air Force Base. The final joint-use agreement is now being prepared and has been approved by the Kent County Levy Court. Preliminary cost estimates for three basic public airport alternatives in Kent County to serve all segments of aviation were established. After several meetings with local legislative and planning groups, the alternative of Dover Air Force Base joint-use plus a new small airport was selected as the course of action to pursue. Preliminary engineering plans for the airport terminal facility to be located at Dover Air Force Base were completed along with a survey of the local travel agencies to estimate the number of airline passengers traveling to the Dover area. Work is continuing with the Dover Air Force Base proposal to secure partial FAA funding of the construction project.

Technical assistance was given to the Sussex County Council and the towns of Delmar and Rehoboth Beach concerning airport operations and future airport planning.

### Aviation Education

The Division of Transportation assisted the Southern Branch of Delaware Technical and Community College in developing their proposal for a Professional Pilot Management Technology curriculum. Aviation ground classes were established at Delaware Technical and Community College in Georgetown with the aid of the Division.

### Aviation Safety

By using local private and public cosponsors three two-evening aviation safety seminars were held across the First State. Total attendance for the series was nearly 1,400 people. A six-week evening program at Delaware Technical and Community College in Georgetown attracted 400 aviation enthusiasts.

Specifications for aircraft charter trips by state agencies were drafted by the Division. A listing of qualified private firms was furnished all state agencies.

**OFFICE OF PLANNING,  
RESEARCH AND EVALUATION**

The Office of Planning, Research and Evaluation began operation in July 1971. The Office plays a role in developing long-range policy planning, provides a continuous monitoring of Departmental operations, disseminates research results as appropriate, and studies and advises on the environmental impacts of constructing the transportation system.

**General Studies**

Studies of several areas of the Department's operations were conducted during the year. These include a study of utility permit policies, resurfacing decision-making, and the effects of de-icing chemicals (preliminary report). Work began on compiling an organizational manual. A series of Departmental seminars examining interactions from a project oriented view was begun.

Recognizing the responsibility of the Department to provide for all modes of transportation, a statewide committee was formed for the purpose of developing a program for bicycles. The activities of the committee will be coordinated through the Office of Planning, Research and Evaluation.

**Research**

The Office serves as the central source of information and assistance on research reported in the literature of the Highway Research Board and similar organizations.

Research on the behavior of nylon-fiber reinforced concrete was conducted in cooperation with the University of Delaware and the duPont Company. Laboratory results show promise and the material is scheduled for field testing in a pavement slab in 1973 fiscal year and a bridge deck the next year. It is hoped that the material will slow the rate of surface deterioration of bridge decks and other surfaces existing under severe environmental conditions.

**Environmental**

In addition to providing general assistance on environmental matters, the Office completed or began Environmental Impact Statements for the Dover East-West Connector, Naamans Road, Fennimore Bridge, and Route 141.

**OFFICE OF ADMINISTRATION**

Fiscal Year 1972 was the first full year of operation for the new Office of Administration in the Department of Highways and Transportation. Due to many problem areas which were carried forward from the former State Highway Department, a great deal of time was spent in solving problems as well as reorganizing and making improvements.

The following indicates significant activities of the various Sections of the Office of Administration.

**FINANCE**

Significant strides were made in upgrading the Highway Accounting System during the fiscal year. For fiscal year 1972, we were reconciled through the end of May by mid June and completed Fiscal Year 1972 reconciliation shortly after the close of the year. Preparations were made for a single input into both the State and this Department's Accounting Systems for fiscal year 1973. A significant amount of reorganization was undertaken which included the addition of three highly qualified accountants to the staff of the Section.

**FEDERAL-AID AND AUDIT**

Fiscal Year 1972 was the first full year of operation for the external audit function, after it had previously been discontinued by the former Controller of the Highway Department for a period of over two years. It is, of course, required to have an external audit function by the Federal Highway Administration. As a result of resuming our audit activities, we have now been able to close out and claim final payment of some of the old Federal-aid Interstate Projects.

**ADMINISTRATIVE SERVICES**

Activities for the Administrative Services Section are summarized as follows:

**SUMMARY OF CONTRACTS ADVERTISED THIS FISCAL YEAR:**

TYPE	NO.	CONTRACT AMOUNT
<b>Construction</b>		
Federal Participating	16	\$ 51,478,882.75
Toll Road	4	449,497.00
100% State	29	4,188,693.93
TOTAL Construction	49	\$ 56,117,073.68
<b>Material &amp; Supplies</b>	31	\$ 1,191,850.09
<b>Equipment</b>	5	\$ 38,465.24
TOTAL	85	\$ 57,347,389.01

**RECEIPTS**

Contract Sales	\$ 12,163.90
Map Sales	2,444.96
Books & Misc. Sales	675.00
Collections from Traffic and Administration Bills and Accident Claims	284,968.82
<b>TOTAL Receipts</b>	<b>\$ 300,252.68</b>

Equal Employment Opportunity Program - During fiscal year 1972, 31 trainees were allocated to 12 Federal-aid Construction Projects. Four completed their training, received their certificates and are now employed as journeymen. The overall percentage of minority workers on Federal-aid Projects was 36%.

**COMPUTER SUPPORT SECTION**

In addition to the programming and related activities for all Divisions of the Department of Highways and Transportation, the Office of Administration has been involved in several major systems projects. A significant step was taken when the Computer Support Section persuaded the Division of Central Data Processing to allow the Section to generate a PCP 360/OS System. Section personnel are now equipped to run the ICES (Integrated Civil Engineering Series) programs, and the URBAN I transportation planning programs. Initial work in ICES is in COGO (coordinate geometry) and STRUDL (structural design). Test experience has been gained with URBAN I and all related transportation data processing services during the year are expected to be accomplished.

The Delaware Maintenance Management System has ended its first reporting year. Even with a lack of historical records, the system has proved useful in suggesting productive changes in maintenance management. Due to a lack of keypunch ability by the Division of Central Data Processing, report generation was delayed until January of this year. The section is now in the process of including motor vehicle fuel, mechanics accomplishment, traffic operations and sign production into the system.

The coordinated Data System is progressing well. The record and item coding system of the CDS provide the capability to store and maintain all highway information. Programming has been completed to create and update the primary subsets of the master file. Accident surveillance programs, which are closely tied to the CDS are also being developed.

**OFFICE SERVICES**

Support for all Divisions and Offices of the Department continued to be given by the various units in the Office Services Section. The Word Processing Center with its telephone dictation system and magnetic tape selectric typewriters, continues to provide typing and composing services more efficiently and at a lower cost than through conventional methods. Typesetting has started for the Department's new Standard Specifications Book. The Records Center has continued with the microfilming and disposal of Department files and records. A complete file of all legislation is kept in the Records Center, eliminating the need for numerous copies being distributed throughout the Department.

**OUTDOOR ADVERTISING AND  
JUNKYARD CONTROL**

Receipts for Fiscal Year 1972 were as follows:

Outdoor Advertising Sign Permits	\$ 16,079.00
Junkyard Licenses	570.00
	<b>\$ 16,649.00</b>

Limited activities were undertaken in this section due to a lack of personnel. Only a small percentage of the signs in the State have the required permits due to our inability to police the signs. A request is being made in the next operating budget for sufficient personnel to properly implement the sign control legislation, as well as initiate the sign removal program as directed by the Federal Highway Administration.

A conviction was obtained in the case that had been pending against a junkyard owner who was operating without the required license. In this case, the constitutionality of the law was challenged and subsequently upheld by the court. Additional action against violators will be initiated upon receipt of instructions thereon from the Department of Justice.

During fiscal year 1972, approximately 2,000 abandoned vehicles were removed from Sussex County under our abandoned vehicle removal program. This was a limited operation due to both lack of funds and personnel. Funds are being requested in the next operating budget to continue a regular abandoned vehicle removal program on a statewide basis.

Future plans and goals for the Office of Administration involve proceeding further in the consolidation of the Highway Accounting System into the State's Central Accounting System, the consolidation of all Departmental purchasing and Fiscal Control Agents into the Office of Administration. Also included in the future plans and goals of the office are improved records retention procedures, expansion of our external audit activities, implementation of internal audit and upgrading the quality of personnel both through conducting our own training programs and raising the qualifications required for prospective employees.

DEPARTMENT OF HIGHWAYS & TRANSPORTATION  
 COMPARATIVE STATEMENT OF TOTAL FUNDS AVAILABLE, EXPENDITURES AND UNEXPENDED BALANCES  
 FOR THE YEARS ENDED JUNE 30, 1972 & 1971

	<u>YEAR ENDED JUNE 30</u>		<u>INCREASE/ (DECREASE)</u>
	<u>1972</u>	<u>1971</u>	
Funds Available	\$86,762,334.58	\$ 97,336,043.32	\$(10,573,708.74)
Expenditures	<u>47,592,681.89</u>	<u>45,642,602.83</u>	<u>1,950,079.06</u>
Unexpended Balances	\$39,169,652.69	\$ 51,693,440.49	\$(12,523,787.80)

DISPOSITION OF UNEXPENDED BALANCES

	<u>YEAR ENDED JUNE 30</u>		<u>INCREASE/ (DECREASE)</u>
	<u>1972</u>	<u>1971</u>	
Continuing	\$32,276,198.93	\$ 44,008,402.28	\$(11,732,203.35)
Encumbered	6,178,750.13	7,362,322.00	(1,183,571.87)
Reverted	<u>714,703.63</u>	<u>322,716.21</u>	<u>391,987.42</u>
Unexpended Balances	\$39,169,652.69	\$ 51,693,440.49	\$(12,523,787.80)

DEPARTMENT OF HIGHWAYS & TRANSPORTATION  
 COMPARATIVE STATEMENT OF EXPENDITURES BY DIVISIONS  
 AND SPECIAL FUNDS  
 FOR YEARS ENDED JUNE 30, 1972 & 1971

		YEAR ENDED JUNE 30		INCREASE/ (DECREASE)
		1972	1971	
<u>GENERAL FUND</u>				
	Office of Secretary	\$ 76,126.37	\$ 35,261.33	\$ 40,865.04
	Office of Administration	566,207.97	561,462.62	4,745.35
	Division of Highways	7,382,532.57	10,043,302.85	(2,660,770.28)
	Division of Transportation	379,435.08	63,115.48	316,319.60
	<b>SUB TOTAL</b>	<b>\$8,404,301.99</b>	<b>\$ 10,703,142.28</b>	<b>\$ (2,298,840.29)</b>
<u>FUND</u>	<u>SPECIAL CONSTRUCTION &amp; OTHER FUNDS</u>			
10	U.S. Grant- National Trans. Needs Study	\$ 14,500.00		\$ 14,500.00
11	Federal Aid Trust Account		\$ 99,540.06	(99,540.06)
11	U.S. Grant - Advance Right of Way	216,875.00		216,875.00
42	Highway Construction Fund 1961	1,331,045.77	59,823.76	1,271,222.01
43	Highway Construction Fund 1964	10,359,795.68	7,263,647.10	3,096,148.58
46	Capital Improvements 1966	1,209,491.44	1,660,552.87	(451,061.43)
47	Capital Improvements 1967	1,839,396.59	3,020,531.04	(1,181,134.45)
48	Capital Improvements 1968	2,969,488.84	4,676,838.45	(1,707,349.61)
49	Capital Improvements 1969	6,390,153.14	8,929,518.92	(2,539,365.78)
51	Special Funds (Sidewalks, etc.)	24,623.48	17,060.86	7,562.62
52	Capital Improvements 1970	7,761,840.73	8,273,425.70	(511,584.97)
53	Capital Improvements 1971	6,003,579.88	867,471.35	5,136,108.53
72	Capital Improvements 1972	1,028,575.77		1,028,575.77
80	Court Street Appraisal (55-02-000)	250.00		250.00
86	Escrow Account (55-02-000)	17,790.75		17,790.75
86	Sussex County Motor Pool (55-05-000)	1,673.73		1,673.73
88	Traffic & Planning	19,299.10	71,050.44	(51,751.34)
	<b>SUB TOTAL</b>	<b>\$39,188,379.90</b>	<b>\$ 34,939,460.55</b>	<b>\$ 4,248,919.35</b>
	<b>TOTAL</b>	<b>\$47,592,681.89</b>	<b>\$ 45,642,602.83</b>	<b>\$ 1,950,079.06</b>

DEPARTMENT OF HIGHWAYS & TRANSPORTATION  
 CONDENSED STATEMENT OF APPROPRIATIONS, TRANSFERS, AVAILABLE FUNDS,  
 EXPENDITURES, AND UNEXPENDED BALANCES FOR YEAR ENDED JUNE 30, 1972

	CONTINUING BALANCE JUNE 30, 1971	ENCUMBERED BALANCE JUNE 30, 1971	ORIGINAL APPROPRIATIONS	SUPPLEMENTAL APPROPRIATIONS	REVENUE
<b>GENERAL FUND</b>					
Office of Secretary		\$ 775.95	\$ 108,100.00		
Office of Administration		21,395.84	598,835.00		
Division of Highways	\$ 163,412.75	991,799.83	7,493,319.00	\$ 1,000.00	
Division of Transportation		26,018.51	120,702.00	443,500.00	
<b>TOTAL GENERAL FUND</b>	<b>\$ 163,412.75</b>	<b>\$ 1,039,990.13</b>	<b>\$ 8,320,956.00</b>	<b>\$ 444,500.00</b>	
<b>SPECIAL FUNDS, CONSTRUCTION &amp; OTHER</b>					
<b>FUND</b>					
10 U.S. Grant - Federal Aid Fund	\$ 96,987.00				
10 U.S. Grant - National Transportation Needs Study	14,528.00				\$ 9,228.50
11 U.S. Grant - Advance Right of Way					296,990.00
12 EEA Salary Account (55-05-000)					
12 Transportation Study (55-06-000)					
40 Highway Improvements 1959	958,517.10				
41 Hard Surfacing Dirt Roads 1955	1,461.01				
42 Highway Construction Fund 1961	1,624,440.53	\$ 39,322.11			274,095.45
43 Highway Construction Fund 1964	207,669.12	1,250,207.15			9,611,514.84
44 Garrison's Pond Dam	3,209.21				
45 Delaware River & Bay Authority	100,000.00				
46 Capital Improvements 1966	600,082.40	1,254,919.72			156,687.60
47 Capital Improvements 1967	4,167,994.45	597,019.90			753,434.85
48 Capital Improvements 1968	5,148,410.13	733,468.90			765,769.10
49 Capital Improvements 1969	8,759,538.93	1,268,589.68			2,341,222.26
51 Special Construction Funds (Sidewalks, etc.)	74,573.33	5,985.81			
52 Capital Improvements 1970	9,734,512.29	953,026.63			1,807,489.99
53 Capital Improvements 1971	12,315,076.08	217,452.57			550,500.12
72 Capital Improvements 1972					546,020.86
80 Court Street Appraisal (55-02-000)					
86 Escrow Account (55-02-000)					
86 Sussex County Motor Pool (55-05-000)					
88 Traffic & Planning	37,733.11	2,339.40			126,916.72
89 Beach Erosion	110.88				
90 Suburban Roads	145.96				
<b>TOTAL SPECIAL FUNDS</b>	<b>\$ 43,844,989.53</b>	<b>\$ 6,322,331.87</b>			<b>\$ 17,239,870.32</b>
<b>TOTAL, GENERAL FUND, SPECIAL FUNDS</b>	<b>\$ 44,008,402.28</b>	<b>\$ 7,362,322.00</b>	<b>\$ 8,320,956.00</b>	<b>\$ 444,500.00</b>	<b>\$ 17,239,870.32</b>

EXHIBIT A

TRANSFERS	OTHER TRANSACTIONS	TOTAL AVAILABLE FUNDS	EXPENDITURES	UNEXPENDED BALANCES	DISPOSITION OF FUNDS		
					ENCUMBERED	CONTINUING	REVERTED TO GENERAL FUND
		\$ 108,875.95	\$ 76,126.37	\$ 32,749.58	\$ 1,674.17		\$ 31,075.41
	\$ (500.00)	619,730.84	566,207.97	53,522.87	11,065.08		42,457.79
	1,125.90	8,650,657.48	1,382,532.57	1,268,124.91	584,635.72	\$ 49,056.58	634,432.61
		590,220.51	379,435.08	210,785.43	204,047.61		6,737.82
	\$ 625.90	\$ 9,969,484.78	\$ 8,404,301.99	\$ 1,565,182.79	\$ 801,422.58	\$ 49,056.58	\$ 714,703.63
		\$ 96,987.00		\$ 96,987.00		\$ 96,987.00	
		23,756.50	\$ 14,500.00	9,256.50	\$ 28.00	9,228.50	
		296,990.00	216,875.00	80,115.00		80,115.00	
	\$ 8,669.78	8,669.78		8,669.78		8,669.78	
	1,000.00	959,517.10		959,517.10		959,517.10	
		1,461.01		1,461.01		1,461.01	
\$ 21,202.85		1,959,060.98	1,331,045.77	628,015.21	536,385.94	91,629.27	
(38,298.25)	(85,089.97)	10,946,002.89	10,359,795.68	586,207.21	489,257.28	96,949.93	
		3,209.21		3,209.21		3,209.21	
		100,000.00		100,000.00	34,611.18	65,388.82	
616.99	(380.00)	2,011,926.71	1,209,491.44	802,435.27	296,418.52	506,016.75	
(73,395.55)	(461.75)	5,444,591.90	1,839,396.59	3,605,195.31	715,634.25	2,889,561.06	
(64,022.69)	(200.83)	6,583,424.61	2,969,488.84	3,613,935.77	695,192.28	2,918,743.49	
231,699.81	3,564.56	12,604,615.24	6,390,153.14	6,214,462.10	582,579.85	5,631,882.25	
4,357.86		84,917.00	24,623.48	60,293.52	42,602.60	17,690.92	
241,443.70		12,736,472.61	7,761,840.73	4,974,631.88	1,017,832.34	3,956,799.54	
	26.91	13,083,055.68	6,003,579.88	7,079,475.80	771,451.02	6,308,024.78	
	8,970,374.90	9,516,395.76	1,028,575.77	8,487,819.99	147,089.56	8,340,730.43	
	250.00	250.00	250.00				
	150,932.55	150,932.55	17,790.75	133,141.80		133,141.80	
	28,942.30	28,942.30	1,673.73	27,268.57	10,364.11	16,904.46	
(15,575.09)		151,414.13	19,299.10	132,115.03	37,880.62	94,234.41	
		110.88		110.88		110.88	
		145.96		145.96		145.96	
\$ 308,029.63	\$ 9,077,628.45	\$ 76,792,849.80	\$ 39,188,379.90	\$ 37,604,469.90	\$ 5,377,327.55	\$ 32,227,142.35	
\$ 308,029.63	9,078,254.35	\$ 86,762,334.58	\$ 47,592,681.89	\$ 39,169,652.69	\$ 6,178,750.13	\$ 32,276,198.93	\$ 714,703.63

DEPARTMENT OF HIGHWAYS & TRANSPORTATION  
 DETAILED STATEMENT OF AVAILABLE FUNDS, EXPENDITURES AND UNEXPENDED BALANCES  
 FOR YEAR ENDED JUNE 30, 1972

CONTINUING BALANCES <u>JUNE 30, 1972</u>	ENCUMBERED BALANCES <u>JUNE 30, 1972</u>	ORIGINAL APPROPRIATIONS	SUPPLEMENTAL APPROPRIATIONS	REVENUE	TRANSFERS
<u>OFFICE OF THE SECRETARY (55-01)</u>					
Salary, Secretary		\$ 31,000.00			
Salaries & Wages of Employees		62,500.00			
Travel		2,500.00			
Contractual Services		5,900.00			
Supplies & Materials		6,200.00			
Operations	\$ 775.95				
TOTAL - OFFICE OF SECRETARY	\$ 775.95	\$ 108,100.00			
<u>OFFICE OF ADMINISTRATION (55-02)</u>					
Salary, Chief of Administration		\$ 20,475.00			
Salaries & Wages of Employees	\$ 500.00	212,410.00			
Salaries - Overtime		500.00			
Personal Services		3,500.00			
Travel	18,752.50	1,500.00			
Contractual Services		864.34	64,450.00		
Supplies & Materials	1,279.00	5,000.00			
Capital Outlay					
Social Security Contribution		291,000.00			
TOTAL - OFFICE OF ADMINISTRATION	\$ 21,395.84	\$ 598,835.00			
<u>DIVISION OF HIGHWAYS (55-05)</u>					
Salary, Director		\$ 28,000.00			
Salaries & Wages of Employees	\$ 8,000.00	5,089,068.00			\$(20,000.00)
Salaries - Overtime		98,800.00			20,000.00
Personal Services		5,000.00			
Travel		6,500.00			
Contractual Services		147,850.00			
Supplies & Materials		413,961.00			
Capital Outlay	213,805.00	100,000.00			(30,829.00)
Operations	245,908.08	1,169,140.00			47,731.00
Lines, Center & Edges of Highways	29,266.52	105,000.00			
Highway Lighting		15,000.00			(1,347.00)
Highway Signing		25,000.00			
Roadside Grass & Growth Control		90,000.00			(15,555.00)
Signal - Route 28 & 20					
Emergency, Snow Removal & Ice Control	577.27	200,000.00		\$ 1,000.00	
Drainage - Route 14	\$ 50,000.00				
Gunning Bedford Overpass	113,401.93				
A. I. DuPont School Sidewalks	10.82	97.61			
Resurfacing Contracts		479,263.73			
Bridge Repair Contracts		14,181.62			
Sidewalk, Milford		100.00			
Heating Fuels		600.00			
TOTAL - DIVISION OF HIGHWAYS	\$ 163,412.75	\$ 991,799.83	\$ 7,493,319.00	\$ 1,000.00	\$ -0-
<u>DIVISION OF TRANSPORTATION (55-06)</u>					
Salary - Director		\$ 20,000.00			
Salaries & Wages of Employees		17,952.00			
Personal Services	\$ 19,514.53	2,000.00			
Plan-Public Transportation		25,000.00			\$(25,000.00)
Travel		800.00			
Contractual Services	1,088.88	4,200.00			
Supplies & Materials	141.00	750.00			
DART		50,000.00			
Transportation Study					25,000.00
GWTA Grant			250,000.00		
DART Grant			193,500.00		
Capital Outlay	1,499.10				
Kent County Airport	3,775.00				
TOTAL - DIVISION OF TRANSPORTATION	\$ 26,018.51	\$ 120,702.00	\$ 443,500.00		\$ -0-

EXHIBIT B

OTHER TRANSACTIONS	TOTAL FUNDS AVAILABLE	EXPENDITURES	UNEXPENDED BALANCES	DISTRIBUTION OF FUNDS		
				ENCUMBERED	CONTINUING	REVERTED TO GENERAL FUND
	\$ 31,000.00	\$ 24,622.84	\$ 6,377.16			\$ 6,377.16
	62,500.00	45,804.98	16,695.02			16,695.02
	2,500.00	409.48	2,090.52			2,090.52
	5,900.00	3,924.62	1,975.38	\$ 1,674.17		301.21
	6,200.00	588.50	5,611.50			5,611.50
	775.95	775.95				
	<u>\$108,875.95</u>	<u>\$ 76,126.37</u>	<u>\$ 32,749.58</u>	<u>\$ 1,674.17</u>		<u>\$ 31,075.41</u>
\$ (500.00)	\$ 20,475.00	\$ 19,215.56	\$ 1,259.44			\$ 1,259.44
	212,410.00	188,083.48	24,326.52			24,326.52
	500.00	384.15	115.85			115.85
	22,252.50	21,713.85	538.65			538.65
	1,500.00	200.02	1,299.98			1,299.98
	65,314.34	43,041.61	22,272.73	\$ 10,372.02		11,900.71
	6,279.00	2,613.95	3,665.05	693.06		2,971.99
	291,000.00	290,955.35	44.65			44.65
<u>\$ (500.00)</u>	<u>\$619,730.84</u>	<u>\$ 566,207.97</u>	<u>\$ 53,522.87</u>	<u>\$ 11,065.08</u>		<u>\$ 42,457.79</u>
	\$ 28,000.00	\$ 23,233.18	\$ 4,766.82			\$ 4,766.82
	5,077,068.00	4,855,428.60	221,639.40			221,639.40
	118,800.00	108,416.95	10,383.05			10,383.05
	5,000.00	3,483.58	1,516.42	\$ 586.00		930.42
	6,500.00	4,190.71	2,309.29			2,309.29
	147,850.00	94,243.16	53,606.84	39,147.92		14,458.92
	413,961.00	327,755.67	86,205.33	32,425.57		53,779.76
	282,976.00	229,319.36	53,656.64	8,071.44		45,585.20
(6,332.81)	1,456,446.27	1,059,021.29	397,424.98	207,296.29		190,128.69
	134,266.52	50,642.91	83,623.61	41,464.46		42,159.15
	13,653.00	8,305.05	5,347.95			5,347.95
	25,000.00	25,000.00				
	74,445.00	44,428.05	30,016.95	1,799.20		28,217.75
	1,000.00	263.67	736.33	688.16		48.17
	200,577.27	183,581.58	16,995.69	4,908.61		12,087.08
	50,000.00	7,010.59	42,989.41		\$ 42,989.41	
	113,401.93		113,401.93	113,400.00		1.93
8,058.71	8,167.14	2,101.90	6,065.24		6,065.24	
	479,263.73	343,332.25	135,931.48	134,848.07		1,083.41
	14,181.62	12,774.07	1,407.55			1,407.55
	100.00		100.00			100.00
<u>(600.00)</u>						
<u>\$ 1,125.90</u>	<u>\$ 8,650,657.48</u>	<u>\$ 7,382,532.57</u>	<u>\$ 1,268,124.91</u>	<u>\$ 584,635.72</u>	<u>\$ 49,056.58</u>	<u>\$ 634,432.61</u>
	\$ 20,000.00	\$ 19,166.59	\$ 833.41			\$ 833.41
	17,952.00	17,646.50	305.50			305.50
	21,514.53	20,636.77	877.76			877.76
	800.00	324.73	475.27			475.27
	5,288.88	3,965.71	1,323.17			1,323.17
	891.00	371.16	519.84			519.84
	50,000.00	50,000.00				
	25,000.00	12,317.52	12,682.48	\$ 10,547.61		2,134.87
	250,000.00	250,000.00				
	193,500.00		193,500.00	193,500.00		
	1,499.10	1,231.10	268.00			268.00
	3,775.00	3,775.00				
	<u>\$ 590,220.51</u>	<u>\$ 379,435.08</u>	<u>\$ 210,785.43</u>	<u>\$ 204,047.61</u>		<u>\$ 6,737.82</u>

**BRIDGE**  
**STRUCTURAL CONTRACTS**  
**BIDS RECEIVED**  
**JULY 1, 1971 - JUNE 30, 1972**

<u>CONTRACT</u>	<u>CONTRACT DESCRIPTION</u>	<u>BID PRICE</u>
<u>New Castle County</u>		
65-01-004	I-495 between P.C. R.R. & N.C. Ave.	\$ 3,392,616.00
68-08-004	Silverside Rd. from Philadelphia Pike to Marsh Road	8,400.00
70-04-005	Relocated Harmony Rd., Ruthar Drive to Kirkwood Highway	642,753.00
70-06-008	E. I. duPont pedestrian bridge over Concord Pike (US 202)	56,958.00
70-10-008	Resurface U.S. 13 Rogers Corner to Tybouts Corner	19,500.00
70-10-021	Wilmington Causeway Rehabilitation	394,097.00
70-12-002	Wilmington Manor @U.S. 13	154,395.00
71-04-003	I-95 over Brandywine Creek	12,500.00
71-05-003	I-495 between N.C. Ave. & Christina River	1,924,999.00
71-10-006	U.S. 13 over Shellpot Creek	24,843.00
71-10-007	I-95 over B&O RR	21,885.00
71-11-002	I-495 over Naamans Creek at Naamans Interchange	47,015.00
72-01-008	Rt. 141 (Gap Pike) over Red Clay Creek	12,960.00
72-01-009	6th Street Wilmington over I-95	11,974.00
72-02-010	Tyler McConnell Bridge, Rt. 141 over Brandywine Creek	47,860.00
<u>Kent County</u>		
70-08-001	U.S. 13 Dover Bypass	81,011.00
<u>Sussex County</u>		
72-03-013	Indian River Inlet Fishing Pier N. side	<u>35,000.00</u>
	<b>TOTAL</b>	<b>\$ 6,888,766.00</b>

**CONSTRUCTION**  
**CONTRACTS COMPLETED AND ACCEPTED - JULY 1, 1971 TO JUNE 30, 1972**

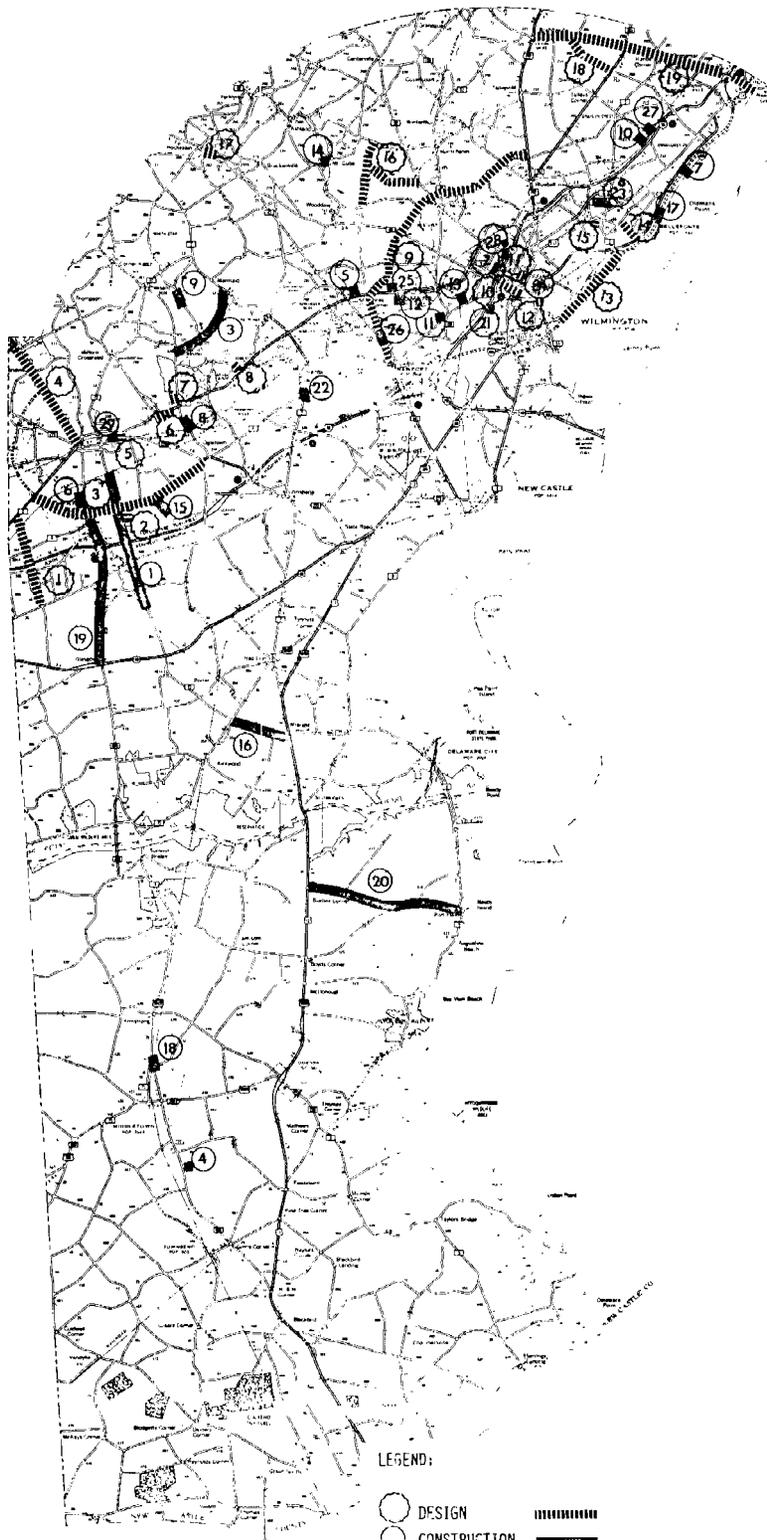
<u>CONTRACT</u>	<u>CONTRACT DESCRIPTION</u>	<u>BID PRICE</u>
<u>New Castle County</u>		
64-01-016	Road 356, S. Chapel St. Ext. - Newark	\$ 597,514.44
67-10-021	I-95 Landscaping	73,862.00
67-12-002	Linden Hill Road	1,617,975.79
67-12-005	Middletown Maintenance Garage	113,723.00
68-03-008	Delaware State Police Troop 6 Building	412,500.00
68-04-002	Route 896, I-95 to Chrysler Plant	162,975.95
68-07-005	Stoney Creek-Grading, Stabilization & Structures	1,428,829.02
68-09-008	Red Mill Road	593,209.55
68-09-013	Elimination of Bridges 199 & 200 Pike Creek Rd.	100,239.30
68-12-001	Talley Road Maintenance Garage	122,211.00
68-12-008	Richardson Park - Elmhurst Area #1	369,400.97
68-12-009	Brack-Ex	223,500.00
69-10-001	I-95 Safety Modifications	264,968.90
69-10-002	Richardson Park-Elmhurst Area-Section II	259,204.56
69-12-006	Replacement of Bridge No. 122 on Rd. No. 261	32,978.50
70-02-002	Gender Road	126,519.32
70-02-003	Wrangle Hill Rd. 46 (Rt. 13 to Rd. 378)	73,178.95
70-03-006	Hot Mix Patching 1970-71	470,400.00
70-03-012	Brandywine Hundred	203,790.00
70-04-011	Bellefonte Streets	264,057.50
70-05-003	U.S. Rte. 301 & Del. Rte. 896-Frogtown Crossing	61,887.10
70-08-002	Rte. 896 (Glasgow to I-95)	210,550.75
70-08-007	Rd. No. 2 (Biddles Corner to Port Penn)	227,438.75
70-08-010	Overhead Sign I-95 - So. Wilm. Viaduct	29,990.00
70-09-004	Delaware Rt. 7 and Delaware Rt. 4	29,769.83
70-10-012	North Hills SD-103	138,710.75
71-01-002	I-95 N.B. Bridge 1-755-505/10th St. Bridge Repairs	17,365.00
71-01-003	Demolition & Removal of Bldgs. - Prices Corner Interchange	19,995.00
71-01-004	Demolition & Removal of Bldgs. - Rte. 141 thru Newport	7,700.00
71-02-004	Blasting-Talley Rd. Hwy. Maint. Yard	3,600.00
71-06-004	Delaware Avenue Beautification	7,560.00
72-03-001	Structure Test Borings - B&O RR Bridge over Kirkwood Highways	3,400.00
<u>Kent County</u>		
68-10-014	Road 31 - Canterbury to Magnolia	333,988.05
69-12-007	Replacement of Bridge #409A on Rd. #409	66,866.54
69-12-009	Replacement of Bridge #137B on Rd. #137	51,865.50
70-03-009	Resurfacing 1970-71	159,810.00
70-03-020	Smyrna Drainage	41,089.41
70-04-004	Dirt Rds. (Nos. 200,205,230,231, & 385)	389,356.00
70-05-001	Mill Creek Bridge Rehabilitation	47,557.20
70-06-007	Milford School Sidewalk	16,884.44
71-05-002	Dirt Roads (Nos. 115,128, & 292)	203,820.82
67-08-008	Milford Bypass	5,287,141.75
<u>Sussex County</u>		
67-05-002	Fenwick Island to Bethany Beach	1,583,758.10
68-10-009	Rte. 26-Dagsboro to Shaft Ox Corner	490,957.15
70-03-011	Resurfacing 1970-71	198,895.20
70-10-002	Wharton Street - Milton	20,554.70
70-10-006	Townsend and W. 6th Street, Laurel	80,882.80
70-10-009	U.S. 13, Maryland Line to Laurel (Rd. 28)	809,527.71
71-03-001	Pedestrian Stairs at Brdg. 156 - Indian River Inlet	10,980.00
71-04-001	Intersection Improvements - Del. Rte. 141 & Melson Road	20,906.00

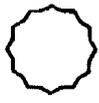
**CONSTRUCTION**  
**ACTIVE CONSTRUCTION CONTRACTS AS OF JUNE 30, 1972**

CONTRACT	CONTRACT DESCRIPTION	PERCENT COMPLETED	BID PRICE
<u>New Castle County</u>			
64-04-021	Brandywine River Bridge to Marsh Rd.	98	\$ 5,919,686.12
65-01-004	Rte. I-495 Bet. Penn Central RR & New Castle Avenue	2	16,876,227.81
65-02-003	Grading - Marsh Rd. to Harvey Rd.	98	1,663,733.38
66-09-006	McKennans Church Road	98	907,963.67
66-09-009	Paving-Concord Pike to Glenrock Dr.	98	1,924,746.48
67-01-001	Concord Pike-Foulk Rd. to Silverside Rd.	98	219,031.30
67-08-009	Centerville Road	28	679,152.95
67-10-012	Twelfth Street, Wilmington	19	426,153.41
67-12-002	Linden Hill Road	98	1,617,975.79
68-03-012	Relocation of Harmony Road	56	1,306,207.39
68-04-001	Kirkwood Highway Improvements	98	114,613.45
68-04-003	Rte. 9 - Road 381 to New Castle	32	1,025,968.49
68-07-005	Stoney Creek-Grading, Stabilization & Structures	98	1,428,829.02
68-08-004	Silverside Rd. (Phila. Pike to Marsh Rd.)	32	980,460.17
68-08-009	Landscaping, Del.Ave. to Twelfth St.	98	23,215.90
68-09-008	Red Mill Road	98	593,209.55
68-09-011	Bridge 111 on Rd. 253, Replacement	98	159,339.43
68-10-018	Casho Mill Road	13	116,743.80
68-10-019	Hercules Rd. & Lancaster Pike - Traffic Cap. Impr.	98	415,681.32
69-02-001	Prices Corner Interchange - Reloc. Rt. 141	71	3,890,000.00
69-06-003	Barksdale Road	91	400,027.74
69-06-006	I-495, Grading & Paving	46	11,907,352.08
69-11-001	Polly Drummond Hill Road	98	678,875.55
69-12-002	Apple Road Extension	91	465,489.34
69-12-007	Bridge 672 on Rd. 336 - Replacement	98	89,380.75
70-02-002	Gender Road	98	126,519.32
70-04-005	Harmony Road	6	1,796,723.57
70-04-007	Delaire	98	94,113.35
70-04-008	Newark Topics Intersections	5	396,457.10
70-04-010	Elmhurst Area	2	450,359.95
70-04-011	Bellefonte Streets	98	264,057.50
70-04-016	Christina River Bridge Substructure	91	5,329,288.20
70-06-003	Interstate Highway Rte. I-495	24	11,934,361.25
70-06-008	A.I. duPont Sidewalk Pedestrian Bridge Overpass	98	56,957.78
70-08-004	Colonial Heights	5	308,819.50
70-08-008	Structure, Reading RR over Rte. 141 Relocated	91	877,302.10
70-09-004	Delaware Rte. 7 and Delaware Rte. 4	98	29,769.83
70-10-008	U.S. Rte. 13, Resurfacing - Rogers Corner to Tybouts Corner	67	520,044.92
70-10-012	North Hills SD-103	98	138,710.75
70-10-021	Bridge 686, Wilm. Causeway Viaduct Rehabil.	0	394,097.15
70-12-002	Pedestrian Bridges over U.S. No. 13, Bridge 27 at Lincoln Ave. & Bridge 28 at Harrison Avenue	0	154,395.75
71-02-010	Intersection Improvements	0	249,439.75
71-04-004	Intersection Improvements - Rte. 2 thru Elsmere	43	240,771.70

CONTRACT	CONTRACT DESCRIPTION	PERCENT COMPLETED	BID PRICE
<u>New Castle Cont.</u>			
71-05-003	Rte. I-495, Between New Castle Ave. & Christina River	15	\$ 3,156,652.30
71-06-001	New Castle Ave. - Rogers Rd. to So. Heald Street	39	512,089.86
71-07-001	Hot Mix Resurfacing Program FY'73	0	342,103.50
71-07-008	Hot Mix Resurfacing Program FY'73	0	191,972.80
71-07-009	Barricades, Warring Lights & Related Items	0	18,915.00
71-10-006	Phila. Pike over Shellpot Creek Retaining Wall Replacement	10	24,843.50
71-10-007	I-95 over B&O RR-Drainage & Slope Repairs	98	21,885.00
71-11-002	Drainage Modifications-Bridge Culverts 798 & 799	0	48,625.00
71-12-001	Borings - Rte. 141, Brandywine Creek to Rockland Road	0	5,200.00
72-01-003	Demolition and Removal of Building	75	27,200.00
72-01-009	Bridge Repairs, 6th St. Overpass-Bureau of Maintenance	0	11,974.00
72-02-010	Tyler McConnell Bridge - Deck Repairs	45	47,860.00
72-03-001	Structure Test Borings - B&O RR Bridge over Kirkwood Highway	98	3,400.00
72-03-010	Suburban Develop. Improvements - Brandywine Hundred	0	207,908.75
72-03-011	Suburban Develop. Improvements - White Clay, Mill Creek, Pencader, Christiana & New Castle Hds.	0	227,807.00
<u>Kent County</u>			
67-10-014	Safety Improvements - Rte. 13 thru Dover	98	1,480,938.42
68-08-003	Eberton Development	70	82,201.01
69-07-003	Philchris Drive	98	38,006.10
70-03-008	Hot Mix Patching, 1970-71	85	389,965.09
70-08-011	Overhead Sign-Existing Dover Bypass	15	81,067.50
71-02-011	Intersection Imprv. - Rte. 42 & U.S. 13	7	87,838.25
72-05-002	Road Nos. 310,385,433 & Harrington Sts.	0	201,000.17
<u>Sussex County</u>			
70-10-009	U.S. 13, Maryland Line to Laurel (Rd.28)	98	809,526.71
70-12-001	Borings, State Rte. 14 (Rehoboth-Lewes)	50	13,505.00
71-05-005	Dirt Rds. 229, 313A and 367A	10	110,522.76
71-07-004	Hot Mix Resurfacing Program FY'73	5	157,586.40
72-03-013	Removal of North Indian River Inlet Fishing Pier	0	35,000.00

MAPS DEPICTING DESIGN, AND  
CONSTRUCTION PROJECTS  
FOR THE STATE  
OF  
DELAWARE





## DESIGN CODE FOR NEW CASTLE COUNTY

- 1 71-11-006 SANDY BRAE ROAD - ELKTON ROAD TO OLD BALTIMORE PIKE
- 2 72-02-006 BROOKSIDE CONNECTOR
- 3 70-12-003 DELAWARE ROUTE 4 - NEWARK BELTWAY (ELKTON ROAD TO  
OGLETOWN)
- 4 67-12-001 ROUTE 896, NEW LONDON ROAD
- 5 70-08-009 ROUTE 2, CLEVELAND AVENUE INTERSECTION IMPROVEMENTS
- 6 70-10-011 KIRKWOOD HIGHWAY, ROAD 352 TO ROAD 314
- 7 70-10-011 KIRKWOOD HIGHWAY, ROAD 352 TO ROAD 314
- 8 70-10-010 HENDERSON ROAD, ROAD 11 TO ST. MARK HIGH SCHOOL ENTRANCE
- 9 ROUTE 141 RELOCATION
- 10 SOUTH WILMINGTON CONNECTOR
- 11 70-10-001 11<sup>TH</sup> STREET & DELAWARE AVENUE, WILMINGTON
- 12 71-10-001 THIRD STREET BRIDGE REPLACEMENT
- 13 I-495 (EDGEMOOR BRANCH)
- 14 70-04-012 LORE AVENUE
- 15 72-05-001 EDGEMOOR ROAD
- 16 66-09-005 HILLSIDE ROAD (264) AND CENTERVILLE ROAD (273)
- 17 72-01-001 LANCASTER PIKE & YORKLYN ROAD, HOCKESSIN
- 18 69-11-004 GRUBB ROAD, FAULK ROAD TO NAAMANS ROAD
- 19 70-06-005 NAAMANS ROAD, U.S. 202 TO U.S. 13

○ CONSTRUCTION CODE FOR NEW CASTLE COUNTY

- 1 64-01-016 ROAD 356 - SOUTH CHAPEL STREET EXTENSION
- 2 67-10-021 I-95 LANDSCAPING
- 3 67-12-002 LINDEN HILL ROAD
- 4 67-12-005 MIDDLETOWN MAINTENANCE GARAGE
- 5 68-03-008 NEW TROOP 2A STATION AT GREENBANK CORRECTIONAL SITE
- 6 68-04-002 DELAWARE 896, I-95 CHRYSLER PLANT
- 7 68-07-005 I-495 STONEY CREEK GRADING
- 8 68-09-008 BRIDGE RED MILL ROAD WHITE CLAY CREEK
- 9 68-09-013 BRIDGE 199, 200, PIKE CREEK ROAD
- 10 68-12-001 MAINTENANCE GARAGE - FOULK ROAD - GRUBB-HARVEY ROAD
- 11 68-12-008 RICHARDSON PARK SUBURBAN DEVELOPMENT STREETS
- 12 68-12-009 ROSELL, BRACK-EX, WIDENING SUBURBAN DEVELOPMENT STREETS
- 13 69-10-002 RICHARDSON PARK ELMHURST SUBURBAN DEVELOPMENT
- 14 69-12-006 BRIDGE 122 DELAWARE 82
- 15 70-02-002 ROAD 354 - GENDER ROAD
- 16 70-02-003 WRANGLE HILL ROAD, DELAWARE 9 TO U.S. 13
- 17 70-04-011 SUBURBAN DEVELOPMENT STREET RECONSTRUCTION  
BELLEFONT STREETS
- 18 70-05-003 DELAWARE 896 & U.S. 301S INTERSECTION IMPROVEMENT  
INTERSECTION IMPROVEMENT U.S. 301 & DELAWARE 896  
U.S. 301 & DELAWARE 896 INTERSECTION IMPROVEMENT
- 19 70-08-002 DELAWARE 896 (GLASGOW - I-95)
- 20 70-08-007 ROAD 2 (BIDDLES CORNER - PORT PENN)
- 21 70-08-010 I-95 OVERHEAD SIGN - SOUTH WILMINGTON VIADUCT
- 22 70-09-004 INTERSECTION IMPROVEMENT - DELAWARE 4 - DELAWARE 7

○ CONSTRUCTION CODE FOR NEW CASTLE COUNTY (CONT.)

- 23 70-10-012 SUBURBAN DEVELOPMENT NORTH HILLS STREET IMPROVEMENT
- 24 71-01-002 BRIDGE - 10TH STREET WILMINGTON - REPAIRS
- 25 71-01-003 PRICE'S CORNER INTERSECTION DEMOLITION
- 26 71-01-004 DELAWARE 141 - NEWPORT DEMOLITION
- 27 71-02-004 BLASTING FOR TALLEY ROAD MAINTENANCE YARD, NEW CASTLE
- 28 71-06-004 DELAWARE AVENUE, WILMINGTON, BEAUTIFICATION
- 29 72-03-001 B & O RAILROAD/DELAWARE 2 BORING CONTRACT



LEGEND:

- DESIGN
- CONSTRUCTION

NOTE: SEE FOLLOWING PAGE FOR CONTRACT NUMBER AND CORRESPONDING JOB DESCRIPTION.



## DESIGN CODE FOR KENT COUNTY

- 1 72-04-001 INTERSECTION IMPROVEMENTS KENT COUNTY
- 2 71-05-004 U.S. 113 FREDERICA - LITTLE HEAVEN
- 3 69-02-021 FREDERICA/CAMDEN
- 4 71-11-007 ROAD 52/WYOMING-HAZLETTVILLE
- 5 71-11-001 DOVER BYPASS/PENN CENTRAL RAILROAD - ROAD 100
- 6 72-02-003 EXISTING DOVER BYPASS/WEBBS LANE-CAMDEN CONNECTOR
- 7 70-10-005 U.S. 13 (DELAWARE 10 - COOPERS CORNER) SAFETY  
IMPROVEMENTS
- 8 70-10-007 ROADS 156, 100 (ROAD 51 - ROAD 2)
- 9 72-04-001 INTERSECTION IMPROVEMENTS KENT COUNTY



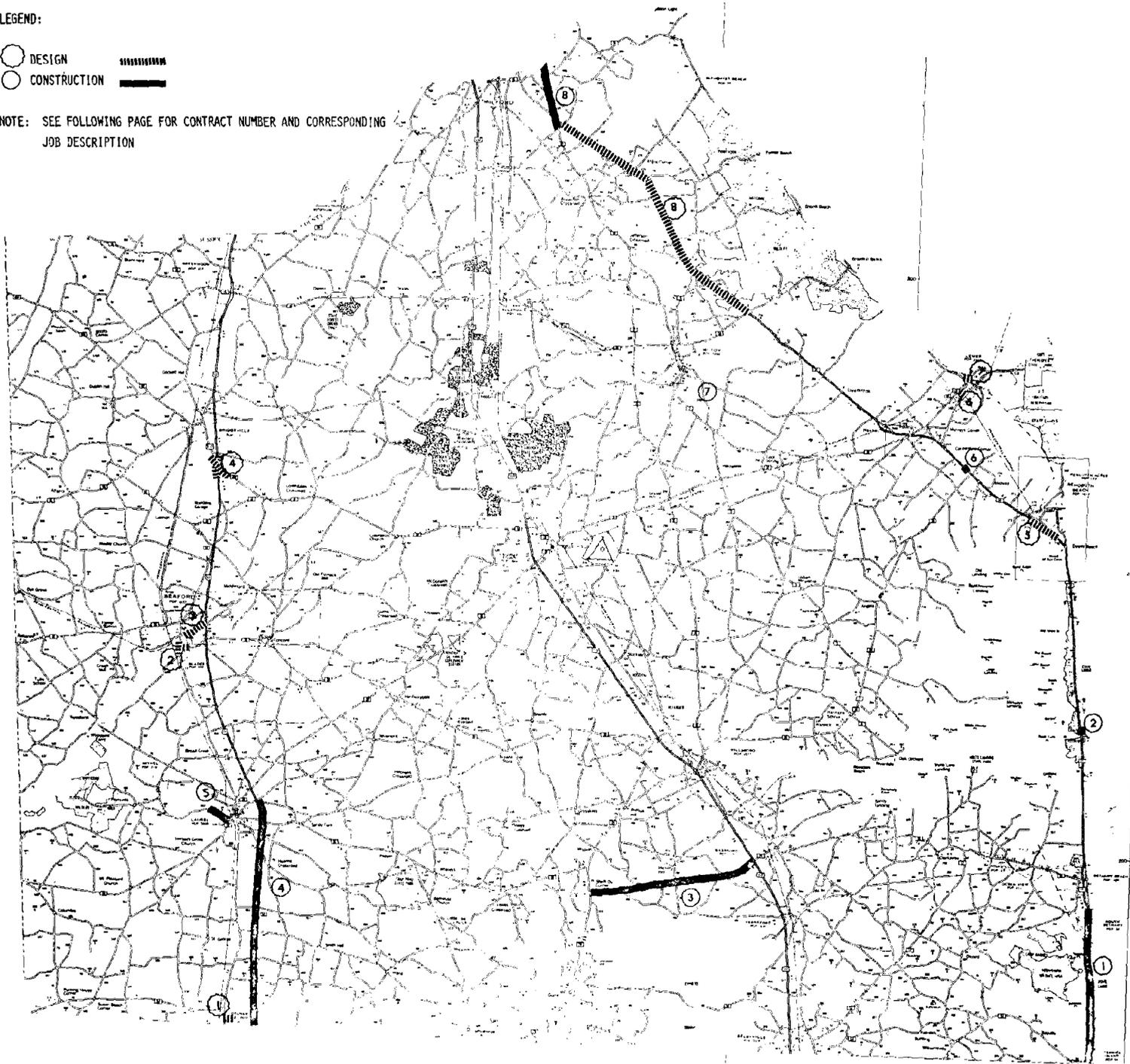
## CONSTRUCTION CODE FOR KENT COUNTY

- 1 68-10-014 ROAD 31, CANTERBURY TO MAGNOLIA
- 2 69-12-007 BRIDGE 672, ROAD 336 (OLD BALTIMORE PIKE)
- 3 69-12-009 BRIDGE 137A, B ROAD 137
- 4 70-04-004 DIRT ROADS (200, 205, 230, 231 & 385)
- 5 70-05-001 MILLCREEK BRIDGE REHABILITATION
- 6 71-05-002 DIRT ROADS (115, 128 & 292)
- 7 67-08-008 MILFORD BYPASS
- 8 70-03-020 SMYRNA DRAINAGE

LEGEND:

- DESIGN
- CONSTRUCTION

NOTE: SEE FOLLOWING PAGE FOR CONTRACT NUMBER AND CORRESPONDING JOB DESCRIPTION





## DESIGN CODE FOR SUSSEX COUNTY

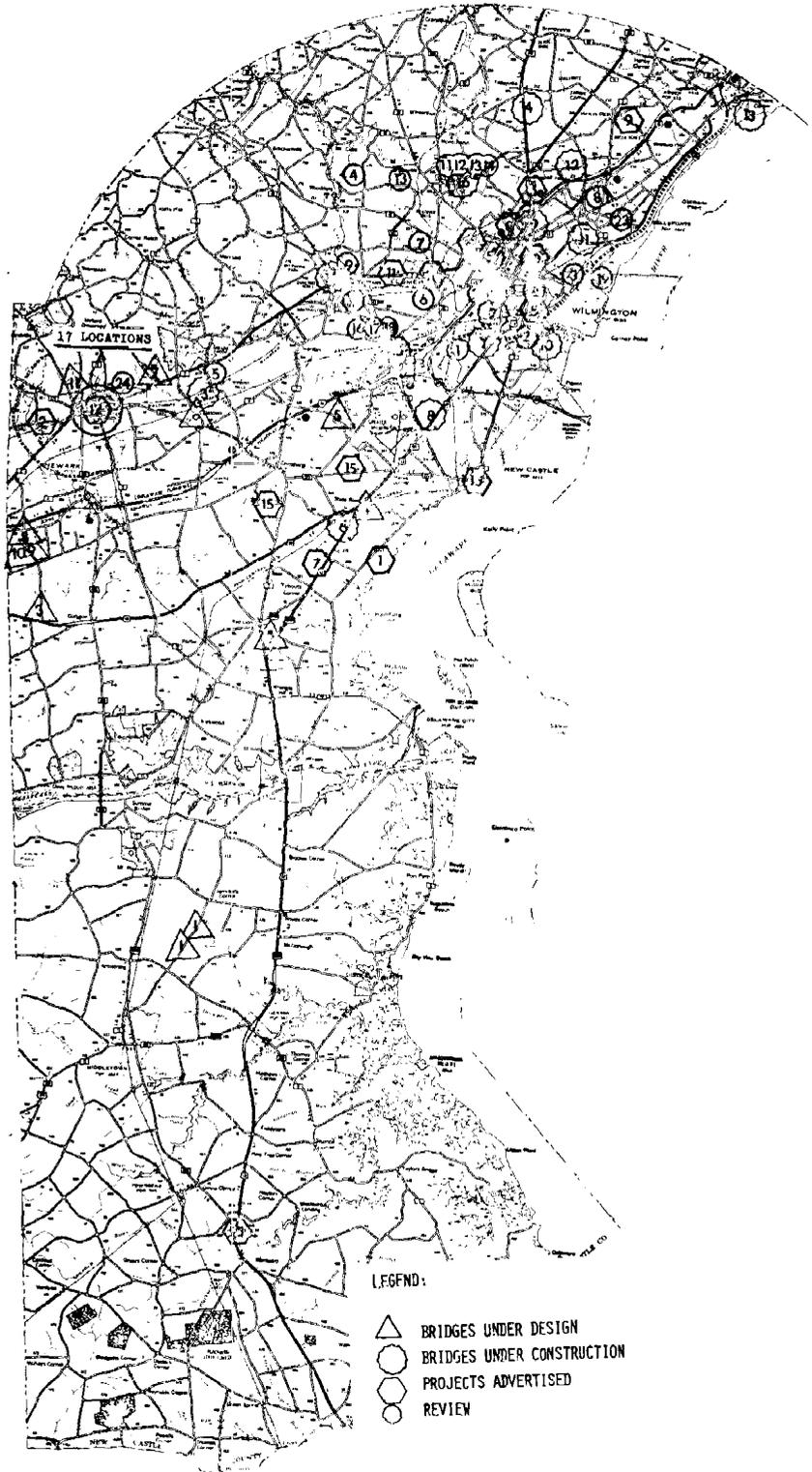
- 1 71-03-007 DELMAR LINCOLN AVENUE & 8TH STREET
- 2 71-02-012 INTERSECTION IMPROVEMENT SUSSEX COUNTY
- 3 70-10-004 ROAD 535, HIGH STREET, SEAFORD
- 4 71-02-012 INTERSECTION IMPROVEMENT SUSSEX COUNTY
- 5 67-10-015 DELAWARE 14, REHOBOTH BYPASS
- 6 70-10-003 MONROE TERRACE, LEWES
- 7 67-10-015 DELAWARE 14, REHOBOTH BYPASS
- 8 68-03-001 DELAWARE 14, DELAWARE 16 - ROAD 204

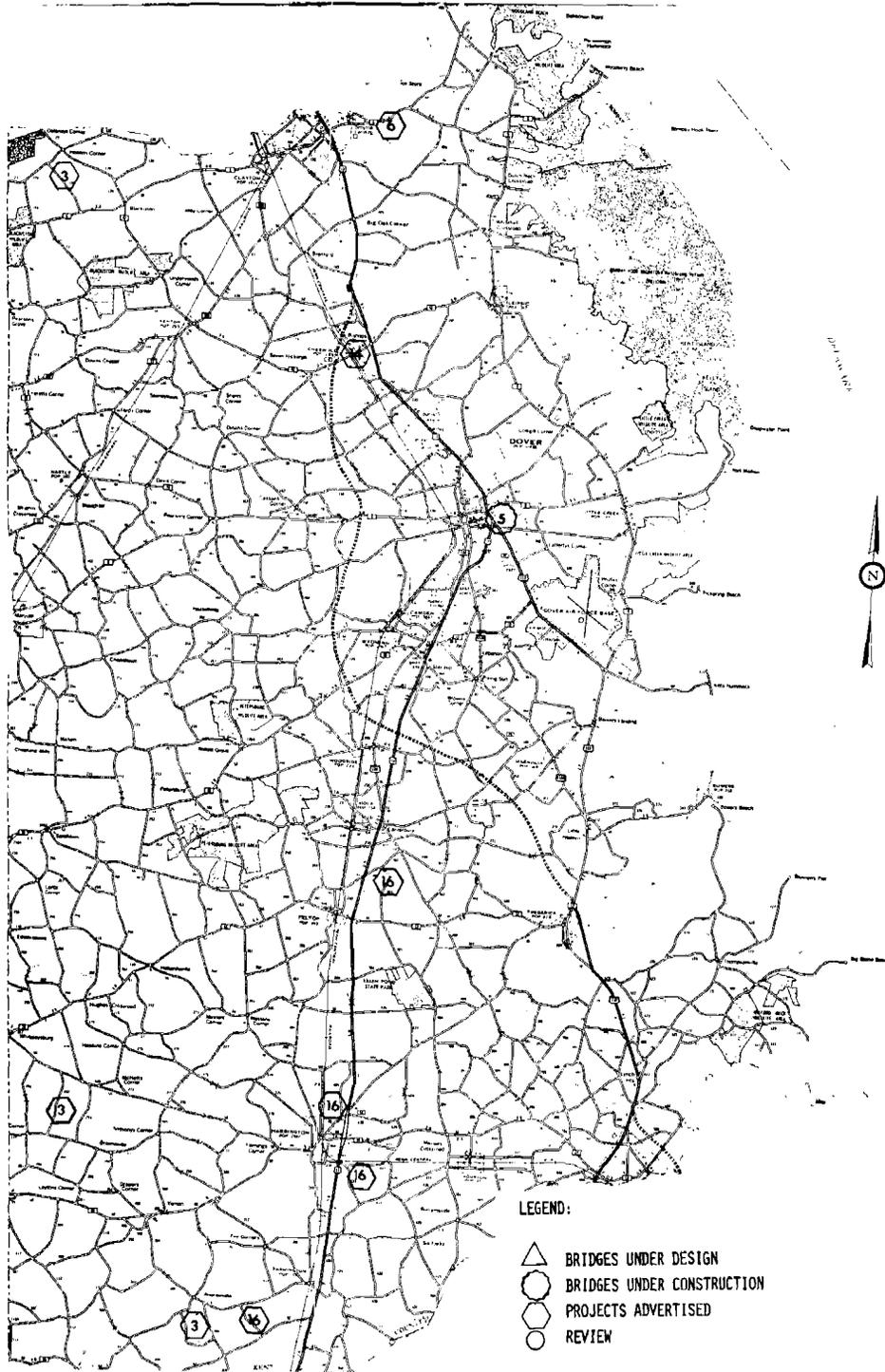


## CONSTRUCTION CODE FOR SUSSEX COUNTY

- 1 67-05-002 DELAWARE 14, BETHANY BEACH - MARYLAND LINE
- 2 71-03-001 INDIAN RIVER INLET BRIDGE PEDESTRIAN STAIRS
- 3 68-10-009 DELAWARE 26, DAGSBORO - SHAFT OX CORNER
- 4 70-10-009 U.S. 13, RESURFACING (MARYLAND LINE - LAUREL)
- 5 70-10-006 TOWNSEND - WEST 6TH STREET, LAUREL
- 6 71-04-001 INTERSECTION IMPROVEMENT MELSON ROAD & DELAWARE 14
- 7 70-10-002 WHARTON STREET, MILTON
- 8 67-08-008 MILFORD BYPASS
- 70-03-011 RESURFACING

MAPS DEPICTING BRIDGES  
UNDER DESIGN, BRIDGES  
UNDER CONSTRUCTION,  
PROJECTS ADVERTISED, AND  
REVIEW PROJECTS

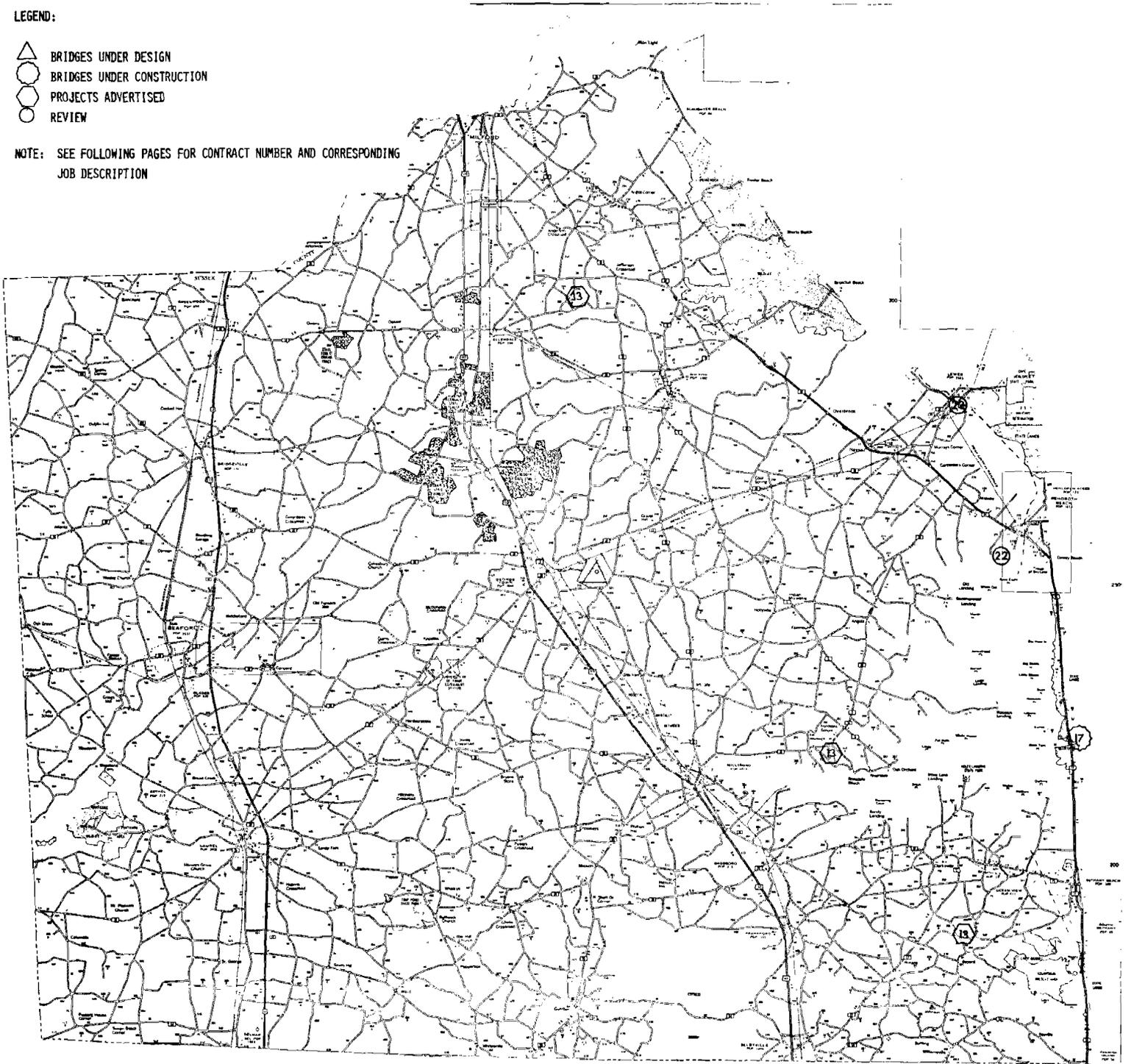




LEGEND:

- △ BRIDGES UNDER DESIGN
- BRIDGES UNDER CONSTRUCTION
- PROJECTS ADVERTISED
- REVIEW

NOTE: SEE FOLLOWING PAGES FOR CONTRACT NUMBER AND CORRESPONDING  
JOB DESCRIPTION



△ BRIDGES UNDER DESIGN (NEW CASTLE COUNTY)

- 1 70-07-002 BRIDGES 401 & 402
- 2 70-10-018 BRIDGE 314
- 3 70-07-005 BRIDGE 353
- 4 70-10-019 BRIDGE 661
- 5 71-11-004 BRIDGE 256
- 6 72-02-004 BRIDGE 230
- 7 70-07-003 BRIDGE 229
- 8 72-02-005 BRIDGE 324
- 9 72-02-005 BRIDGE 320
- 10 71-11-006 BRIDGE 325
- 11 67-12-001 BRIDGE 263



## BRIDGES UNDER CONSTRUCTION

- 1 65-01-004 I-495 BETWEEN PENN CENTRAL RAILROAD & NEW CASTLE AVENUE  
(NEW CASTLE COUNTY)
- 2 68-08-004 SILVERSIDE ROAD FROM PHILADELPHIA PIKE TO MARSH ROAD  
(NEW CASTLE COUNTY)
- 3 70-04-005 RELOCATED HARMONY ROAD, RUTHAR DRIVE TO KIRKWOOD HIGHWAY  
(NEW CASTLE COUNTY)
- 4 70-06-008 E. I. DUPONT PEDESTRIAN BRIDGE OVER CONCORD PIKE  
(U.S. 202) (NEW CASTLE COUNTY)
- 5 70-08-001 U.S. 13 DOVER BYPASS (KENT COUNTY)
- 6 70-10-008 RESURFACE U.S. 13 ROGERS CORNER TO TYBOUITS CORNER  
(NEW CASTLE COUNTY)
- 7 70-10-021 WILMINGTON CAUSEWAY REHABILITATION (NEW CASTLE COUNTY)
- 8 70-12-002 WILMINGTON MANOR U.S. 13 (NEW CASTLE COUNTY)
- 9 71-04-003 I-95 OVER BRANDYWINE CREEK (NEW CASTLE COUNTY)
- 10 71-05-003 I-495 BETWEEN NEWCASTLE AVENUE & CHRISTINA RIVER  
(NEW CASTLE COUNTY)
- 11 71-10-006 U.S. 13 OVER SHELLPOT CREEK (NEW CASTLE COUNTY)
- 12 71-10-007 I-95 OVER B & O RAILROAD (NEW CASTLE COUNTY)
- 13 71-11-002 I-495 OVER NAAMANS CREEK AT NAAMANS INTERCHANGE  
(NEW CASTLE COUNTY)
- 14 72-01-008 ROUTE 41 (GAP PIKE) OVER RED CLAY CREEK  
(NEW CASTLE COUNTY)
- 15 72-01-009 6TH STREET WILMINGTON OVER I-95 (NEW CASTLE COUNTY)
- 16 72-02-010 TYLER MCCONNELL BRIDGE, ROUTE 141 OVER BRANDYWINE CREEK  
(NEW CASTLE COUNTY)
- 17 72-03-013 INDIAN RIVER INLET FISHING PIER NORTH SIDE (SUSSEX COUNTY)



## PROJECTS ADVERTISED

- 1 ROUTE 9 - ROAD 381 TO NEW CASTLE
- 2 CASHO MILL ROAD
- 3 KENT COUNTY DIRT ROADS
- 4 DELAWARE AVENUE BEAUTIFICATION
- 5 NEW CASTLE AVENUE
- 6 SMYRNA DRAINAGE
- 7 U.S. 13 RESURFACING - ROGERS CORNER TO TYBOUTS CORNER
- 8 RESURFACING BRANDYWINE RIVER BRIDGE
- 9 SILVERSIDE ROAD
- 10 12TH STREET WILMINGTON
- 11 INTERSECTION IMPROVEMENTS - ELSMERE
- 12 NEWARK TOPICS
- 13 DIRT ROADS NOS. 229, 313A & 367A
- 14 BISHOPS CORNER, CHESWOLD
- 15 INTERSECTION IMPROVEMENTS - NEW CASTLE COUNTY
- 16 KENT COUNTY DIRT ROADS, ROADS 310, 385, 433, HARRINGTON STREET

## ○ REVIEW PROJECTS

- 1 65-01-006 I-495, BRIDGE 6-10 TO ROGERS ROAD
- 2 71-05-003 I-495, ROGERS ROAD TO CHRISTINA RIVER BRIDGE
- 3 70-06-003 I-495, STABILIZATION, CHERRY ISLAND MARSH AREA
- 4 67-08-009 CENTERVILLE ROAD
- 5 70-04-005 PHASE II, HARMONY ROAD
- 6 70-04-010 ELMHURST STREETS
- 7 70-08-004 COLONIAL HEIGHTS
- 8 70-10-012 NORTH HILLS
- 9 69-02-002 PHASE II, PRICES CORNER INTERCHANGE
- 10 69-02-003 PHASE III, PRICES CORNER INTERCHANGE
- 11 71-09-005 KENNETT PIKE RECONSTRUCTION & STRUCTURE
- 12 71-09-006 GRADING & PAVING, STATION 294± TO BRANDYWINE CREEK
- 13 71-09-007 GRADING & PAVING, READING RAILROAD BRIDGE TO KENNETT PIKE
- 14 71-09-008 GRADING & PAVING, LANCASTER PIKE TO READING RAILROAD
- 15 70-08-003 BRANDYWINE CREEK BRIDGE-SUBSTRUCTURE  
BRANDYWINE CREEK BRIDGE-SUPERSTRUCTURE  
GRADING & PAVING, BRANDYWINE CREEK BRIDGE TO ROCKLAND ROAD
- 16 71-02-007 SUBSTRUCTURE THRU NEWPORT
- 17 71-02-008 SUPERSTRUCTURE THRU NEWPORT
- 18 71-02-009 DEPRESSED SECTION THRU NEWPORT
- 19 GRADING & PAVING, CHRISTINA RIVER TO EDGEMOOR ROAD
- 20 69-02-021 U.S. ROUTE 13, FREDERICA TO PENN CENTRAL
- 21 70-12-003 NEWARK ARTERIAL, OGLETOWN TO ELKTON ROAD
- 22 67-10-015 REHOBOTH BYPASS
- 23 70-04-012 LORE AVENUE

○ REVIEW PROJECTS (CONT.)

- 24 70-08-009 CLEVELAND AVENUE - ROUTE 2 INTERSECTION IMPROVEMENT
- 25 71-10-001 THIRD STREET BRIDGE REPLACEMENT
- 26 69-11-002 SOUTH WILMINGTON CONNECTOR, I-95 TO JEFFERSON STREET
- 27 72-04-005 SOUTH WILMINGTON CONNECTOR - JEFFERSON STREET  
TO 4TH STREET