



MADISON COUNTY ILLINOIS

Long-Range Transportation Plan for 2023 - 2043

Prepared
January 2023

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Introduction

The sufficiency of a region's transportation system is critical to its economic vitality. Efficient roadways, mass transit, and related travel modes are fundamental requirements for economic development, and transportation improvements are among the most effective investments that the public sector can make to support economic expansion. Recognizing the relationship between transportation and a strong economy, Madison County established a long-range planning process to ensure that transportation infrastructure meets future needs.

While Madison County experienced its first decline in population over any decade in the past 40 years, employment has grown by 3% in the same timeframe while maintaining an unemployment rate of 5.4%. Madison County is committed to community development through economic development. There are several programs and grants available with the goal of creating more jobs within the county, the expansion of local governments' tax basis and investment in capital projects that will enhance the county's overall quality of life. A major area of development in the heart of the county is the I-55 corridor district which can be seen in Exhibit 1.

New development will exert a greater influence on travel demand and traffic conditions will reflect a growing number of licensed drivers, registered vehicles, and commercial businesses in the county. The average number of daily trips taken per resident will increase, resulting in more intensive use of Madison County's roadway and public transit systems.

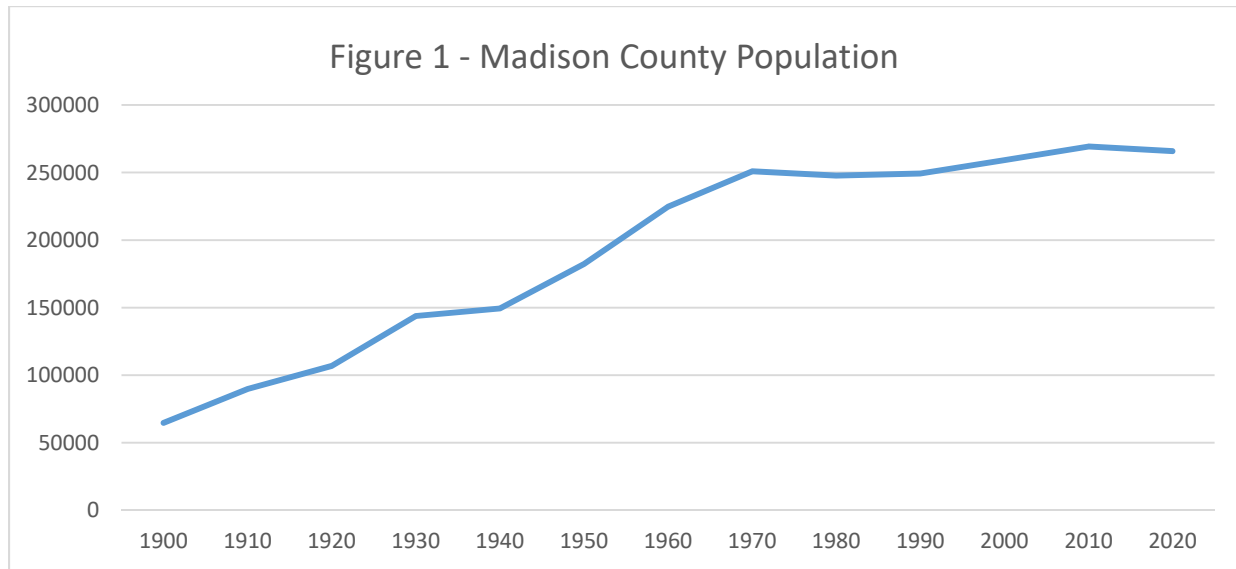
This plan focuses on long-range transportation improvements and the funding required to make capacity improvements. It makes logical assumptions for intersection and roadway capacity improvements, historical growth, evaluation of growth trends, and engineering judgment. Specific highway and bridge improvement projects are identified in an effort to estimate the total cost of improving and maintaining the County Highway System over the next 20 years. These project needs are then compared with the county's ability to fund them, given the current and projected revenue streams over the same time period.

In more urban counties, there is frequently more emphasis on public transportation, mass transit, and Intelligent Transportation Systems (ITS) as those counties reach a point where add-lanes projects have diminishing returns. Although Madison County has a sizeable population compared to others within the state, population densities are still relatively low. This means that many daily trips will still utilize single passenger vehicles while services provided by mass transit and ITS will play a very limited role in solving Madison County's transportation needs over the next 20 years. Rather, the focus of this plan is to analyze the County Highway System and suggest recommendations that will improve capacity and safety. Additionally, the cyclical nature of residential development was clearly exposed in 2008, when homebuilding stopped, land values decreased, and foreclosures exploded. This also will extend the time period when mass transit will be a viable alternative for the residents of Madison County.

COVID-19 has created another interesting wrinkle in the delivery of improved transportation networks. As more people are working from home, recent numbers for annualized average daily traffic on many roadways have remained unchanged or even decreased from data obtained 5 years ago. Madison County anticipates it may be more difficult determining which corridors are projected to see significant

increases in traffic, and correspondingly assign capital improvement dollars, as many individuals choose to work remotely on a more permanent basis.

Any study encompassing the span of 20 years will be required to integrate numerous assumptions. Madison County believes that this study, based more heavily on engineering judgment, will perform as well as those based on empirical evaluations.



Existing Highway System

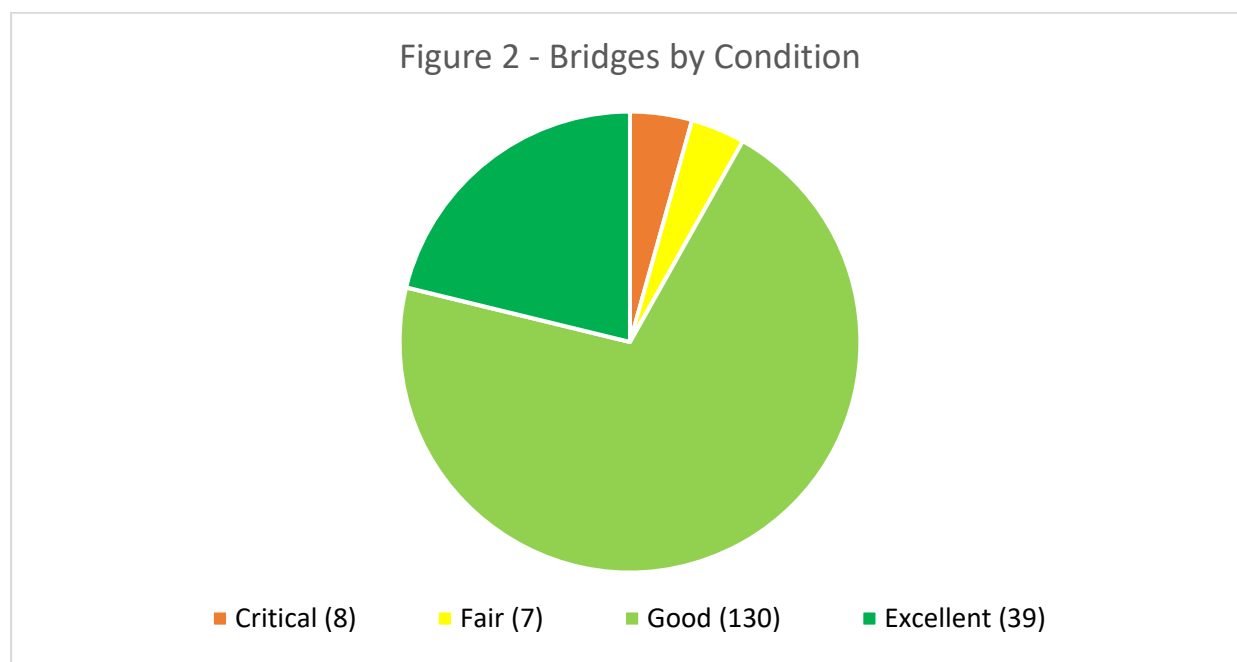
Madison County is currently responsible for 188 centerline miles of highway and 68 structures within the County Highway System. These facilities consist almost entirely of 2-lane type roadways and bridges. Madison County maintains four major roadway surfaces that reflect a trade-off between longevity and durability, and cost of installation and maintenance. Generally, Portland cement concrete is the most durable and expensive of paving materials, followed by high-type bituminous overlay on rigid base, high-type bituminous on flexible base, and low-type bituminous (oil & chip seals). There are no aggregate only roadways on the County Highway System. 63% of roadways in the County Highway System have an oil & chip seal surface. Madison County has made a strong effort to upgrade priority road segments to high-type bituminous when areas call for reconstruction. 27% of roadways in the County Highway System have a high-type bituminous overlay. This is reserved for higher ADT roadways when proper funding is available. The remaining 10% of county roadways are Portland cement concrete.

Madison County is further served by 779 centerline miles and 116 bridges on the township roadways. Nearly all roadways on the Road District Systems are oil & chip seal surface with the exception of those roadways maintained within subdivisions which trend towards high-type pavements.

Roadways are stratified into functional classifications consistent with traffic volumes, posted speed limits and significance to the regional roadway network. The County Highway System is generally in

good physical condition. From a capacity viewpoint, the condition is also good, with the exception of a few intersections and short roadway segments in more urban areas that experience congestion.

Madison County conducts regular bridge inspections for all county owned structures as well as providing inspections for township owned structures. Bridges and other structures are rated on a qualitative scale from “excellent” to “critical” according to Nation Bridge Inspection Standards. Critical structures are those in imminent need of major rehabilitation or replacement. As shown in Figure 2, 8 bridges of the 184 inspected are rated critical and have a high priority for replacement and another 7 have been given a medium priority for replacement. Meaning 92% of the bridges currently inspected by Madison County are in good or better condition.



The funding plan does not include a public transit component. This is because the Madison County government does not operate a public transit system. There however exists in Madison County a public transit system comprised of buses running regular routes, bike trails and park & ride connections, some including connection to light-rail terminals, that is run by a municipal corporation organized under the Local Mass Transit District Act called Madison County Mass Transit. Therefore, intermodal additions to the plan are not anticipated but would be evaluated if the opportunity presented itself.

Expected Deficiencies

Madison County has made good use of funding in the past to limit capacity issues due to proper planning and maintenance of facilities. Even with proper management, funding future projects may become a challenge due to a foreseeable decline in fuel taxes. Advances in transportation technology makes roads and travel more safe, but will limit the revenue through fuel taxes as there is a greater emphasis on ridesharing, fuel efficiency and electronic vehicles. Changes will need to be made in policy

and taxes to make up for these shortfalls in revenue. As this will be difficult to get public approval, voter education will be imperative to implement these necessary changes.

Autonomous vehicle technology is rapidly advancing driven by manufacturer's investment into development and consumer demand. With 93% of auto fatalities caused by human error, safety is a major factor in the push for autonomous vehicles (AVs). Planning for the number of AVs on the road and their safe integration will be difficult due to a number of uncertainties, but it is necessary. Upgrades will need to be made to pavement markings, signs, signals, and intersections. The impact on the County Highway System will likely be minimal in the beginning, but with time, these costly upfront upgrades will need to be made system wide, not just in the more urban areas. The Federal Highway Administration as well as many state Department of Transportations have conducted studies and are planning future improvements geared towards AVs with the belief that by 2036 the majority of cars sold will be self-driving and many urban cities will restrict human drivers in certain areas.

Current & Anticipated Transportation Funding

There are several revenue sources that will help fund the needed capital improvements and provide maintenance for transportation infrastructure on the County Highway System. They are described in some detail herein. Please refer to Exhibit 2, Historical Highway Department Funding, and Exhibit 3, Financial Analysis of 2023-2043 Transportation Plan, for more information.

Motor Fuel Tax (MFT): Madison County, like all other counties in the State of Illinois, receives MFT based on the number of registered vehicles in the county. According to Illinois Secretary of State, there were 237,000 registered vehicles in Madison County in 2020. The taxes collected can be used for both capital improvements and maintenance. In 2019, the Illinois Legislature approved the Rebuild Illinois Program, which effectively increased the State Motor Fuel Tax from 19¢ per gallon to 38¢ per gallon, and indexing the tax to inflation. Additionally, a bonding component of this program provided a one-time additional MFT infusion of \$9.17 million dollars to Madison County over the previous 3 years of the program. This was the first increase to MFT in almost 30 years, and will help to fund needed improvements on both the State and Local Highway Systems. Beginning in FY 2022, Madison County was able to realize the expenditures of Rebuild allotments, causing the dramatic increase in MFT funding shown in Exhibit 2.

County Highway Fund: The County Highway Fund is a levy placed on the appraised valuation of private properties in the county. The maximum allowable rate for the tax is 0.10%. The fund itself is similar to the county's general levy but is earmarked only for use by the Highway Department. Salaries, administration overhead, equipment and its upkeep, training, and other operational expenses come out of the Highway Fund. Only a small portion of this fund is used for county highway maintenance projects annually. This fund is represented in the annual revenue for the county in Exhibit 2, but the portion used for maintenance projects is the only amount included in the total capital funds.

County Bridge Fund: The County Bridge Fund is a statutorily discretionary levy placed on the appraised valuation of private properties in the county. The maximum allowable rate for the tax is 0.05%, however the actual rate fluctuates year to year depending on the number and size of proposed projects on the 5 year plan. At first glance, the name of the fund would imply these tax revenues would be used

solely on county structures, however the fund's purpose is actually to provide aid in replacing township structures within the county.

The cost of bridges has increased dramatically over the past 10 years, far outpacing the increases in pavement construction, and dwarfing the increases in the consumer price index. This fund, along with the Motor Fuel Tax Fund and Matching Fund, has historically been the mainstay for bridge rehabilitation and replacement on the County Highway System.

Although Madison County has only 68 bridges on the County Highway System, the county is frequently petitioned by Townships to participate in bridge projects on the Township System (116 bridges). By statute, the county is responsible to fund these projects 50%/50%, but the county passed a resolution in 1974 to fund them 75% County/25% Township. The annual cost of the joint bridge projects is relatively small, with occasional upward spikes. The county is able to leverage the State's formula driven Township Bridge Program to obtain partial reimbursement for structures constructed on the township systems utilizing County Bridge Funds. However, the statute set amount remains unchanged at \$15 million for disbursement among the entire state and Madison County realizes a very small allotment averaging around \$165,000 a year.

Matching Fund: The Matching Fund is a statutorily discretionary levy placed on the appraised valuation of private properties in the county. The maximum allowable rate for the tax is 0.05%, however the actual rate fluctuates year to year depending on the number and size of proposed projects on the county's 5 year plan and East-West Gateway's Transportation Improvement Plan (TIP). Madison County has used these funds to great affect historically. The Matching fund is used to fulfill the local match requirement imposed by federal funding regulations. Typically, when Federal funds are applied to a project, they require some percentage of local funds to be contributed to the project. This percentage may differ from fund to fund, but usually requires 1 local dollar for every 4 federal dollars granted (80/20). Without the ability to match the local requirement, our region would experience a great loss of federal dollars.

The Matching fund has experienced a roller coaster ride over the past 20 years, going from \$1.3 million in realized levies in 2000 to \$2.3 million in 2008, and decreasing to \$700,000 in 2020 and 2021. If at any time the Federal program funding grows, so must the Matching fund to continue to ensure municipalities, the county and other governmental entities can leverage Federal money to our region.

Federal Funds: When the county receives Federal funds, the most typical form are Surface Transportation Program – Rural (STP-R) and Surface Transportation Program – Bridge (STP-Br). STP-R funds are allocated to Madison County based on a formula that includes land area, population and mileage. STP-Br funds are allocated to Madison County based on the square feet of deficient and/or functionally obsolete bridge deck area. Funds can be used for rural county highways and also for bridge rehabilitation and reconstruction. The funds are not distributed to Madison County, but instead are held and administered by the Illinois Department of Transportation. Funds can only be spent on projects on the federal aid system and which meet federal eligibility rules. Other Federal funds exist through competitive grants but are not received regularly enough to be included in this long-range plan.

State Funds: At this time there are no formula derived State Fund allotments outside of MFT.

Madison County selectively pursues competitive Federal and State grants. The most commonly awarded being Grade Crossing and Protection Funds (GCPF). Occasionally Madison County will apply for and receive competitive funding awards from the Congestion Mitigation and Air Quality Improvement Program (CMAQ) or Highway Safety Improvement Program (HSIP).

Large scale projects regularly take years to plan and construct. The current economic environment has quickly caused cost estimates to be outdated and funds earmarked for future projects have had to be repurposed to see current projects to completion. If funding increases do not keep pace with inflation, it is possible county projects will need to be put off while funds are collected to ensure projects do not get abandoned. This waiting period will likely stretch in place infrastructure beyond their useful life causing a degradation of ride quality and levels of service.

Anticipated Improvements

This section presents a detailed plan for strategic improvement of the roadway network in Madison County. The projects included in this plan were chosen selectively through a process that elicited the observations of residents, local officials and technical personnel in the county. In this way the LRTP embodies the desires of individual communities relative to the future roadway system and presents a unified perspective of the county's needs in the region.

Intersection Improvements: As the volume of vehicles entering an intersection increases, the need for turning lanes, traffic signals or roundabouts increases. Turning lanes and signals generally provide a greater level of safety for the motorists, while roundabouts can create an even greater level of safety and eliminate maintenance and electrical costs that are needed for traffic signals. Capacity of the intersection generally increases with the implementation of these improvements.

The cost of an intersection improvement can vary greatly depending on many factors. For the purposes of this study, historical costs of 3-leg and 4-leg intersections were used as a baseline, with other adjustment factors assigned where needed.

Capacity Improvements: For the purposes of this study, capacity improvements are defined as "add lane" improvements. In general, 2-lane roadways and bridges can accommodate a limited amount of traffic. As roadways approach 15,000 vehicles per day, consideration should be given to a capacity improvement. Capacity improvements are identified on several county highways where impending growth will dictate the need for additional lanes.

Bridge Improvements: These improvements are self-explanatory. Bridges that have reached the end of useful life, or bridges that require capacity improvements must either be rehabilitated or replaced.

A list of anticipated improvements over the next 20 years has been included in this funding plan as Exhibit 4. These projects are also represented pictorially on Exhibit 5. The county's share of costs associated with these projects are in future dollars, assuming 2% annual inflation, and will rely on continued federal and state participation in funding.

It is important to note that this plan assumes financial cooperation of future developments in the capacity improvements of several roadways and resurfacing projects, county wide. All new developments within the County Highway System require a traffic impact study to be conducted and submitted to the county for review. The State and many other municipalities also require similar studies to be performed. Should the studies reveal the need for a capital improvement, whether it be capacity, safety, etc., the developer is required to complete the improvement with their development. This ensures that the county, State and municipalities will not need to extensively plan for future developments as funds will not need to be included in budgets. This does not mean that Madison County will not aid in new development, as many times the county will help to source funding for the improvement. Southwestern Illinois Metropolitan and Regional Planning Commission also provides support in funding capital improvements for a new development, especially when the development will result in creating jobs for the region.

Market forecasting performed by Madison County Planning & Development has indicated that several routes from northeast of Edwardsville to north of Troy may experience rapid residential development during the course of this study. Major routes needing improvements in this area are Fruit Road, Pin Oak Road, Blackburn Road, and Staunton Road. It is believed that Fruit Road will be the main corridor utilized to access Edwardsville while Staunton Road from Fruit Road to IL-143 will see a surge of ADT as the main access route to Interstate 55.

No one can know with certainty to what degree Madison County will have to participate in the listed projects. Projects along state routes, which are initiated by the State, are frequently paid for by the State. Similarly, projects initiated by a local agency are frequently paid for by the local agency. There is also a significant degree of uncertainty with the level of funding to be provided by municipal developments. Madison County is currently working with municipal agencies to address some of these municipal issues. In general it is assumed that underestimated costs on one project may well be balanced by overestimated costs on another project.

Maintenance & Pavement Preservation

Capital improvements to the County Road and Bridge System cannot be built and forgotten. Ongoing rehabilitation and maintenance is required each year to keep the system operating at its greatest efficiency. The cost of maintaining the system is included in the capital expenditures in Exhibit 7.

The estimated life of a flexible pavement, before it needs some type of maintenance or rehabilitation, is about 20 years. In Madison County's case, with approximately 170 lane-miles of pavement, about 20 lane-miles (10 centerline miles) should be rehabilitated each year just to keep the system operational. The approximate cost of rehabilitating 20 lane-miles of pavement is \$2,500,000 in 2022 dollars. It is known that these costs will grow over the next 20 years due to inflation. For the purposes of this study, an annual increase in expenditures of 2% has been assumed. This increase is approximately the same as the 15-year historical increase in the Consumer Price Index (1.63%), shown in Exhibit 6. Only a 1% growth in MFT revenues is used because of the short time MFT has been indexed to inflation. See Assumptions below.

Additionally, the county high-type pavement mileage is expected to increase from 85 current centerline miles to approximately 153 centerline miles in 2043 if all improvements identified in Exhibit 4 are completed. Annualized over this 20-year period, it means that the highway system will grow an average of 2% per year. Therefore, the assumption of 2% annual increase in maintenance cost may be underestimated for the purposes of this study.

Assumptions

As with any long term study, many assumptions must be made to reach a congruent conclusion. This study is no different. But in an effort to provide greater insight to the conclusions drawn in the final analysis, a list of some of the major assumptions is provided here.

- Madison County will continue to maintain its highway and bridge system, without adding or deleting significant facilities from other agencies.
- Madison County population will rebound and climb to approximately 270,000.
- The Madison County Board will continue to levy property taxes for the County Highway and County Bridge Funds. Increases will not be less than an average of 1% in the Highway Fund over the period of this study.
- Federal funds will continue to be made available to Madison County through Federal Infrastructure Bills and the State of Illinois for improvements on the federal aid network.
- Inflation for road and bridge construction will not exceed an average of 2% over the period of this study. Inflation has averaged approximately 1.63% per year over the past 15 years in the Midwest Urban Area (see Exhibit 6). The current high inflation percentage will decline and will average out in the years to follow.
- No new revenue sources will become available, other than those under consideration as part of this study.
- Developers will pay for new intersections and capacity improvements on county highways that will serve their developments or source funding outside of county funds.
- The life cycle costs of maintaining flexible pavements will not change dramatically due to technological advances.

Analysis

Madison County is now receiving significant Motor Fuel Tax revenues compared to years prior to 2019. While COVID-19 affected gas sales and consumption in and around 2020, the previous few years have shown the county can continue to expect tax revenues from MFT around \$6.4 million. Revenues from the increase in Motor Fuel Tax have had a significant and dramatic impact on the ability of Madison County to provide improvements to its citizens. MFT projections are included in Exhibit 7.

The significance of these funds cannot be overstated. Several major corridors throughout the county are now funded in this plan due to the Rebuild Illinois Program. Starting in FY2023, realignment projects along Lebanon Road and Staunton Road will go to letting with completion dates expected to be some time in 2025. Along with the realignment projects, many vital resurfacing projects will be completed

using these funds. Madison County is receiving \$27 million in MFT funding towards the costs associated with these projects that total \$31 million, reducing the local funds required to just over \$4 million.

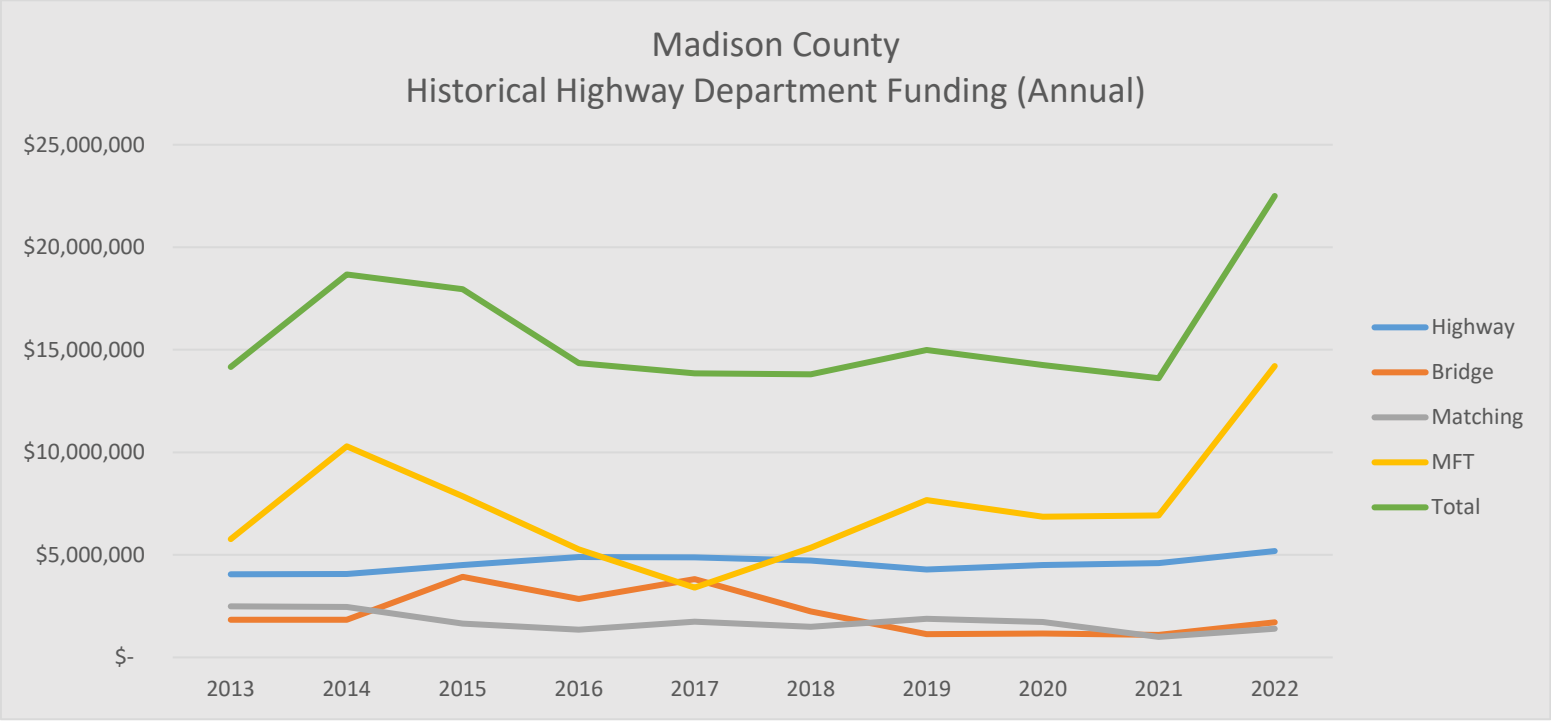
The list of needed projects (Exhibit 4) also assumes that the county will receive financial participation from other agencies, and federal and state funding on key components of the plan.

Averaged over 20 years, it is estimated that revenues will exceed expenditures by \$1.5 million a year, with an approximate \$29 million surplus at the end of this plan. However, so many uncertainties exist in the compilation of a long-range transportation plan, that this surplus could easily be unrealized due to any number of factors. Nevertheless, it is important that the Madison County Board remain vigilant in awareness of the need to continue pursuit of funding or levy adjustment for needed transportation projects.

Conclusion

Based on the information contained in this study, it is expected that existing revenue streams should address the majority of vehicular infrastructure needs over the life of this study, assuming Madison County continues to receive State and Federal assistance and they require developers to fund the majority of capital improvements that become necessary due to new residential subdivisions and other commercial traffic generators.

If a significant amount of new highways and bridges are added to the County Highway System, or if intermodal additions are considered, the county may need to source additional revenue to fund these components.



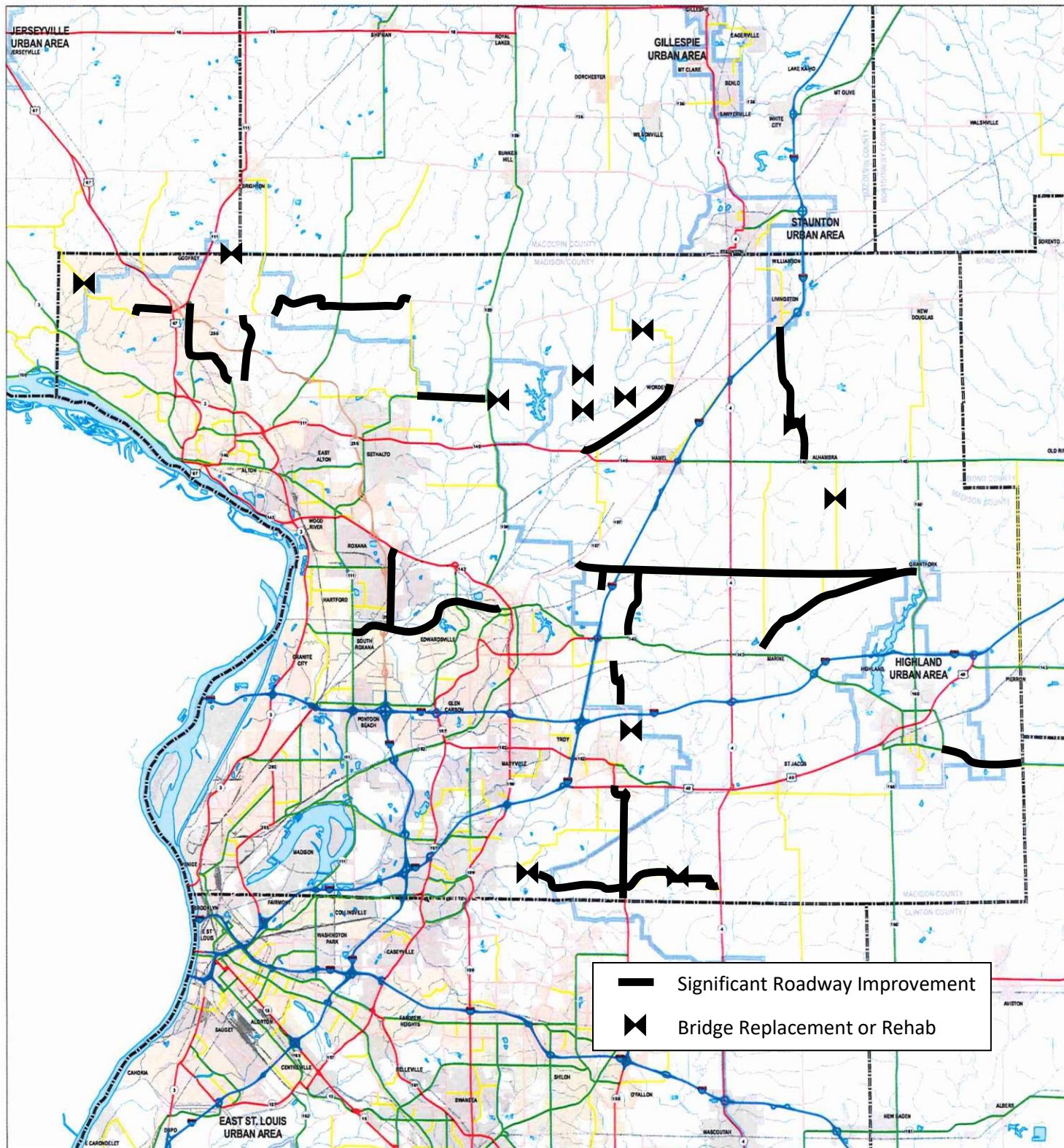
Madison County Highway Department
Historical Tax Levy Data

Year	County Bridge		County Highway		Matching		Total Extension
	Rate	Extension	Rate	Extension	Rate	Extension	
2000	0.0500	\$1,306,786.42	0.1000	\$2,613,572.84	0.0500	\$1,306,786.42	\$5,227,145.68
2001	0.0493	\$1,377,097.79	0.0985	\$2,751,402.28	0.0493	\$1,377,097.79	\$5,505,597.86
2002	0.0399	\$1,199,818.68	0.0948	\$2,850,697.01	0.0399	\$1,199,818.68	\$5,250,334.37
2003	0.0300	\$979,004.33	0.0749	\$2,444,247.47	0.0300	\$979,004.33	\$4,402,256.13
2004	0.0305	\$1,036,618.91	0.0761	\$2,586,449.16	0.0305	\$1,036,618.91	\$4,659,686.98
2005	0.0411	\$1,535,835.59	0.0557	\$2,081,412.22	0.0411	\$1,535,835.59	\$5,153,083.40
2006	0.0392	\$1,599,218.22	0.0536	\$2,186,686.13	0.0392	\$1,599,218.22	\$5,385,122.57
2007	0.0376	\$1,664,173.81	0.0514	\$2,274,961.00	0.0376	\$1,664,173.81	\$5,603,308.62
2008	0.0376	\$1,728,032.95	0.0515	\$2,366,853.64	0.0500	\$2,297,916.16	\$6,392,802.75
2009	0.0373	\$1,730,576.46	0.0605	\$2,806,967.18	0.0287	\$1,331,569.55	\$5,869,113.19
2010	0.0390	\$1,799,147.60	0.0633	\$2,920,154.96	0.0300	\$1,383,959.69	\$6,103,262.25
2011	0.0385	\$1,873,935.79	0.0690	\$3,358,482.32	0.0296	\$1,440,740.24	\$6,673,158.35
2012	0.0428	\$2,065,322.22	0.0724	\$3,493,675.90	0.0442	\$2,132,879.48	\$7,691,877.60
2013	0.0457	\$2,172,251.84	0.0772	\$3,669,537.03	0.0472	\$2,243,551.14	\$8,085,340.01
2014	0.0500	\$2,333,637.93	0.0944	\$4,405,908.41	0.0289	\$1,348,842.72	\$8,088,389.06
2015	0.0455	\$2,150,284.94	0.0900	\$4,253,310.87	0.0257	\$1,214,556.55	\$7,618,152.36
2016	0.0420	\$2,052,438.65	0.0871	\$4,256,366.81	0.0207	\$1,011,559.05	\$7,320,364.51
2017	0.0399	\$1,995,082.47	0.0798	\$3,990,164.95	0.0150	\$750,031.00	\$6,735,278.42
2018	0.0260	\$1,345,111.08	0.0782	\$4,045,680.24	0.0196	\$1,014,006.81	\$6,404,798.13
2019	0.0195	\$1,045,057.19	0.0755	\$4,046,247.06	0.0190	\$1,018,260.85	\$6,109,565.10
2020	0.0186	\$1,047,111.25	0.0775	\$4,362,963.53	0.0125	\$703,703.79	\$6,113,778.57
2021	0.0177	\$1,045,020.61	0.0739	\$4,363,108.63	0.0119	\$702,584.47	\$6,110,713.71

County Highway	2023-2043 Anticipated Capital Improvements w/ Termini		Estimated Total Cost (County Share Only)
3 - Renken Road	Resurfacing	IL 159 to Prairietown	\$ 300,000
	Resurfacing	Prairietown to IL 4	\$ 700,000
4 - Humbert Road	Resurfacing & Sidewalks	City of Alton limits to Bethany Ln	\$ 5,000,000
6 - Pocahontas Road	Resurfacing	Marine Rd to IL 160	\$ 3,500,000
13 - Summerfield Road	Bridge Replacement over Lake Fork Creek		\$ 450,000
	Bridge Replacement over Little Silver Creek		\$ 600,000
14 - Sherry Creek Road	Bridge Replacement over Sherry Creek		\$ 1,000,000
17 - Seminary Road	Resurfacing	Seiler Rd to Macoupin County	\$ 300,000
	Reconstruct Shoulders	Harris Ln to Seiler Rd	\$ 2,000,000
19 - Moreland Road	Resurfacing	IL 143 to IL 140	\$ 340,000
	Resurfacing	Birch Dr to Buchta Rd	\$ 250,000
19 - Wanda Road	Resurfacing	New Poag Rd to IL 143	\$ 2,400,000
21 - Staunton Road	Reconstruction	Michael Dr to Oakland Hills	\$ 2,000,000
	Construct Sidewalk	Wildewood Dr to McGaughey St	\$ 200,000
	Realignment	Maple Grove Rd to Goshen Rd	\$ 6,200,000
	Realignment	Goshen Rd to IL 143	\$ 3,000,000
	Reconstruction	IL 143 to Fruit Rd	\$ 6,000,000
	Bridge Replacement over Wendell Branch		\$ 1,500,000
22 - Moro Road	Bridge Replacement over Paddock Creek		\$ 1,500,000
	Resurfacing	Moro to IL 159	\$ 1,400,000
23 - Quercus Grove Road	Bridge Replacement over Cahokia Creek		\$ 2,200,000
23 - Possum Hill Road	Bridge Replacement over Sherry Creek		\$ 1,300,000
24 - Dauderman Road	Bridge Replacement over Sugar Fork		\$ 450,000
27 - Alhambra Road	Resurfacing	Veterans Memorial Dr to IL 140	\$ 3,500,000
	Bridge Repair over Silver Creek		
31 - Ellis Road (Co. Rd. 400 N)	Bridge Replacement over Buckeye Branch		\$ 450,000
32 - Lebanon Road	Bridge Construction over CSX Railroad		\$ 2,350,000
	Reconstruction	Clay School Rd to IL 4	\$ 12,800,000
	Bridge Replacement over Silver Creek		\$ 1,200,000
40 - St. Rose Road	Resurfacing	Iberg Rd to Baumann Rd	\$ 1,400,000
44 - Fruit Road	Reconstruction	IL 157 to IL 160	\$ 17,000,000
	Bridge Replacement over Sand Creek		\$ 450,000
46 - Brakhane Road	Resurfacing	IL 140 to Worden	\$ 1,350,000
49 - Wieseman Road	Bridge Replacement over W Fork Cahokia Ck		\$ 2,200,000
50 - Troy-O'Fallon Road	Widening	US 40 to County Line	\$ 26,000,000
	Resurfacing	US 40 to Meadowbrooke	\$ 100,000
	Resurfacing	Meadowbrooke to County Line	\$ 520,000
52 - Seiler Road	Realignment	Wood Station Rd to Dorsey	\$ 20,000,000
	Resurfacing	Seminary Rd to Wood Station Rd	\$ 450,000
	Resurfacing	Humbert Rd to Seminary Rd	\$ 1,200,000
	Resurfacing	E Fork of Wood River to Bethalto Rd	\$ 250,000
Lars Hoffman Crossing	Construction	Extension from Existing to Airport Rd	\$ 5,750,000
61 - Airport Road	Bridge Replacement over Piasa Creek		\$ 1,900,000
	Bridge Replacement over Little Piasa Creek		\$ 1,500,000
62 - Blackburn Road	Reconstruction	Pin Oak Rd to Fruit Rd	\$ 2,500,000
66 - Sorento Road	Resurfacing	Main St to Bentiage Rd	\$ 200,000
69 - New Poag Road	Resurfacing	IL 111 to St. Louis St	\$ 2,500,000
	Resurfacing	IL 3 to IL 111	\$ 900,000
72 - Old Moro Road	Bridge Replacement over Tributary to Rocky Branch		\$ 500,000

Note: Projected construction costs are in future dollars, assuming 2% annual inflation.

TOTAL: \$149,560,000



5-YEAR CLASSIFICATION MAP
MADISON COUNTY
ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
 OFFICE OF PLANNING AND PROGRAMS
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

SCALE

0 5,000 10,000 15,000 20,000 25,000 Feet
 0 1.6 3.2 4.8 6.4 8.0 9.6 11.2 12.8 Kilometers

Legend

- Rivers & Lakes
- Streams
- Incorporated City/Town/Village
- Interstate, US, State Route
- 1 Interstate
- 2 Freeway or Expressway
- 3 Other Principal Arterial
- 4 Major Collector
- 5 Minor Collector
- 6 Local Road or Street
- Railroad
- County Boundaries
- Illinois State Boundary
- Urban Boundaries

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Data Sources:
 Illinois Department of Transportation
 Illinois State Tollway Authority
 Illinois Commerce Commission
 Illinois Department of Revenue
 Illinois State Geological Survey
 United States Department of Transportation
 United States Geological Survey

Illinois Department of Transportation
Mapping & Information Systems

CPI for All Urban Consumers (CPI-U)

Original Data Value

Series Id: CUUR0200SA0

Not Seasonally Adjusted

Series Title: All items in Midwest urban, all urban consumers, not seasonally adjusted

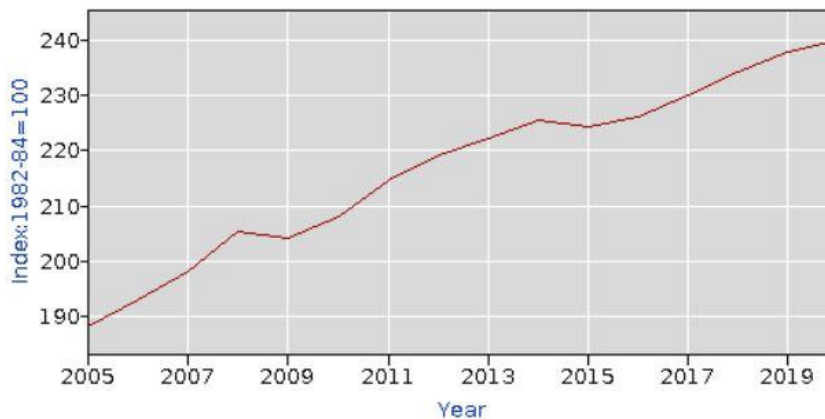
Area: Midwest

Item: All items

Base Period: 1982-84=100

Years: 2005 to 2020

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2005	184.1	185.2	186.3	187.7	187.4	187.8	188.4	189.7	192.5	192.1	190.3	189.7	188.4
2006	190.8	190.7	192.0	193.0	193.6	194.1	194.6	195.1	193.7	192.3	192.8	192.9	193.0
2007	193.1	194.5	196.4	197.4	199.2	199.3	199.0	198.6	199.7	199.5	200.8	200.2	198.1
2008	201.4	201.9	203.7	205.4	207.2	209.0	210.1	209.4	209.3	206.0	201.7	199.6	205.4
2009	200.8	201.5	202.0	202.3	203.2	205.4	204.8	205.6	205.6	205.7	206.2	205.6	204.1
2010	206.6	206.6	207.4	207.8	208.0	207.9	208.2	208.6	208.8	208.7	208.8	209.3	208.0
2011	210.4	211.1	213.0	214.5	215.9	216.0	216.1	216.6	217.0	215.7	215.6	215.2	214.7
2012	216.4	216.9	219.0	219.4	219.1	219.0	219.0	220.5	221.1	220.4	219.5	219.0	219.1
2013	219.3	221.6	222.1	221.9	223.0	223.8	222.9	223.0	223.3	222.2	221.7	221.2	222.2
2014	222.2	223.5	225.5	226.2	226.6	227.6	227.0	226.6	226.9	225.8	224.4	222.8	225.4
2015	221.5	222.3	223.6	223.8	224.7	225.9	225.9	225.8	225.2	225.1	224.0	222.7	224.2
2016	223.3	223.2	224.6	225.6	226.5	227.8	226.8	227.1	227.6	227.4	226.7	226.8	226.1
2017	228.3	228.6	228.8	229.7	229.7	229.8	229.8	230.4	231.0	230.7	231.1	230.5	229.9
2018	232.0	232.5	232.9	233.9	235.1	235.5	235.3	235.3	235.5	235.7	234.3	233.5	234.3
2019	233.8	235.4	236.8	237.5	238.2	238.3	238.8	238.8	238.8	239.2	238.9	238.7	237.8
2020	239.7	240.4	239.2	236.5	237.3	239.3	240.4	241.4	241.9	241.7	241.3	241.5	240.0



Average Annual Increase in CPI from 2005 to 2020: 1.63%

Financial Analysis of 2023-2043 Transportation Plan

Madison County

Year	Estimated Revenues (\$000's)							Averaged Expenditures (\$000's)			Surplus/Deficit (\$000's)
	MFT	Bridge	Highway	Matching	State	Federal	Total	Capital	Maintenance	Total	
2023	6400	1708	50	1400	7325	1800	18683	20100	2500	22600	-3917
2024	6464	1742	51	1428	7325	1800	18810	17220	2550	19770	-960
2025	6529	1777	52	1457	3500	1800	15114	9350	2601	11951	3163
2026	6594	1813	53	1486	0	1800	11745	6800	2653	9453	2292
2027	6660	1849	54	1515	0	1800	11878	6936	2706	9642	2236
2028	6726	1886	55	1546	0	1800	12013	7075	2760	9835	2178
2029	6794	1923	56	1577	0	1800	12150	7216	2815	10032	2119
2030	6862	1962	57	1608	0	1800	12289	7361	2872	10232	2057
2031	6930	2001	59	1640	0	1800	12430	7508	2929	10437	1993
2032	7000	2041	60	1673	0	1800	12574	7658	2988	10646	1928
2033	7070	2082	61	1707	0	1800	12719	7811	3047	10859	1861
2034	7140	2124	62	1741	0	1800	12867	7967	3108	11076	1791
2035	7212	2166	63	1776	0	1800	13017	8127	3171	11297	1720
2036	7284	2209	65	1811	0	1800	13169	8289	3234	11523	1646
2037	7357	2254	66	1847	0	1800	13324	8455	3299	11754	1570
2038	7430	2299	67	1884	0	1800	13480	8624	3365	11989	1492
2039	7505	2345	69	1922	0	1800	13640	8797	3432	12228	1411
2040	7580	2392	70	1960	0	1800	13802	8972	3501	12473	1328
2041	7655	2439	71	2000	0	1800	13966	9152	3571	12723	1243
2042	7732	2488	73	2040	0	1800	14133	9335	3642	12977	1156
2043	7809	2538	74	2080	0	1800	14302	9522	3715	13237	1065
Totals:	148731	44038	1289	36097	18150	37800	286105	192274	64458	256732	29373

Note: 1) Table does not include speculative competitive funding.

2) Assumes no net change in federal funding.

Projected Future Traffic Madison County Highways							
County Highway	IDOT Route	Highway No.	Length (miles)	2023 ADT		2043 ADT	
				Loc A	Loc B	Loc A	Loc B
Renken Road	2735	3	9.29	2000	1600	2299	1840
Humbert Road	8996	4	4.42	7200	9650	8115	10876
Pocahontas Road	775/766	6	10.00	900	425	994	470
Baumann Road		8	1.52	325	300	389	359
Summerfield Road		13	4.59	450	275	560	342
Marine Road		13	6.70	900	1200	1690	2253
Prairietown Road		14	2.30	350	1950	387	2155
Sherry Creek Road		14	1.69	350	350	562	562
Dustman Road		14	0.92	175	125	240	172
Possum Hill Road		14	2.55	350	300	562	482
Seminary Road	8998	17	5.00	4600	1900	4982	2058
Moreland Road	9017/779	19	8.07	4850	3500	6280	4532
Wanda Road	9018/8975	19	3.55	1800	5450	2950	8930
Poag Road		19	2.14	300	300	306	306
Staunton Road	9392/780	21	7.68	2250	650	3030	875
Moro Road	9016/771	22	4.15	3550	1200	4332	1464
St. James Drive	771	22	2.50	2500	500	3050	610
Quercus Grove Road		23	5.08	650	400	966	594
Possum Hill Road		23	1.82	300	1100	429	1572
Dauderman Road		24	3.78	350	400	357	408
Alhambra Road	773	27	5.34	750	800	990	1056
Ellis Road (Co. Rd. 400 N)		31	3.51	1200	1200	1176	1176
Lebanon Road	772	32	6.10	950	350	989	364
St. Rose Road	8846/778	40	3.02	3550	2850	3480	2794
Pin Oak Road		42	2.46	200	200	208	208
Fruit Road	766	44	12.10	800	725	2379	2156
Brakhane Road	776	46	3.32	725	725	1016	1016
Dustman Road		49	1.15	200	200	204	204
Wieseman Road		49	4.66	275	400	281	408
Troy-O'Fallon Road	9393/1937	50	4.45	13000	8150	13262	8315
Staunton Road		51	3.48	950	1500	1305	2060
Seiler Road	9019/737	52	12.36	1600	475	2155	640
Bivens Road		53	4.29	275	100	547	199
Rockwell Road		54	7.10	650	225	762	264
Woodburn Road		55	1.46	925	925	907	907
Airport Road	8952/8985	61	5.72	650	1850	858	2443
Blackburn Road		62	0.95	950	950	3164	3164
Sorento Road	777	66	1.51	900	900	1142	1142
New Poag Road	8877	69	7.41	6050	7700	7833	9970
Union School Road	9021	71	0.79	3400	3400	3757	3757
Old Moro Road		72	3.26	500	350	245	172
Prairietown Road		73	3.30	1950	1200	2155	1326
Governors Parkway	8902	75	4.35	10250	8950	12507	10921
Possum Hill Road		76	0.71	350	350	541	541

Design Standards / Geometric Features

Madison County Highways

Design Standards for Madison County Highways and Bridges shall include, but are not limited to, the following publications:

- *Bureau of Design and Environment Manual*
Illinois Department of Transportation (IDOT)
- *Bureau of Local Roads and Streets Manual*
Illinois Department of Transportation (IDOT)
- *A Policy on Geometric Design of Highways and Streets*
American Association of State Highway and Transportation Officials (AASHTO)
- *Manual on Uniform Traffic Control Devices for Streets and Highways*
U.S. Department of Transportation, Federal Highway Administration (FHWA)

The following exhibits provide examples of typical geometric features associated with different levels of traffic and classifications of highways.

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

32-2-2

August 2016

Design Element			Manual Section	Design Volume (Two-Way DHV) New Construction / Reconstruction DHV < 1050 (2)	
Design Controls	Design Forecast Year	Level	27-6.02	20 Years	
	Minimum Design Speed * (1a)	Rolling	27-5.02	60 mph (3a) 55 mph (3a)	100 km/h (3a) 90 km/h (3a)
Cross Section Elements	Access Control		35-1 BDE	Controlled by Regulations (4)	
	Level of Service (LOS) *		27-6.04	C	
	Traveled Way Width *		31-1.01	24'	7.2 m
	Surface Type		Chapter 44	High Type Pavement	
	Shoulder Width *		31-1.06	10'	3.0 m
Roadway Slopes	Shoulder Type			4' Paved w/ Remainder Aggregate	1.2 m Paved w/ Remainder Aggregate
	Auxiliary Lanes *	Lane Width	31-1.03	12'	3.6 m
		Shoulder Width		4' (Paved)	1.2 m (Paved)
	Flush / TWLTL Widths		31-1.05	14'	4.2 m
	Cross Slope	Travel Lane * Shoulder Rollover Factor	31-1.08	1.5% (5a) Paved 4% / Aggregate 6% (5b) 8%	
Roadway Slopes	Side Slope (Maximum)	Front Slope	31-2.03 31-2.04	1V:6H	
		Ditch Width		4' (6)	1.2 m (6)
		Back Slope		≤10' 1V:3H >10' 1V:2H (7)	
	Rock Cut			1V:0.25H	
		Fill Section		1V:6H to Clear Zone (8) 1V:3H (max) to Toe of Slope (8)	

DHV = Design Hourly Volume

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR RURAL TWO-LANE MINOR ARTERIALS
(New Construction/Reconstruction)
Figure 32-2A (US Customary / Metric)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

32-2-4

August 2016

Design Element		Manual Section	Design Volume (ADT)					
			ADT < 400	400 to 750	750 to 2000	ADT > 2000		
Design Controls	Design Forecast Year	27-6.02	Current	20 Years				
	Minimum Design Speed * (1a)		Level	40 mph (1b)	50 mph (1b)	50 mph	60 mph	
			Rolling	30 mph (1b)	40 mph (1b)	50 mph		
	Level of Service (LOS) *	27-6.04	C					
	Traveled Way Width *	31-1.01	20'	22'	24' (2)			
Surface Type		Chapter 44	Aggregate Surface or Bituminous Treated (3)	High Type Pavement				
Shoulder Width *		31-1.06	2' (4a)	4' (4b)	6' (4b)	8' (4b)		
Shoulder Type			Turf or Aggregate (5a)			Aggregate or Paved (5b)		
Auxiliary Lanes *			10'	Desired 11' Minimum 10'		Desired 12' Minimum 11'		
			2'	4'		Desired 6' Minimum 4'	Desired 8' Minimum 4'	
Cross Slope			2.0% - 4% (6b)	1.5% - 2.0%				
			Turf 5% - 8% / Aggregate 4% - 6%	Aggregate 4% - 6% / Paved 4%				
			10%	8%				
Roadway Slopes		Cut Section	1V:3H		1V:4H			
			Ditch Width		Minimum 2'			
			Back Slope		<15' 1V:4H 15' - 25' 1V:3H >25' 1V:2H			
		Rock Cut		1V:0.25H				
		Fill Section	≤6' 1V:3H >6' 1V:2H		≤10' 1V:3H >10' 1V:2H		≤25' 1V:4H >25' 1V:2H	

ADT = Average Daily Traffic

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR RURAL TWO-LANE COLLECTORS
(New Construction/Reconstruction)
Figure 32-2B (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

August 2016

32-2-7

Design Element			Manual Section	Design Volume (ADT)					
Design Controls	Design Forecast Year		27-6.02	ADT < 250	250 to 400	400 to 750	750 to 2000	ADT > 2000	
	Minimum Design Speed * (1)	Level	27-5.02	Current					
		Rolling		30 mph (1c/d)	40 mph (1d)	50 mph			
		Level of Service (LOS) *		27-6.04	30 mph (1b-d)	30 mph (1d)	40 mph (1d)		
Cross Section Elements	Traveled Way Width *		31-1.01	18 (2a)	20'	22'	24' (2b)		
	Surface Type		Chapter 44	Aggregate Surface or Bituminous Treated (3)					
	Shoulder Width *		31-1.06	2' (4a)		4' (4b)	6' (4b)	8' (4b)	
	Shoulder Type			Turf	Turf or Aggregate (5a)		Aggregate, Paved, or Comb. (5b)		
	Auxiliary Lanes *	Lane Width	31-1.03	N/A	10'	Desired 11' Minimum 10'		Desired 12' Minimum 11'	
		Shoulder Width		N/A	2'	Desired 4' Minimum 2'	Desired 6' Minimum 4'	Desired 8' Minimum 4'	
	Cross Slope (6a)	Travel Lane *	31-1.08	2.0% - 4% (6b)					1.5% - 2.0%
		Shoulder		Turf 5% - 8%	Turf 5% - 8% / Aggregate 4% - 6%		Aggregate 4% - 6% / Paved 4%		
		Rollover Factor		10%					8%
	Roadway Slopes	Cut Section	Front Slope	1V:3H (7a)		1V:3H		1V:4H	
Ditch Width			Desired 2'		Minimum 2'				
Back Slope			≤10' 1V:3H >10' 1V:2H (7a/b)	≤10' 1V:3H >10' 1V:2H (7b)	≤10' 1V:3H >10' 1V:2H	<15' 1V:4H 15 - 25' 1V:3H >25' 1V:2H			
		Rock Cut	1V:0.25H						
Fill Section			≤6' 1V:3H >6' 1V:2H	≤10' 1V:3H >10' 1V:2H	≤25' 1V:4H >25' 1V:2H				

ADT = Average Daily Traffic

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR RURAL TWO-LANE LOCAL ROADS
(New Construction/Reconstruction)

Figure 32-2C (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

32-2-10

August 2016

Design Controls	Design Element	Manual Section	Design Volume (DHV)		
			Two-Way DHV < 1250 (1)	Two-Way DHV 1250 - 2050 (1)	Two-Way DHV 2050 - 2900 (1)
Highway Type		---	TWS-2	TWS-4	TWS-6
Design Forecast Year		27-6.02		20 Years	
Design Speed * (2)		27-5.02		40 mph – 50 mph	
Level of Service (LOS) *		27-6.04		C	
Traveled Way	Number of Travel Lanes	31-1.02	2	4	6
	Traveled Way Width *	31-1.01		12'	
	Traveled Lane Width (Shared with Bicycles)	42-3.02		See Section 42-3.02	
	Right			8' Paved	
	Left	31-1.06	N/A		6' (4' Paved)
Shoulder Width * (3)	Lane Width			Single Left & Right 12'	
	Shoulder / Curb Type and Width	31-1.03		Dual Lefts & Rights 24'	
Auxiliary Lanes *	Travel Lane (Minimum) *			Shoulder 4' and/or B-6.24 CC&G (4)	
	Auxiliary Lane	31-1.08		1.5% - 2.0%	
Cross Slope (5a)	Flush			(5b)	
	Flush (TWLTL)		N/A	Range 4' to 14'	
	Traversable	31-1.05	N/A	Desired 12'	
Median Width	Raised Curb		N/A	Range 10' to 14'	16'
		31-2.02		Desired 5' / Minimum 4'	18'
Side Slope (Maximum)	Cut Section (Uncurbed)			1V:4H	
	Rock Cut	31-2.03		1V:0.25H	
	Fill Section (Uncurbed)			1V:4H	
Median Slope	Concrete Surface / Traversable		N/A		1.5%
	Flush / TWLTL Surface	31-1.05		1.5%	
	Grass/ Landscape Surface		N/A		5% (Towards C&G)

DHV = Design Hourly Volume / TWS = Two-Way Street

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR SUBURBAN ARTERIALS
(New Construction/Reconstruction)

Figure 32-2D (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

August 2016

32-2-13

Design Element	Manual Section	Design Volume (DHV)		
		Two-Way DHV < 1250 (1)	Two-Way DHV 1250 - 2050 (1)	Two-Way DHV 2050 - 2900 (1)
Highway Type	---	TWS-2	TWS-4	TWS-6
Design Forecast Year	27-6.02	20 Years		
Design Speed *	27-5.02	30 mph – 40 mph		
Level of Service (LOS) * (2)	27-6.04	C		
Surface Width *	Number of Travel Lanes	2	4	6
	Travel Lane	Desired 12' Minimum 11' (3)		Desired 12' Minimum 11'
	Travel Lane (Shared with Bicycles)			
	Parking Lane (4)			
	Auxiliary Lane			
	Travel Lane (Minimum) *			
	Auxiliary Lanes			
	Cross Slope	1.5% - 2.0%	1.5% - 2.0% (5a)	
	Outside Curb and Gutter Type	2.0% (5b)	(5b)	
		N/A	Range 4' to 14'	
Median Width	Flush		Desired 12' Range 10' to 14'	
	Flush (TWLTL)			16'
	Traversable	N/A		18'
Sidewalk Width (7)	Raised Curb	N/A		
Obstruction Free Zone * (8)			Desired 5' / Minimum 4'	
Side Slope (9) (Maximum)	Cut Section (Curbed)		1.5'	
	Rock Cut		---	
	Fill Section (Curbed)		---	
	Concrete Surface / Traversable	N/A	1.5%	1.5%
	Flush / TWLTL Surface			
Median Slope	Grass/ Landscape Surface	N/A	5% (Towards C&G)	

DHV = Design Hourly Volume / TWS = Two-Way Street

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR URBAN TWO-WAY ARTERIALS
(New Construction/Reconstruction)

Figure 32-2E (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

32-2-16

August 2016

Design Element	Manual Section	Design Volume (DHV)	
		One-Way DHV < 1300 (1)	One-Way DHV 1300 - 1850 (1)
Highway Type	---	OWS-2	OWS-3
Design Forecast Year	27-6.02	20 Years	
Design Speed *	27-5.02	30 mph – 40 mph	
Level of Service (LOS) * (2)	27-6.04	C	
Surface Width *	Number of Travel Lanes	2	3
	Travel Lane	Desired 12' Minimum 11'	
	Travel Lane (Shared with Bicycles)	See Section 42-3.02	
	Parking Lane (3)	Desired 10' Minimum 8'	
	Auxiliary Lane	Single Left & Right – Desired 12' / Minimum 11' Dual Lefts & Rights – Desired 24' / Minimum 22'	
Cross Slope	Travel Lane (Minimum) *	1.5% (4a)	
	Auxiliary Lanes	2.0% (4b) (4b)	
Outside Curb and Gutter Type	31-1.07	B-6.12, B-6.18, or B-6.24 CC&G (5)	
Sidewalk Width (6)	31-2.02	Desired 5' / Minimum 4'	
Obstruction Free Zone * (7)	35-2	1.5'	
Side Slope (8) (Maximum)	Cut Section (Curbed)	---	
	Rock Cut	---	
	Fill Section (Curbed)	---	

DHV = Design Hourly Volume / OWS = One-Way Street

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR URBAN ONE-WAY ARTERIALS
(New Construction/Reconstruction)

Figure 32-2F (US Customary)

Design Element		Manual Section	Design Volume (ADT / DHV)		
			Two-Way ADT < 5000	Two-Way ADT ≥ 5000 and DHV < 1400 (1)	Two-Way DHV 1400 - 2400 (1)
Highway Type		---	TWS-2		
Design Forecast Year		27-6.02	Current	20 Years	
Design Speed * (2)		27-5.02	30 mph	30 mph – 40 mph	
Level of Service (LOS) *		27-6.04	Desired C / Minimum D		
Surface Width *		Number of Travel Lanes	2	4	
		Travel Lane	Desired 11' Minimum 10'	Desired 12' Minimum 10' (3)	Desired 12' Minimum 10'
		Travel Lane (Shared with Bicycles)	See Section 42-3.02		
		Parking Lane (4)	Minimum 8'	Desired 10' Minimum 8'	
		Auxiliary Lane	Desired 11' Minimum 10'	Desired 12' Minimum 10'	
Cross Slope		31-1.08	1.5% - 2.0%		1.5% - 2.0% (5a)
Outside Curb and Gutter Type		31-1.07	(5b)		
Median Width		Flush	N/A	4'	
		Flush (TWLTL)	Desired 12' Range 10' to 14'		
Sidewalk Width (7)		31-2.02	Desired 5' / Minimum 4'		
Obstruction Free Zone * (8)		35-2	1.5'		
Side Slope (9) (Maximum)		Cut Section (Curbed)	---		
		Rock Cut	---		
		Fill Section (Curbed)	---		
Roadway Slopes		31-2.03	---		

ADT = Average Daily Traffic / DHV = Design Hourly Volume / TWS = Two-Way Street

* Controlling design criteria (see [Section 27-7](#)).GEOMETRIC DESIGN CRITERIA FOR URBAN TWO-WAY COLLECTORS
(New Construction/Reconstruction)

Figure 32-2G (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

32-2-22

August 2016

Design Element	Manual Section	Design Volume (ADT / DHV)	
		One-Way ADT < 5000	One-Way ADT ≥ 5000 and DHV < 1450 (1)
Highway Type	---	OWS-2	OWS-3
Design Forecast Year	27-6.02	Current	20 Years
Design Speed * (2)	27-5.02	30 mph	30 mph – 40 mph
Level of Service (LOS) *	27-6.04	Desired C / Minimum D	
Surface Width *	Number of Travel Lanes	2	3
	Travel Lane	Desired 11' Minimum 10'	Desired 12' Minimum 10'
	Travel Lane (Shared with Bicycles)	See Section 42-3.02	
	Parking Lane (4)	Minimum 8'	Desired 10' Minimum 8'
	Auxiliary Lane	Desired 11' Minimum 10'	Desired 12' Minimum 10'
Cross Slope	Travel Lane (Minimum) *	1.5% - 2.0%	1.5% - 2.0% (5a)
	Auxiliary Lanes	(5b)	
Outside Curb and Gutter Type	31-1.07	B-6.12, B-6.18, or B-6.24 CC&G (6)	
Sidewalk Width (7)	31-2.02	Desired 5' / Minimum 4'	
Obstruction Free Zone * (8)	35-2	1.5'	
Roadway Slopes	Cut Section (Curbed)	---	
	Rock Cut	---	
	Fill Section (Curbed)	---	

ADT = Average Daily Traffic / DHV = Design Hourly Volume / OWS = One-Way Street

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR URBAN ONE-WAY COLLECTORS
(New Construction/Reconstruction)

Figure 32-2H (US Customary)

BUREAU OF LOCAL ROADS & STREETS
GEOMETRIC DESIGN TABLES

August 2016

32-2-25

Design Element	Manual Section	Design Volume (ADT)		
		ADT < 1000	1000 - 5000	ADT > 5000
Highway Type	---	TWS-2 / OWS-2		
Design Forecast Year	27-6.02	Current		
Design Speed *	27-5.02	30 mph (1)		30 mph
Level of Service (LOS) *	27-6.04	D		
Surface Width *	Number of Travel Lanes	2		
	Travel Lane *	Minimum 10'	Minimum 11'	Minimum 12' (2)
	Travel Lane (Shared with Bicycles)	See Section 42-3.02		
	Parking Lane (3)	Minimum 8'		
	Auxiliary Lane	10'	Desired 11' Minimum 10'	Desired 12' Minimum 10'
Cross Slope	Travel Lane (Minimum) *	1.5% - 2.0%		
	Auxiliary Lanes	(4)		
Outside Curb and Gutter Type	31-1.03	B-6.12, B-6.18, or B-6.24 CC&G (5)		
Sidewalk Width	31-2.02	Desired 5' / Minimum 4'		
Obstruction Free Zone * (6)	35-2	1.5'		
Side Slope (7) (Maximum)	Cut Section (Curbed)	---		
	Rock Cut	---		
	Fill Section (Curbed)	---		

ADT = Average Daily Traffic / TWS = Two-Way Street / OWS = One-Way Street

* Controlling design criteria (see [Section 27-7](#)).

GEOMETRIC DESIGN CRITERIA FOR URBAN LOCAL STREETS
(New Construction/Reconstruction)

Figure 32-2I (US Customary)

Fiscal Year 2023 to 2027 - Anticipated Project List

PROJECT	CONSTRUCTION		FUNDING SOURCE								
	YEAR	COST	M.F.T.	FEDERAL	STATE	CO. BRIDGE	ROAD DIST	T.B.P.	MATCHING	CO. HWY.	OTHER
Engelke Bridge (Olive Township)	2023	\$ 1,100,000		\$ 800,000					\$ 300,000		
Lebanon Rd - CSX Railroad (Collinsville Township) - 50%	2023	\$ 8,500,000			\$ 7,325,000	\$ 1,175,000					
Staunton Road Realignment - Preconstruction	2023	\$ 750,000	\$ 750,000								
Staunton Road Sidewalk - Southwest of Worden	2023	\$ 200,000	\$ 200,000								
Staunton Rd Extension (Michael Drive to Oakland Hills)	2023	\$ 2,000,000	\$ 2,000,000								
Possom Road Bridge	2023	\$ 1,300,000	\$ 1,300,000								
Voorhees Ln Culvert Replace. on Jersey/Macoupin Co Line	2023	\$ 275,000				\$ 275,000					
Lars Hoffman Crossing Extension (Village of Godfrey)	2023	\$ 6,000,000	\$ 5,750,000								\$ 250,000
County Highway Maintenance/Upkeep Project	2023	\$ 50,000								\$ 50,000	
FY 2023 Total		\$ 20,175,000	\$ 10,000,000	\$ 800,000	\$ 7,325,000	\$ 1,450,000	\$ -	\$ -	\$ 300,000	\$ 50,000	\$ 250,000
Hosto Bridge (Pin Oak Township)	2024	\$ 920,000				\$ 690,000	\$ 230,000				
Lebanon Rd - CSX Railroad (Collinsville Township) - 100%	2024	\$ 8,500,000			\$ 7,325,000	\$ 1,175,000					
Staunton Road Realignment - Maple Grove to Goshen Rd	2024	\$ 6,200,000	\$ 6,200,000								
Lee Road Bridge Replacement on Clinton County Line	2024	\$ 1,600,000	\$ 300,000	\$ 1,300,000							
Moreland Road Resurfacing	2024	\$ 1,700,000	\$ 340,000	\$ 1,360,000							
County Highway Maintenance/Upkeep Project	2024	\$ 50,000								\$ 50,000	
FY 2024 Total		\$ 18,970,000	\$ 6,840,000	\$ 2,660,000	\$ 7,325,000	\$ 1,865,000	\$ 230,000	\$ -	\$ -	\$ 50,000	\$ -
Pilla Bridge (Hamel Township)	2025	\$ 4,250,000			\$ 3,500,000	\$ 600,000	\$ 150,000				
Alhambra Road Resurfacing & Bridge Repair	2025	\$ 3,500,000	\$ 3,500,000								
Harris Bridge (Helvetia Township)	2025	\$ 600,000				\$ 450,000	\$ 150,000				
Seminary Road Shoulders	2025	\$ 2,000,000	\$ 2,000,000								
County Highway Maintenance/Upkeep Project	2025	\$ 50,000								\$ 50,000	
FY 2025 Total		\$ 10,400,000	\$ 5,500,000	\$ -	\$ 3,500,000	\$ 1,050,000	\$ 300,000	\$ -	\$ -	\$ 50,000	\$ -
Humbert Road Resurfacing	2026	\$ 5,000,000	\$ 5,000,000								
Bridge on County Highway	2026	\$ -									
Bridge on Township Road	2026	\$ 600,000				\$ 450,000	\$ 150,000				
Bridge on Township Road	2026	\$ 600,000				\$ 450,000	\$ 150,000				
County Highway Maintenance/Upkeep Project	2026	\$ 50,000								\$ 50,000	
FY 2026 Total		\$ 6,250,000	\$ 5,000,000	\$ -	\$ -	\$ 900,000	\$ 300,000	\$ -	\$ -	\$ 50,000	\$ -
Bridge on County Highway	2027	\$ -									
Bridge on Township Road	2027	\$ 600,000				\$ 450,000	\$ 150,000				
Bridge on Township Road	2027	\$ 600,000				\$ 90,000	\$ 30,000	\$ 480,000			
County Highway Maintenance/Upkeep Project	2027	\$ 50,000								\$ 50,000	
FY 2027 Total		\$ 1,250,000	\$ -	\$ -	\$ -	\$ 540,000	\$ 180,000	\$ 480,000	\$ -	\$ 50,000	\$ -
FY 2023 - 2027 Total		\$ 57,045,000									
Total Estimated County Funds		\$ 59,500,000									