

POLICY AND
PROCEDURE
FOR

**UPGRADING
GRAVEL ROADS
TO PAVED**

COLE COUNTY
MISSOURI

Revised May 2001

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UPGRADING GRAVEL ROADS TO PAVED

GOAL: It is a goal of the County of Cole to promote public safety and to enhance the quality of life for all its citizens. As such, we realize the importance of having an adequate transportation network and the vital role, which it plays in achieving this goal. As a part of our goal, the County of Cole is desirous of providing paved surface roads throughout the County on an interval of not more than 1 mile. By establishing a systematic approach by which our gravel roads can be upgraded to paved, we are fulfilling an important part of this goal.

PURPOSE: To provide a formal written procedure for upgrading gravel roads to paved. To provide a policy which will maximize the available funds for the betterment of our County. To provide a means by which requests for upgrading can be reviewed uniformly and fairly for all.

METHOD OF REQUEST: Method of request shall be by petition with a minimum of seventy-five percent (75%) of affected property owners being required to sign said petition for normal consideration by the Cole County Commission. This does not preclude the County's right to initiate such improvements per the State Statute.

FORM OF PETITION: The petition shall be submitted only on forms approved by the County. A copy is attached hereto. Requests for upgrading gravel can be made singularly or in combination of roads.

MINIMUM REQUIREMENTS: Current or projected funding levels will not permit the paving of all gravel roads; therefore, reasonable minimum requirements must be adopted to determine if and when a roadway should be improved. Roadways must meet the following minimum requirements to be considered for upgrading:

1. Minimum vehicular volume of 125 Average Daily Traffic (ADT) and rising. The Department of Public Works will determine the existing ADT by conducting traffic counts.
2. Property Owners must dedicate the necessary rights-of-way (60-foot minimum) prior to upgrading.
3. Project should provide for continuity of the network or fulfill the goal of a 1-mile interval.

In unusual cases, upgrading may be justified where the minimum requirements are not satisfied but where other factors warrant upgrading such as:

1. Where a life cycle cost analysis, paved vs. unpaved, indicated a savings to the County.

2. Where roadways have unsafe conditions that are correctable by upgrading to a paved surface.

ESTABLISHING PRIORITIES: After meeting the minimum requirements for upgrading, each roadway shall be evaluated utilizing the following factors:

1. Traffic Volume: The average daily traffic (ADT) is a measure of the demand for use of the road in its present condition. Traffic volume is an indicator of what the "popular vote" results may be if the traveling public was asked to choose priorities. Thus, traffic volume will be a prime indicator of priorities. It should be noted that upgrading a gravel roadway to paved could itself generate traffic. Traffic counts will be taken over a three-day period under normal conditions.

2. Route Classification: Roads can be classified several ways. Functional classification indicates the character of use and purpose. The major types of roadway classifications for Cole County are as follows:

- a. Type I - Arterials - Connect centers of population and economic activity with each other and the State of Municipal road systems. Occur at reasonable regular intervals to collect traffic from roads of lesser importance. Carry the relatively heavy corridor traffic movements, either present traffic or potential traffic awaiting proper improvement to the route. Generally having an ADT of 1000 vehicles or greater.

- b. Type II - Collectors - Occur at reasonably regular intervals to collect traffic from local roads and channels in onto the arterial road system. Serves minor population centers not feasibly served by the arterial route. Generally having an ADT of 300 vehicles or greater.

- c. Type III - Local Roads - Provide direct access to the abutting properties. Route either is a dead end, or, if continuous, short and serves areas of low population. Generally having an ADT of 100 vehicles or less.

Functional classification is a very useful factor in establishing priorities because it is an indicator of the relative importance of a route to the overall transportation network. Another route classification that will be used in establishing priorities is the school bus route.

3. Maintenance History: Maintenance effort and costs will also be considered in establishing priorities.

Budgeting for improvements will be based on the values established by the Priority Index Equation and as set forth in the County's five (5) Year Capital Improvements Program.

PRIORITY INDEX EQUATION

The equation for the priority index is: $PI = TF + FC + MF$

Where PI = Priority Index

TF = Traffic Factor

ADT Range	Traffic Factor (TF)
0 - 60	0
61 - 100	2
101 - 150	4
151 - +	6

FC = Functional Classification Factor:
(Note! Add 2 points for School Route)

Type I = 4	(1000 + vpd)
Type II = 2	(300 -1000 vpd)
Type III = 0	(0-300 vpd)

MF = Maintenance Factor = $2 \times (\text{Maintenance Rating}/5)$

Each road will be rated by the Department of Public Works on a scale of 0 to 5 with 0 indicating low maintenance cost and 5 indicating high maintenance cost.

Other Considerations - The danger of using a mathematical calculation for establishing priorities is that it will be taken too literally. Therefore, other considerations will be taken into account in establishing priorities. They are as follows:

Combinations of Sections. There may be significant savings to the County from combining adjacent roadways into a single project.

Optimizing Budgets. Funding levels might not allow a project costing \$250,000 to be completed in a given year, but would allow full funding for two smaller projects of \$130,000 and \$120,000. Completion of the two smaller projects may be in the County's best interest.

Development Density. Consideration will be given to upgrading gravel subdivision streets where full development exists provided streets were accepted into the County Highway System prior to June 1, 1977.

Regional Balance. A program, which has regional balance, is desirable; therefore, balancing expenditures to the maximum extent possible between the Eastern and Western Districts of Cole County will be given fair consideration.

ENGINEERING DESIGN STANDARDS: A professional engineer utilizing the following standards will design each project:

1. Missouri Highway and Transportation Department Table of General Design Data.
2. Rules for Land Subdivision of Cole County, Missouri.
3. Standard Specifications for Street and Road Construction, Cole County, Missouri.

When upgrading a gravel roadway to paved, the horizontal and vertical alignment of roadway should be compatible with the anticipated running speeds. Therefore, each roadway will be reviewed at the critical locations utilizing the above referenced standards to establish its design speed. Should costs or right-of-way prohibit the upgrading of all substandard sections, warning devices will be placed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

RIGHT-OF-WAY ACQUISITION: Due to availability of funds, County Policy regarding right-of-way acquisition is as follows:

1. The County is requesting that required rights-of-way be donated by the property owners so that all available funding can be spent on the Upgrading of Gravel Roads to Paved.
2. Roadways where property owners are willing to donate the required rights-of-way will have preference in the Upgrading Program.
3. On projects that effect large numbers of the traveling public, or where safety factors warrant, the County of Cole reserves the right to acquire needed rights-of-way in accordance with the Missouri Revised Statutes.

PARTICIPATION IN COSTS - PROPERTY OWNERS: Property owners shall be responsible for donating the necessary rights-of-way to complete the improvement (min. 60 foot ROW) and for relocating all obstructions such as fencing outside of the road right-of-way.

COUNTY: The County shall be responsible for all engineering and construction costs to complete the project utilizing current County Design Standards.

ROADWAYS AFTER COUNTY PLANNING: County maintained gravel roadways which were constructed after adoption of County Planning (June 1, 1977) may be considered for

upgrading based on the following criteria: In subdivisions where over 50% of all houses are constructed, the road(s) may be upgraded to paved by adding 5" of Asphaltic Concrete (3-1/2 " of Black Base & 1-1/2 " of Type C) Surface twenty-two (22) foot in width to a prepared (firm and unyielding) subgrade. These projects shall be initiated by petition request with Commission approval being required.

PARTICIPATION IN COSTS - PROPERTY OWNERS - Property Owner(s) shall be responsible for all paving costs. This cost shall be paid to the County prior to paving road(s). All costs for relocating obstructions such as planting, trees, and fencing shall be the responsibility of the Property Owner(s). Additionally, all costs associated with removing and/or replacing paved driveways shall be the sole responsibility of the Property Owner(s).

COUNTY - The County shall be responsible for all other costs (equipment and labor) associated with preparing the subgrade and finishing grading.

ADMINISTRATIVE REVIEW OF PETITION: All petitions will be referred to the Department of Public Works for verification of property owner signatures, minimum requirements, and priority rating. Departmental comments will then be submitted to the Citizens Advisory Committee for their review. After thorough consideration of all factors, the Committee will submit its recommendations in writing to the Cole County Commission for their review and approval.

DEVELOPMENT OF FIVE-YEAR CAPITAL IMPROVEMENTS PROGRAM: The Cole County Commission will direct the Public Works Department to include their recommendations in a Five (5) Year Capital Improvement Program (CIP). Each year prior to budget hearings, the Citizens Advisory Committee will review the current capital needs and recommend to the County Commission any modifications required to the Capital Improvement Program.

Recommended for approval by the
Cole County Road and Bridge Citizens Advisory Committee
And
Cole County Traffic and Safety Advisory Board

John "Jay" Jordan, Chairperson
Road & Bridge Advisory Committee

Donald F. James, P.E., Chairman
Traffic & Safety Advisory Board

Wayne Bernskoetter
Ray Lahmeyer, P.E.
Paul LePage
Marcellus Markway
Mike Wyss
Rudolf Lemke, P.E.

C.R. "Dick" Duncan
Donald L. Neumann, P.E.
John J. Rodemann
Don Schnieders
Tim Tinnin

Adopted by the Cole County Commission this _____ day of _____, 2001.

Robert "Bob" Jones
Presiding Commissioner

Michael D. Forck
Eastern Commissioner

Eric Peters
Western Commissioner

ATTEST _____
William "Bill" Deeken
County Clerk

