

## PROGRAMMING FOR RURAL ROAD IMPROVEMENTS

by

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Two programs are administered by the Kentucky Department of Highways for the improvement and maintenance of Secondary and Rural Roads in each county. Taxes paid by the people of the entire State into the road fund support both of these programs.

The first Legislative Act providing assistance to counties in the upgrading and maintenance of county roads was passed in 1934. One-third of the then sales tax money was earmarked to be divided by a formula among the counties. When the sales tax was repealed in 1936, the Legislature appropriated \$2 million annually from the general fund of the Highway Department for aid to counties in the construction and maintenance of roads.

In 1946, this fund was increased from \$2 to \$5 million annually. The fund was increased from \$5 to \$10 million annually in 1964. The formula for distribution to counties prior to 1964 was one-third equally among the 120 counties, one-third based on a ratio which the rural population of each county bears to the total rural population of the State, and one-third based on a ratio which the geographical area of the county bears to the total area of the State.

The following formula for distribution was adopted in 1964. One-fifth is divided equally among the 120 counties; one-fifth is apportioned among the counties on the basis of the ratio which the rural population of each county bears to the total rural population of the State; and one-fifth is allotted on the basis of the ratio that the public road mileage outside of cities, towns and urban areas having a population of 2,500 or more bears to the total mileage of such roads for the entire State. The remaining two-fifths is apportioned on the basis of the ratio which the rural area of the county bears to the total rural area of the State. In brief, this is the origin and basis for administration of the current County Road Aid Program.

The Rural Secondary Program is financed by two cents of the 7-cent State gasoline tax. This program originated in 1948 by an Act of the Legislature, placing an additional two cents tax per gallon of gasoline to be used for the construction, reconstruction and maintenance of a

system of secondary roads. During the 1966-67 fiscal year, approximately \$22 million was expended on this program. The distribution of funds for this program is at present the same as for the County Road Aid Program.

The law requires that once each year the Department of Highways give the Fiscal Court of each county an opportunity to make recommendations for projects to be incorporated into the County Road Aid and Rural Secondary Programs. These recommendations are seriously considered by the Department in the development of the programs. Proposed programs are submitted by the District Office to the Division of Rural Roads indicating the recommendations of the Fiscal Court, the District Office and interested citizens in a county.

After due consideration of these recommendations by the Division of Rural Roads and other appropriate officials in the central office, a proposed contract covering the County Road Aid Program is submitted to the Fiscal Court for approval. If the Fiscal Court declines to enter into a contract agreement with the Department of Highways in connection with the County Road Aid Program, the Department is authorized by Statute to proceed with limited maintenance of the county roads heretofore covered under this program.

The Rural Secondary Program, being the direct responsibility of the Department of Highways, does not necessitate a contract agreement with the Fiscal Court. However, proposed improvements are discussed and recommendations for projects on a priority basis are received from each county.

For the current fiscal year in District No. 3, which is composed of ten counties, approximately \$786,000 was allotted under the County Road Aid Program to assist in the maintenance and construction of county roads. This allotment is broken down as follows: approximately \$379,000 is being expended for 117 miles of construction and reconstruction and \$407,000 has been allotted for the maintenance of 1,912 miles of county roads. All construction and reconstruction projects comply with the Department's Geometric Design Standards. In the maintenance of projects under this program, an attempt is made -- so far as funds will permit -- to provide an all-weather facility for the communities served.

For the construction, reconstruction and maintenance of Rural Secondary Projects in District No. 3, approximately \$2,324,000 has been allotted for the current fiscal year. This includes the balance carried forward from the 1966-67 fiscal year and provides \$1,549,000 for 122 miles of construction and reconstruction and \$775,000 for 988 miles of maintenance. All construction projects meet requirements as outlined in

the Department's Geometric Design Standards. The funds allocated for the maintenance of the Rural Secondary System are believed to be adequate for the same standard of maintenance applied to other systems within the State network.

Even though one program is the sole responsibility of the Department of Highways and the other is State aid to roads, for which the county is responsible, these programs are closely related and are generally considered simultaneously. In past years, it is doubtful if sufficient time could be allotted by District Office personnel in formulating these programs. In the past four years, however, planning and programming personnel have been assigned on the District level, a Rural Secondary System has been adopted, and a formula has been devised which assures that a specific amount of each fund is available each year for these road purposes in each county.

I will briefly review with you the methods used in the programming of County Road Aid and Rural Secondary Projects in District No. 3. A pending file is maintained in which requests for road improvements and complaints registered by citizens of each county are placed. Projects which are segments of the Rural Secondary System, County Road Aid Program and roads for which the county assumes full responsibility are reviewed periodically, a reconnaissance is made, the party making comment is contacted and the project in which they are interested is discussed with them. Members of Fiscal Courts are contacted and furnished information as to condition, needed repairs, estimated cost, present and projected traffic counts, etc., in order that they may be able to determine the priority a project should be given in considering the over-all road program for their respective county.

Since by far the majority of counties do not employ a registered professional engineer, District Office personnel are continuously gathering field data and comparing projects that are the responsibility of the county in order that recommendations may be made to the Fiscal Court for programming on a priority basis.

All projects that have been in the past or that are presently on the County Road Aid Program have been accurately logged. These logs are updated frequently, and when a project has been brought up to a reasonably good standard, it is often recommended to the Fiscal Court that this project be deleted from the County Road Aid Program and replaced with another of approximately equal length. In this manner, the entire system of county roads eventually can be upgraded.

Approximately 50 percent of the allotment each year is applied to reconstruction of roadway and bridges. Projects on the County Road Aid

Program are frequently discussed with county officials, emphasizing the fact that although the Department of Highways is responsible for the administration of this program, the roads remain the full responsibility of the county. We believe that considerable progress has been made in getting the Fiscal Courts to recognize this responsibility.

Prior to the required annual meeting with the Fiscal Courts, a base map for each county is prepared, projects are listed according to priority established by District Office personnel, consisting of the District Engineer, Program Engineer, and Operations and Maintenance Engineers, for recommendations to the Fiscal Court. Full information as to the reasoning behind these priorities is furnished the Court.

At this meeting, members of the Fiscal Court have had ample time to consider information that has previously been given to them and, in most instances, have formed their opinion as to the priority listing of these projects in the recommended program. In most cases, an agreement is readily reached as to the combined priority of the District Office and Fiscal Court.

The necessary documents are then submitted to the Division of Rural Roads for processing through proper channels. After review, if recommendations are accepted by the Central Office, contracts are returned to the District Office to be submitted to the Fiscal Court for ratification.

By motion of the Court, the County Judge is authorized to sign the contract in behalf of the county. This is attested by the County Court Clerk and recorded. The signed contract is submitted to the Central Office along with the necessary requisitions for materials, the schedule for actually accomplishing the proposed work, and recommendations as to what portion of the work the District Office personnel feel can be accomplished by State forces or by contract.

The Rural Secondary Program as stated earlier is the absolute responsibility of the Department of Highways. The Rural Secondary System as adopted by the Department, is a part of the State-responsible network of highways. This system is composed of farm-to-market or collector roads best serving the traffic needs of rural communities. Although sufficiency rating studies on these roads of the type made on other systems in the State network have not been completed, an engineering evaluation has been made of all Rural Secondary Roads within District No. 3.

At the time this system was adopted, the Department accepted responsibility for 988 miles of roads of this classification in District No. 3. A number of miles of roadway of low standard that had formerly been county responsibility was included. As funds become available, this mileage will be upgraded to acceptable standards.

In evaluating the Rural Secondary System, the following factors are considered in giving projects a priority for extraordinary maintenance, reconstruction, survey and plans, and resurfacing of existing bituminous surfaces: type of terrain, right of way, number of residences served, average daily traffic, project length, cost, and whether connecting roads are improved. For surfacing and resurfacing, consideration is given to the percentage of base failures, edge failures, surface cracking, warped and distorted roadway section, slippery surface, raveling, and the portion beyond economical maintenance repair.

Throughout the years that the Rural Secondary Program has been in effect, it is questionable whether due consideration has been given to upgrading and reconstruction of major drainage structures falling within the limits of Rural Secondary Projects. In numerous cases, the maintenance for these structures continued to be the responsibility of the county. With the adoption of the Rural Secondary System into the State-responsible network, all structures became the responsibility of the Department of Highways. We have only recently completed a full inventory and evaluation of these structures. At present, State forces are engaged in upgrading and general maintenance work on some major structures, surveys are being made, and plans are being developed for the improvement of others by contract.

In programming Rural Secondary Projects, first consideration naturally must be given for maintenance requirements of the heretofore improved roads. The maintenance of many projects particularly those that formerly were county responsibility and do not meet required standards, is considered only on a limited basis that will provide an all-weather service to the communities served.

Detailed estimates for the proposed improvement of both County Road Aid and Rural Secondary Programs are prepared in the District Office. It has been the practice in District No. 3 that one estimate would serve for all purposes from programming up to and including construction. A summary of field information is compiled, this information is reviewed and discussed by a group composed of the District Engineer, Program Engineer, Construction Engineer, Operations Engineer, Maintenance Engineers and, if special design criteria are involved, the District Projects Design Engineer.

There is one exception to this practice. When a project requires a survey and plans, a preliminary estimate to be used exclusively for programming purposes is submitted, since it would be impossible to accurately determine quantities before plans are developed. When plans are completed to the stage that accurate quantities can be determined, a

revised estimate is then submitted. On all projects that do not require plans, an analyzed estimate is compiled at the time the project is recommended for programming and filed in the District Office. This estimate is used for all further purposes unless project conditions change, which would naturally require re-evaluation.

It is the intention to program for all available monies each year on both the County Road Aid and Rural Secondary Programs. This, however, sometimes cannot be accomplished. If there is a free balance at the time programs are formulated, it is incorporated into the new program. It is our opinion that the procedures as outlined above have enabled us to provide better recommendations for both County Road Aid and Rural Secondary Programs in District No. 3.