

Tripp County Master Transportation Plan

Roadway Maintenance Rotation and Projects Summary

The Tripp County Master Transportation Plan (MTP) is organized with recommendations for maintenance strategies for unpaved roads. Paved roads are also organized to address maintenance and reconstruction needs. Recommended cross sections are illustrated on Figure I. The County Major Bridge Plan is updated annually and guides design and construction of structures. The highlights below summarize the maintenance rotation and roadway projects organized by the plan.

Unpaved County Roads – Restoration Maintenance Rotation

The MTP is supported by best practices and guidance adopted by the SDDOT Local Roads Plan. Design shall be in accordance with current SDDOT standards, and the Federal Highway Administration (FHWA) August 2015 *Gravel Roads Construction and Maintenance Guide*, Chapter 3 Appendix I. Construction Guidelines include the following useful reference charts:

- Thickness Design Guidance for New or Reconstructed Rural Roads
- Surface Aggregate Sample Specifications
- Gradation and Plasticity Index Determination
- Gravel Coverage with Depth of Gravel
- Gravel Spreading Chart in Feet per Truckload

Unpaved County Roads – Restoration Maintenance Rotation

The MTP recommends that county resources be applied to restoration maintenance on a set rotation. The maintenance level of service for unpaved roads would cycle every 8-years to restore County Classification roads. The County would need to restore an average of 91.5 miles each year to fully achieve this recommendation.

	Rural Major Access Miles	Rural Minor Access Miles	Local Access Miles	Total Estimated Miles
Annual Range	28.5 to 47.4	13.7 to 31.8	28.6 to 40.1	82.5 to 102.5
Average	35.2	23.2	33.2	91.5

Unpaved County Roads – Reconstruction Maintenance Rotation

The MTP recommends that county resources be applied to strategically reconstruct unpaved roads that do not meet the recommended design standard. Reconstruction should be completed during the programmed year of restoration. Recommendations reflect updated functional classifications, the assigned County Classification, and a priority of completions. Significantly deficient roads would be reconstructed during the first 8-year rotation. During the next 8-year rotation the deficient Rural Major and Rural Minor Access roads would be addressed. Local Access roads that are deficient would be the final priority for reconstruction.

Rotation Period	Reconstruct Significantly Deficient Miles	Rotation Period	Reconstruct Rural Major/Minor Access Deficient Miles	Rotation Period	Reconstruct Local Access Deficient Miles
Annual Range Years 1-8	4.1 to 17.2	Annual Range Years 9-16	2.1 to 21.5	Annual Range Years 17-20	20.4 to 25.3
Total	99.1	Total	101.5	Total	94.1
Average	12.4	Average	12.7	Average	23.5

Unpaved County Roads – Restoration & Reconstruction Maintenance Costs

The MTP recommendations for restoration and reconstruction prioritize resources needed for the program of work. An assessment of costs included the inflation of all costs related to unpaved road maintenance. The annual average restoration and reconstruction costs for the 20-year plan are included with the MTP as a guide.

Year	Reconstruction Prioritized Rotation Miles	Reconstruction Cost Estimated	Restoration of Miles Not Reconstructed	Restoration Cost Estimated	Total R & R Cost Estimates
Avg Years 1-8	12.4	\$471,654	79.1	\$2,159,527	\$2,631,181
Avg Years 9-16	12.7	\$585,963	78.8	\$2,623,103	\$3,209,067
Avg Years 17-20	23.5	\$1,269,615	71.2	\$2,748,902	\$4,018,518
Total	Reconstruction	\$13,539,396	Restoration	\$49,256,650	\$62,796,046

Paved County Roads – Countywide Priorities

The MTP organizes reconstruction and restoration maintenance recommendations for paved county roads that represent countywide transportation priorities. The life of existing paved roads should be maintained as long as possible. When reconstruction is recommended, a standard cross section should be provided.

Route	From	To	Project Miles	Comments	Planning Estimate	Jurisdictional Lead
North County Road	E. Tripp St	266 th St	15.0	Reconstruction with Multimodal Cross Section	\$30,000,000	Tripp County
South County Road	282 nd St	W. 11 th St	3.75	Reconstruction with Base Typical Cross Section	\$6,375,000	Tripp County
	288 th St	282 nd St	6.0	Restoration with Mill and Overlay	\$1,800,000	Tripp County
	296 th St	288 th St	8.0	Restoration with Mill and Overlay	\$2,400,000	Tripp County
279th St	316 th Ave	317 th Ave	1.0	Restoration with Mill and Overlay	\$300,000	Tripp County
317th Ave (with 279th St)	Iron Star Rd	US 18	0.66	Restoration with Mill and Overlay	\$198,000	Tripp County
Rahn Lake Road	310 nd Ave	314 th Ave	4.0	Restoration with Mill and Overlay	\$1,200,000	Tripp County
	314 th Ave	US 183	8.0	Restoration with Mill and Overlay	\$2,400,000	Tripp County

Paved County Roads – City Adjacent Priorities

The MTP organizes reconstruction, restoration, and limited conversion maintenance recommendations for paved county roads adjacent to Winner and Colome. The three roadways support local transportation priorities and coordination should be coordinated to support community growth priorities. The life of existing paved roads should be maintained as long as possible. When reconstruction is recommended, a standard cross section should be provided.

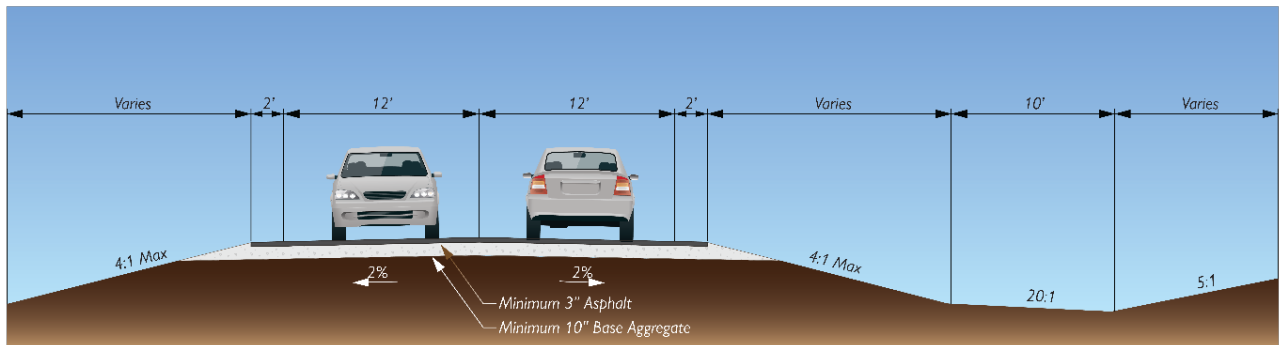
Route	From	To	Project Miles	Comments	Planning Estimate	Jurisdictional Lead
278th St	315 th Ave	½ Section Line west	0.5	Reconstruction with Base Typical Cross Section	\$850,000	Tripp County with City of Winner
Country Club Rd	279 th St	10 th St	0.8	Restoration with Mill and Overlay	\$240,000	Tripp County with City of Winner
286th St	West of Colome	SD 49 (323 rd Ave)	0.5	AC to Gravel Conversion	\$33,000	Tripp County with Colome and Pleasant View TWP

Paved County Roads – Economic Opportunity Paved Surfaces

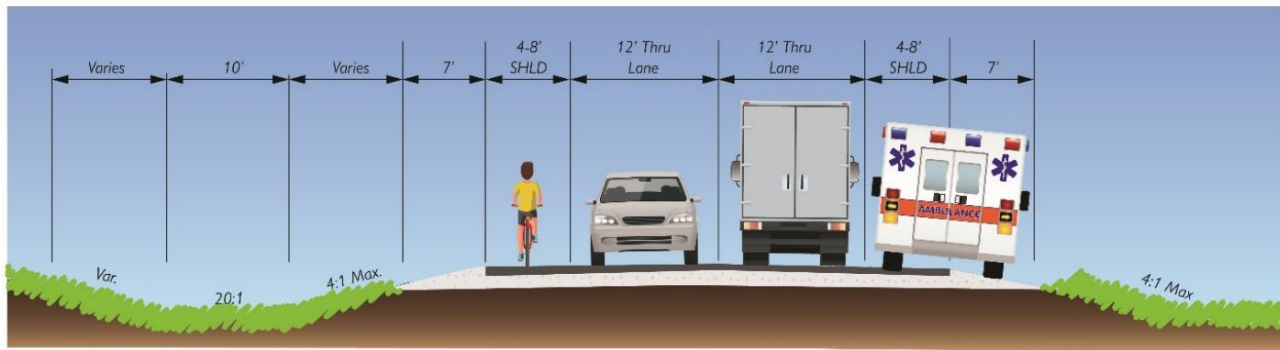
The MTP also documents projects that may support economic opportunity adjacent to the City of Winner. These projects are illustrative of opportunity rather than a current need. Identification of these projects should encourage coordination of interjurisdictional planning to expand commercial and industrial economy locally.

Route	From	To	Project Miles	Comments	Planning Estimate	Jurisdictional Lead
315th Ave (NW County Rd)	Dakota St	277 th St	0.5	Reconstruction with Base Typical Cross Section	\$850,000	Tripp County with City of Winner
314th Ave	US 18	277 th St	0.5	Reconstruction with Base Typical Cross Section	\$850,000	Tripp County with Lamro TWP
278th St	US 18	317 th Ave	0.6	Reconstruction with Base Typical Cross Section	\$1,020,000	Tripp County with City of Winner
277th St	316 Ave	Airport Dr	0.5	Reconstruction with Base Typical Cross Section	\$850,000	Tripp County with City of Winner
	315 th Ave	316 th Ave	1.0	Reconstruction with Base Typical Cross Section	\$1,700,000	Tripp County with City of Winner

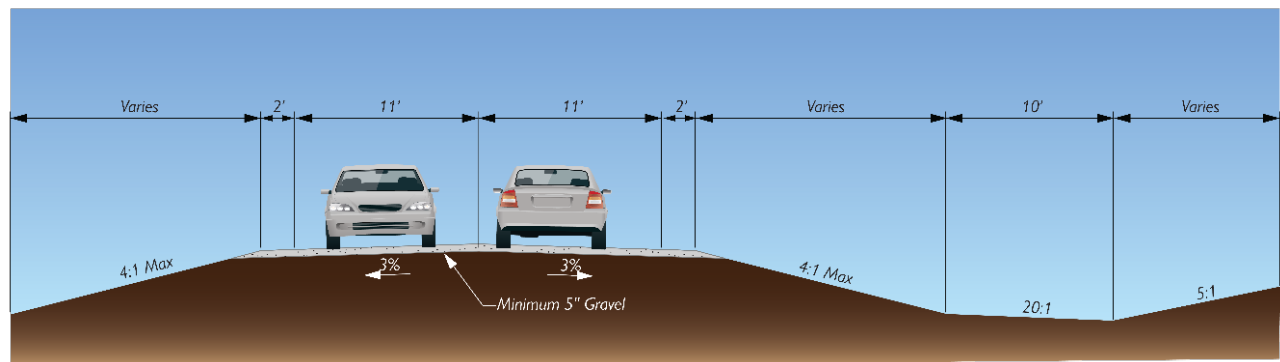
Figure 1. Major Roads Plan Typical Cross Sections



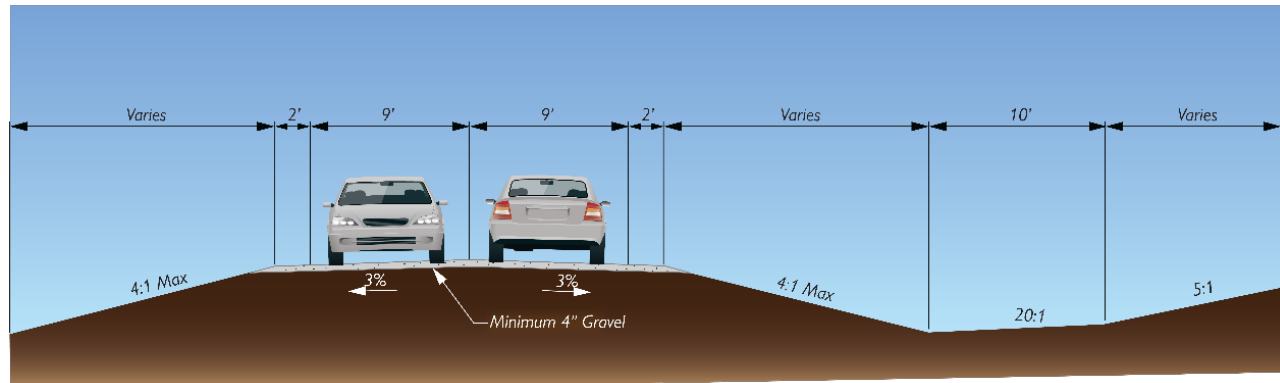
Base Typical Cross Section - Paved



Multimodal Cross Section - Paved



Base Typical Cross Section – Unpaved



Local Typical Cross Section – Unpaved