

Chapter 5

TRANSPORTATION

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TRANSPORTATION PLANNING 5.1

The transportation chapter addresses issues which are vital to county residents and which affect lives on a daily basis. Transportation influences virtually every aspect of community life by moving people, goods and services throughout all communities, the region and beyond. Of equal importance, transportation plays a significant role in shaping patterns of growth, facilitating economic prosperity, and influencing the character and quality of life for county residents. For these reasons, transportation planning is a particularly important component in McDonald County's Comprehensive Plan.

- **Safety is a major priority for roads in McDonald County**

The Missouri Department of Transportation, MoDOT, clearly establishes safety as the top priority for roads in this state. Inadequate road conditions and traffic congestion contribute to accidents and represent a significant danger and cost to the traveling public. Avoiding these hazards is also a priority of McDonald County.

In a rural county such as McDonald, a great number of citizens must commute each day to jobs in towns, other counties and neighboring states. Farmers depend on these roads for their operations and emergency vehicles must have access to residents at all times. School buses and mail carriers have daily routes which also depend on roads that can be used regardless of weather.

- **Accessibility to passable roads under all weather conditions is another important priority for McDonald County roads.**

Upkeep and maintenance of road conditions are crucial to safe and passable roads and will require much of the available road funds. Weather damage also contributes to maintenance cost. There is an endless stream of projects competing for limited transportation funds. Establishing priorities for the use of road funds becomes essential.

- **It is a goal of this comprehensive plan to establish a consistent and objective method to identify and prioritize transportation projects.**

With a large percentage of road funds dedicated to safety and maintenance issues, remaining transportation funds are limited to address issues such as; relieving congestion, improving connectivity and enhancing communities. It is these issues which will need careful consideration to establish an order of priority for funding the many needed projects. This plan attempts to add predictability to that process, while remaining flexible and accountable to the citizens of McDonald County.

- **Ensure limited transportation dollars are spent in the best possible way.**
- **Increase predictability in the planning and decision-making process.**
- **Promote accountability and flexibility in the planning and decision-making process.**
- **Keep pace with growth through transportation improvements prior to or concurrent with development, rather than reactive.**

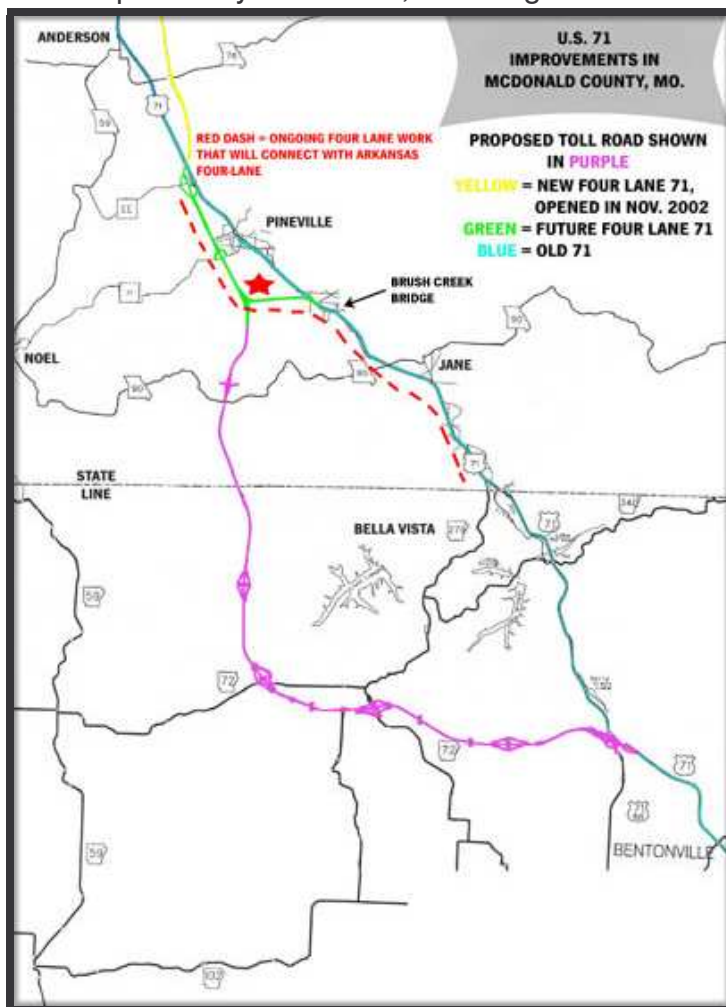
Eight hundred miles of roads network across McDonald County. The state of Missouri is responsible for approximately 200 of those miles, while the county maintains the remainder. Of the county maintained roads, 159 miles are paved, the rest are graded by county equipment. The right-of-ways of those 600 miles of roads is mowed and maintained by the county road department. Of the more than 100 bridges that span waterways, only 15 are span type bridges with the rest being low-water slabs and one functionally obsolete bridge.

STATE MAINTAINED ROADS 5.2

Approximately a quarter of the roads in McDonald County are the responsibility of the state of Missouri. The most crucial of these highways is Highway 71 which is the main North/South transportation artery through McDonald County. A 5.5 mile stretch of Hwy 71, the four-lane highway around Pineville, was opened in August of 2007 at a cost of \$46 million. That project is the completion of the four-lane highway from I-44 in Joplin to the Arkansas state line. It is the end of 12 years of construction that replaced a curvy, hilly two-lane U.S. 71, which ran through the towns of Neosho, Goodman, Anderson and Pineville, with an interstate-grade highway along most of the route, which allows traffic to travel at 70 miles per hour. The southern five miles of the highway were built to expressway standards, meaning there are at-grade crossings and stoplights on the highway south of Pineville. This is the first North/South highway that is four-lanes completely through the state of Missouri.

The next phase of construction was to be an 18-mile bypass from just south of Pineville to the west of Bella Vista, Ark., which would connect to Interstate 540 north of Bentonville, AR. Missouri is only responsible for construction of about five miles of that highway, and an interchange at Missouri Highway 90 between Noel and Jane.

Arkansas has been unable to finance their portion of the bypass, and Missouri has moved the \$54 million funding from this project as a result. That decision by MoDOT was made after an Arkansas study showed insufficient local usage would result from Arkansas' proposed toll road to finance a significant portion of construction. Much of the McDonald County traffic would continue to use the bypass rather than a new toll road, at \$1.50 for each direction, to access NW Arkansas jobs and businesses.



Other state highways in McDonald County are all two lanes, which provide North/South and East/West corridors across the county. These roads are narrow with little in the way of shoulders and are bordered by ditches. Often winding and hilly and prone to flooding, the state roads can present hazardous driving conditions. The state maintains the pavement as well as the right-of-way on these roads. There is concern that right-of-way maintenance is not up to county standards and add to the potential hazards on the state roads.

Improvements to state roads must be planned for and funded over an extended period of time. It is important for McDonald County to identify potential needs on the state roads and express concerns to MoDOT and to our state representatives as needs are identified.

COUNTY MAINTAINED ROADS 5.3

Funding for county maintained roads comes primarily through a half-cent sales tax. Funds from the state are added to that amount and together total approximately two million dollars per year. Recent increases in retail sales have greatly expanded the budget for roads. Costs of building and maintaining roads have also increased, consuming a portion of that new funding for higher cost of materials used in road construction and increase in price of fuel. This inflation would have strained the road budget were it not for the substantial increase in sales tax. The budget is limited for roads and care must be exercised in order to plan for road improvements and maintenance.



County road crews refinish chip and seal roads.

Photo courtesy of Rick Peck, McDonald County Press

As of 2007 only 159 of the over six hundred miles of county maintained roads are sealed. Improving roads in McDonald County is a priority. The McDonald County Commission established a goal to extend chip and seal pavement as rapidly as possible. However, maintenance of roads that are already paved takes precedence over new paving. Weather damage can add significant concerns for road conditions. After five or six years, resurfacing is

necessary in order to keep roads from disintegrating. In 2007, the county resurfaced 60 miles of county roads, limiting the resources for new pavement. Currently there are about 99 miles that need resurfacing, so the process is likely to continue into 2008. As the miles of paved roads increases, the portion of the road budget dedicated to upkeep will need to increase, competing for available funds.

McDonald County Baseline Information

County Maintained Roads: What we have now – 2007, 5 yrs, 10 yrs, 20 yrs.

Measures	Baseline 2007	2012	2017	2027
Miles of Paved Roads	159			
Miles of Chat Roads	2			
Miles of Dirt Roads	488.88			
Total Miles of County Roads	650.68			

In 2007 the cost to chip and seal new roads is about \$10,000 per mile of prepped road. To widen, prep, chip and seal a road costs roughly \$55,000 per mile for McDonald County. At times, it is more economical to hire independent contractors to resurface roads rather than using county road department equipment and personnel. In the summer of 2007, the cost for chip and seal in the Rocky Comfort area was \$10,300 per mile, while a contractor could be hired to do the same job for \$9,800. On new roads that haven't been sealed before, the county has made an “engineering decision” to raise the road using “shot” rock for the base. This allows for a hard road, but one that is porous and will let the water leach in order to avoid having soft spots in the road. Such quality construction will greatly increase the life span of the roads, as well as save on maintenance costs.

BRIDGES 5.4

Of the more than 100 bridges in McDonald County there are only about 15 span-type bridges. The remaining bridges are all low-water slabs, which need repair from time to time. Most slabs are in good condition. Maintaining such bridges is a substantial expense for the road budget of McDonald County and needs to be budgeted for accordingly.

MoDOT is in charge of inspecting the structural soundness of bridges as required by state law. In 2007, one bridge, the Old Iron Bridge on Cowan Ridge Road near Powell, is considered problematic by MoDOT. The tonnage limit on that bridge was dropped to three tons after an inspection by the state. In addition, a bar was placed across the bridge at seven feet to assure really heavy vehicles couldn't motor over it. That bridge is on the list of state bridges to be replaced. Because of its historic and scenic value, citizens and the County Commission are working to preserve the Historic Powell Bridge

The state grades bridges based on the deficiencies they uncover and changes are posted on the bridge itself. The state inspection team looks at the overall infrastructure of the bridge, check to see if there is seepage in the concrete bed, look for any rusting of iron components and more.

MoDOT is currently (2007) planning work on the Hwy. 43 bridge over Patterson Creek (rating of 4 out of 9) as well as another bridge on Route DD on the Newton-McDonald County line. These bridges are not necessarily unsafe, but if they were built today, they would be constructed differently.

ROAD MAINTENANCE 5.5

Poorly maintained roads cause major wear and tear on vehicles as well as causing safety hazards and inconvenience to drivers. Such maintenance takes the form of grading roads, mowing right-of-ways, and repairing pavement such as potholes and resurfacing to keep roads from disintegrating. It must be kept in mind that priorities often change.

- **The Planning Commission recommends maintenance of the roads and right-of-ways in McDonald County to take precedence in budget planning over the extending of road pavement.**

In 2007, there are eight road graders available for road maintenance and improvements as well as two mowers for maintaining right-of-way. The Planning Commission considers the purchase of adequate equipment for maintenance to be more crucial to the needs of McDonald County than paving a few additional miles of roadway and recommend giving equipment purchases priority in budget planning for the coming year.

Maintaining the right-of-way of county roads is more than an aesthetic process. It is crucial to the safety of traffic on rural roads. One community member reported that their road in late summer is so overgrown that it becomes a trail through the weeds. On such a road, it would be impossible to see oncoming traffic and difficult to pass such traffic. Other road right-of-ways are kept in pristine condition. It is apparent that roads with higher traffic count receive more maintenance than quieter, less traveled roads. It is important to understand that current levels of maintenance on busy roads should not be reduced in order to provide adequate maintenance on quiet roads. Rather, additional equipment and man-power is recommended to rectify this disparity.

- **Maintenance of all right-of-way and roads are safety and access issues which apply equally to all county roads.**

PROJECT PRIORITIES 5.6

McDonald County is primarily a rural area with limited population and financial resources. Care must be used to avoid overspending on roads beyond those financial resources. Because the needs are widespread and resources are limited, it is imperative to determine criteria to prioritize road projects.

The Transportation Committee of the Planning Commission has identified six criteria to be used for priority consideration in new road projects;

- **traffic count**
- **facilitate efficient traffic flow and reduce mileage**
- **improve safety of road**
- **accessibility in all weather**
- **planned developments**
- **enhance economic activity**

Traffic Count is a criteria often used to determine which roads receive priority attention from the Road Department for both maintenance and improvement. One flaw in this process is that poor roads are avoided in favor of better roads that are not as convenient to drivers. If the poorer roads were to receive priority consideration, then traffic count would go up on those

roads and down on the longer routes, resulting in shorter drive times and more economic travel. While traffic count is a valuable tool, consideration of efficient routing may make this a trade-off.

Efficient traffic flow would typically involve creating a “shortcut” between two already paved roads, allowing a shorter route to destinations which would save time and distance of travel. In turn, the efficient travel should result in increased safety due to reduced miles traveled. Economy of travel would also be an asset for county citizens with less gas used and lessened wear and tear on vehicles. County services would also benefit, such as school bus routes with shorter travel time for students and lower fuel costs to the county. The benefits of this priority item, “facilitate efficient traffic flow and reduce mileage”, is vital when it comes to determining priority of various road improvement projects.

The need for safety cannot be over-emphasized. When hazards are identified, prompt correction needs to be given to the problem. While this is listed under priority for paving roads, correcting safety hazards may involve limited areas of pavement rather than the whole road length. It may be a low-water bridge or some other factor which needs to be addressed.

- **Due to its importance, safety demands highest priority to correct specific problems, but does not give priority for the whole length of road paving.**

Accessibility in all weather is certainly an important consideration for road improvements. Due to extensive waterways throughout the county, flooding of roadways is a frequent problem. It is also one which results in the loss of life as drivers attempt to ford the flooded roadways and low water bridges and become swept away. Improving county roads with better low-water bridges and culverts can eliminate some hazards. It is likely that such flood prone areas will remain impassable during weather events. Where possible, flooded areas should be posted by water level markers or barricaded to prevent vehicles from being swept away.

Ice and snow also affect road accessibility during times of a winter storms. Fast response by the road department to clear roads will enable residents to get to jobs and tend their farm animals. Postal route carriers and school buses also require prompt road clearing. Having equipment, supplies and workers ready for action in the aftermath of ice and snow is a priority in colder months for McDonald County. Once again, safety and accessibility issues are recommended to take budget precedence over new road paving projects.

Planned developments come in a variety of forms, residential, commercial, public services, industrial and so forth. Proper development of infrastructure such as roads should be an integral part of the development process. In order to address these issues in detail, the Planning Commission recommends the development of regulations for subdivisions and large scale developments to address infrastructure needs. Developers will be required to construct all on-site infrastructure and may also be required to extend roads and other infrastructure to the development from existing off-site facilities.

The criteria is in place to determine priorities for road projects. The question remains how to establish a consistent and objective method to identify and prioritize transportation projects using these criteria. The Transportation Committee of the Planning Commission is developing

a rating/evaluation sheet to be used to rank the priority of road projects. This evaluation will enable decision makers to quantitatively rank projects according to the criteria presented in this chapter. This assessment sheet may be attached as an appendix to the Comprehensive Plan, and may be changed or amended as a separate document as issues and problems which are encountered need to be resolved. Projects receiving the highest numerical scores on the assessment sheets will be placed accordingly on the list of road projects until completed or removed due to problems encountered such as those listed below.

In order to properly improve a given road, adequate right-of-way may be needed for work to proceed. Eminent Domain is avoided when possible by McDonald County to acquire such right-of-way. If the necessary right-of-way is not currently available or given freely by neighboring land owners, it may become necessary to remove that road project from the priority list.

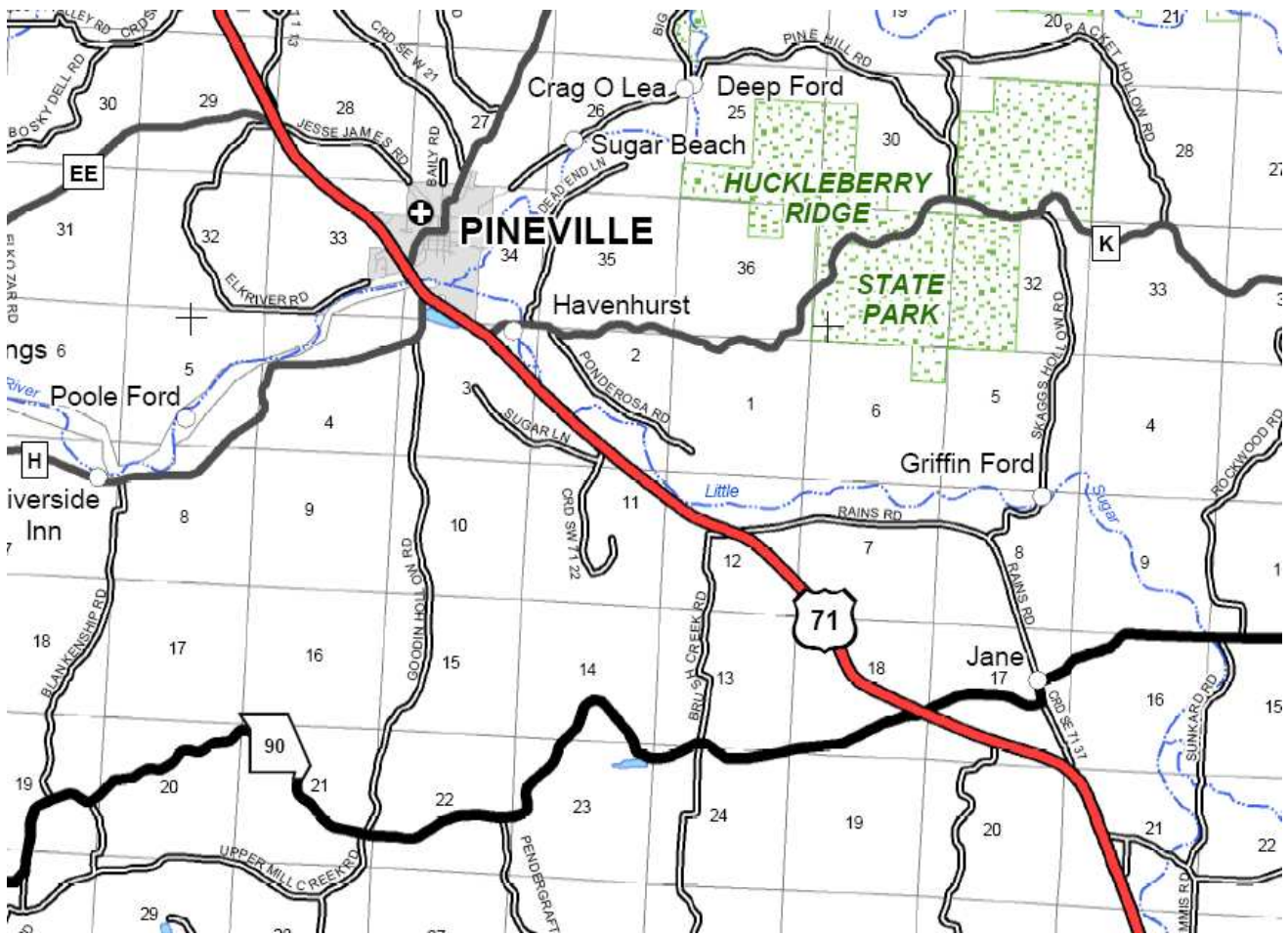
Road length and cost of project will receive consideration. While a particular road improvement may be at the top of the list for improvements, if the price of doing that project would be equivalent of completing multiple other projects also on the priority list, weight is given to the multiple projects. Very expensive projects may need to be done in stages over a period of years rather than in a single phase. Alternately, funds may be set aside over a period of years which are earmarked to a specific road improvement project. Subsequently, priorities change and any schedule of improvements is subject to change. Reasons for passing a scheduled project should be recorded on that road's assessment sheet for future reference.

Needs change, often rapidly, and decisions may have to be made on roads which have not been assessed as priority for the year. An example is the construction of a road leading to a new school. The assessment sheet is a tool for the County Commission and Road District and is a reflection of the judgment of the duly elected County Commissioners. Determination of priority of road projects always remains with the County Commissioners with the input from the Road Department. The Planning Commission encourages the School Transportation Department to be a participant in the evaluation of road needs. The assessment sheet is intended to be a tool to enable the decision making process to proceed in an accountable fashion while remaining flexible.

ROAD MAPPING 5.7

A sales tax of up to one half percent was passed in 2001 in order to provide McDonald County with 911 emergency service. One of the first steps in order to initiate that service was to map all county roads and assign street addresses to all residences. Each address was then identified with a gps location. When an emergency call comes into the 911 center, a precise location is recognized in order to quickly and efficiently dispatch help from law enforcement, fire and first responders and ambulance service.

The Missouri Department of Transportation, MoDOT, has a map of McDonald County roads available online at <http://modot.gov/newsandinfo/documents/countymaps/mcdonald.pdf> . The one page map on MoDOT's website is slow to load and at first glance has limited detail as shown below. However, using the enlarge feature enables the user to zero in with detail on the road of interest. This is an excellent resource available to McDonald County.



ROAD SPECIFICATIONS 5.8

The current specifications for road construction and improvement in McDonald County follows. These are the minimum specifications rather than maximum. For roads used by large numbers of vehicles or very heavy vehicles, the county reserves the right to require appropriate roads to match conditions under which they will be used.

McDonald County Commission

BARBARA WILLIAMS, CLERK

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COUNTY ROAD SPECIFICATIONS REVISED 3-18-07

- RIGHT OF WAY:** 50' FENCE TO FENCE.
- DITCHING:** AS REQUIRED TO PREVENT STANDING WATER.
- CULVERT SIZE:** MINIMUM 18 INCHES DIAMETER.
- ROAD BED:** 22' WIDE.
- ROCK:** 4" OF COMPACTED BASE ROCK.
- CHIP AND SEAL:** BASE ROCK TO BE OIL PRIMED
20' WIDE ROADWAY TO BE CHIP AND
SEALED TO COUNTY SPECIFICATIONS.
- DRIVEWAYS:** DRIVEWAYS WITH CULVERTS AND
ACCESSES ARE LAND OWNERS RESPONSIBILITY.
- DEEDS:** ROAD MUST BE DEEDED TO COUNTY.
- INSPECTION:** THE COUNTY COMMISSION WILL EXAMINE AND
APPROVE.
THE COMMISSION RETAINS THE RIGHT TO REJECT ANY ROAD
IF NOT SATISFIED WITH THE QUALITY OF WORK.

Larry D. Jones
Presiding Commissioner

Sam Gaskill
Eastern Commissioner

Gayle Brock
Western Commissioner