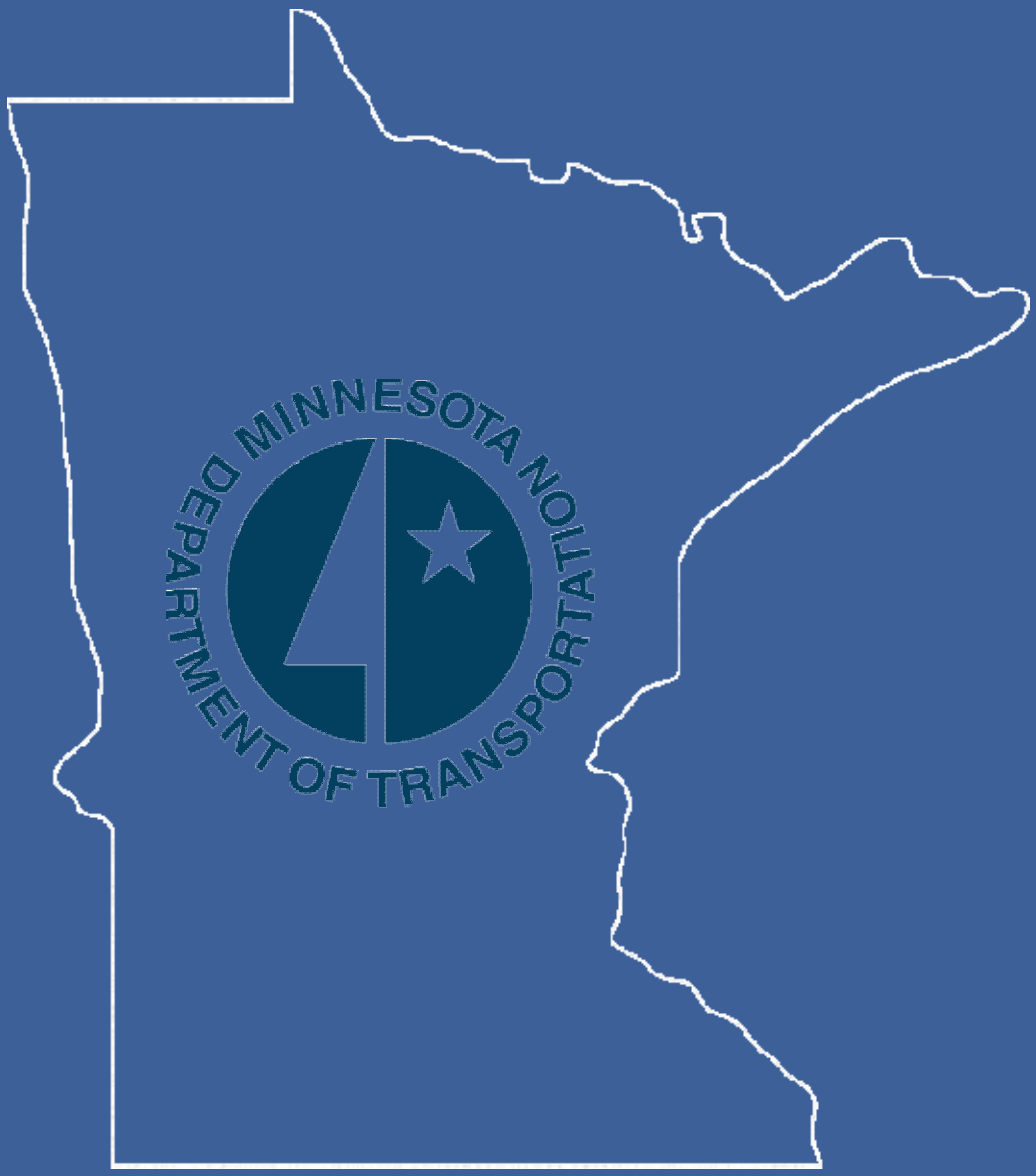
Minnesota Jurisdictional Realignment Project

Final Report



July 2014

Executive Summary

Introduction

This document presents the final report of the Minnesota jurisdictional realignment project, divided into an executive summary and a detailed report.

The overall objective for this project was to ensure that Minnesota roads are owned and operated at the right jurisdictional level. This project developed and applied a methodology to identify roadway segments that are not owned by the right level of government (referred to as misaligned). This project also provides additional information that can be used as a basis from which a jurisdictional transfer process and program can be established to remedy the misalignments.

Looking forward, a guiding principle in Minnesota's 50-year vision is to "strategically fix the system," which includes reviewing parts of the system that may need to be reduced while other parts that may need to be enhanced or expanded to meet changing demand - ensuring that roads are aligned with the proper jurisdictional owner.

To accomplish these objectives, the project established a standard and consistent approach which can be used to identify segments that different jurisdictional interests in Minnesota—the state, counties, cities, and townships—agree are "misaligned." The project then applied this approach to build a misalignment register.

It has long been recognized in Minnesota that the jurisdictional responsibilities for roadways need to be reassessed to ensure their efficient and effective management. The issue and discussion of jurisdictional alignment has been ongoing. The topic became a highly focused issue in the 1980s and has been revisited since then. A total of seven studies were conducted between 1983 and 1998 on the subject, and all studies acknowledged misalignments in the state and agreed that it was necessary to ensure that the "right roads are at the right level" of government.

The key issues with misaligned roads as identified in prior studies and through this study are as follows:

- Misaligned roads may not provide appropriate level of service for users in terms of both capacity and customer expectations, such as safety, ride quality and maintenance
- Misaligned roads may use the wrong source of funding, which may not contain required funds for improvements. This may result in a lower service level than if the road was properly aligned/owned by the appropriate jurisdiction
- Misaligned roads may lead to an "impaired" network of roads due to differing jurisdiction priorities (that is, the road conditions may change significantly while traveling and may not meet traveler's expectations)
- Misaligned roads may not receive the priority for funding or improvements, and as a result, misaligned roads that are widely used may be underserved while others may be over-served

This study goes beyond the scope of prior studies, in that this project identifies specific segments that are misaligned and considered candidates for transfer from one jurisdiction to another. This study also identifies a planning-level cost estimate for transfers, providing decision makers with data to make informed decisions.

A 14-member project steering committee comprising of representatives from counties, cities, townships and MnDOT guided the project from start to the end. The representatives included members from both urban and rural areas of the state to ensure a holistic approach.

Approach

The project had two phases:

Phase 1 established guiding principles, evaluated the history and prior studies of jurisdictional transfers, developed an approach for identifying misalignments, piloted the approach, and defined an agreed-upon process for applying the approach.

Phase 2 applied the process defined in Phase 1 to build a misalignment register and transfer program, along with prioritizing the segments into implementation tracks and identifying planning-level cost estimates for the transfer program.

This report combines the approach and findings from both phases to provide a comprehensive report.

Misaligned Segments Identification Process/Approach

The project focused on routes that are owned by state, counties, cities, and townships—but excluded the interstate system since its ownership is already well established.

The approach for identifying segments that may be misaligned is summarized as follows.

Step 1: Divide network into three tiers for analysis based on probability of misalignment

The project team[1] divided the network into three tiers for analysis based on the probability of misalignment by cross-referencing the route system and functional class.

The route system defines the owner of the segments, while the functional class defines the primary purpose of the road. The project team used the overarching goals of each agency to cross-reference the route system and functional class. For example, Minnesota Department of Transportation's (MnDOT) key goal of mobility means that routes with a functional class of principal arterial and many minor arterials and major collectors should be owned by MnDOT. Roads with a functional class of minor collectors and local roads are primarily intended to serve a local purpose, such as providing direct access to homes, businesses, and farms. The team divided the road network into three tiers that indicate the probability of misalignment based on cross-referencing the route system and functional class. The three tiers are presented in Table 1 and Table 2. Table 1 cross-references the route system (shown in rows) and the functional class (shown in columns) to indicate the number of miles that fall within each grouping. Table 2 summarizes the mileage information by tiers (shown in rows) and segment owners (shown in columns).

[1] For the purposes of this document, the project team is defined as Parsons Brinckerhoff Consultants, MnDOT Planning Director and State Aid Staff.

Table 1. Analysis tiers and mileage chart

Road System	Owner	Principal Arterial			Minor Arterial	Major Collector	Minor Collector	Local	Total	Total by Jurisdiction
		Interstate	Other Freeway/ Expressway	Other						
Interstate highway	State*	914							914	914
State highway	State		166	4,143	5,561	1,046	18	9	10,942	10,942
County state-aid highway	Counties			81	2,863	15,049	10,028	2,564	30,584	46,600
County road	Counties				83	514	1,433	12,296	14,326	
Unorganized territory road	Counties					4	4	1,682	1,690	
Municipal state-aid street	Cities			32	610	1,319		1,421	3,382	22,199
Municipal street	Cities			0	41	351	30	18,395	18,816	
Township road	Township				19	76	355	53,268	53,717	53,717
Parks and other roads	Parks or private				1	64	163	4,101	4,329	4,329
Total		914	166	4,256	9,178	18,422	12,030	93,735	138,702	138,702
Total without interstate and parks and other roads										133,459

**Policies dictated by FHWA, managed by State*

Legend

Tier 1—High misalignment probability
Tier 2—Medium misalignment probability
Tier 3—Low misalignment probability
Not applicable
Excluded from analysis

Table 2. Analysis tiers by jurisdiction

Tier	MnDOT	Counties	Cities	Townships	Total
Tier 1 (high misalignment probability)	27	2,644	32	19	2,722
Tier 2 (medium misalignment probability)	6,606	12,300	651	431	19,989
Tier 3 (low misalignment probability)	4,310	31,656	21,515	53,268	110,748
Excluded from analysis (not applicable)					5,243
Total	10,942	46,600	22,199	53,717	138,702

Step 2: Obtain detailed information for segments for further analysis

The team then obtained detailed information for each road segment to prepare a listing of all segments for analysis. This information included current owner, mile beginning and end points, functional class, and location (county and city). The team also prepared maps to present the same information visually, allowing reviewers to view both the road network and individual segments for further review and analysis. The listing of segments and maps was prepared for a subset of the road network. This includes Tier 1 segments that are either owned by MnDOT or functionally classified as *principal arterials* and Tier 2 segments that are owned by MnDOT.

Step 3: Review segments with appropriate team members against established parameters

The first part in this step involved establishing a set of consistent parameters against which all the segments can be reviewed. The project team discussed various parameters before agreeing on a set of unambiguous parameters that were reviewed qualitatively for each segment. Some of these parameters included the following:

- Road system continuity preferences
- System spacing
- Location
- Site of national, state, or local interest
- Relative traffic volume
- Intermodal facilities

Step 4: Prepare a revised preliminary misalignment register

This step involved revising the preliminary misalignment register to remove any segments that were not deemed as misaligned and adding any segments that were missed in the identification process. These remaining misaligned segments were deemed as candidates for inter-agency transfer contingent upon a discussion and agreement among agencies as well as funding availability.

Cost Estimation Approach

The primary objective of this task was to establish planning-level costs for all segments on the misalignment register to ensure they are in good condition before a segment could be considered for a transfer. The project team approached this by considering various treatments that may need to be applied to roads and bridges to bring them up to good condition and design standards. The primary intent of this approach is to provide a planning level estimate of the costs. Each segment will need to be estimated in further detail before a transfer can be negotiated between agencies. Table 3 and Table 4 present the unit costs for pavements and bridges.

Table 3. Pavement unit costs

Mill/Overlay (per lane mile)	Rehabilitation (per lane mile)	Reconstruction (per lane mile)
$150,000	$250,000	$1,000,000 (rural) $2,000,000 (urban)

Table 4. Bridge unit costs

Mill/Overlay (per sq ft)	Re-Decking (per sq ft)	Reconstruction (per sq ft)
$12	$60	$145

Findings

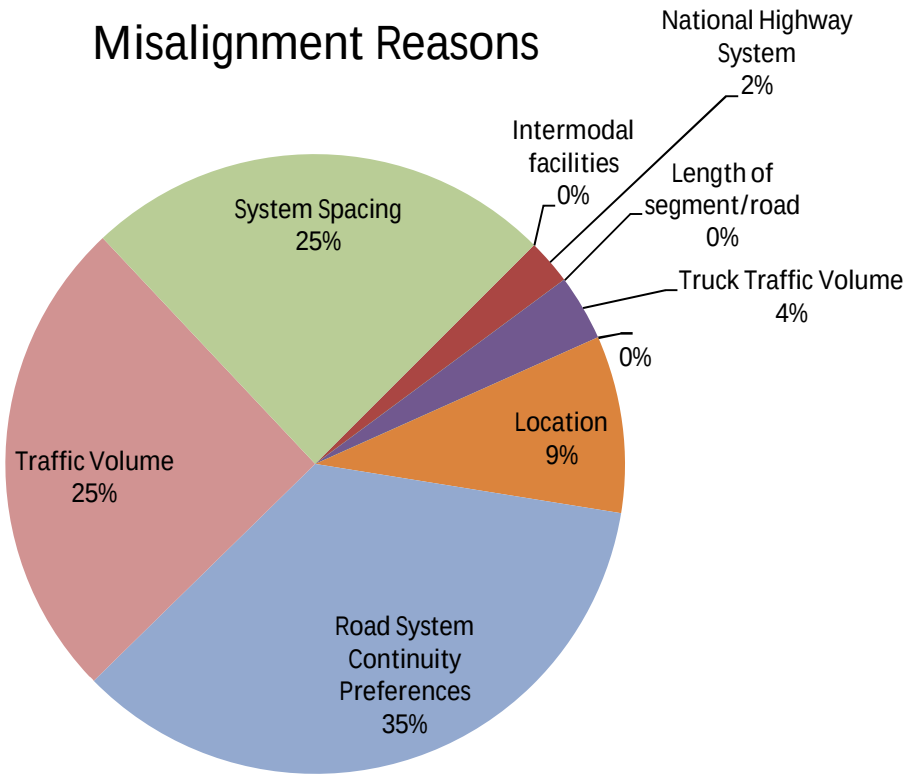
Misaligned Segment Mileage

The team identified a total of 1,181 centerline miles as misaligned out of the 6,746 centerline miles that the project focused on. This includes about 97 miles of segments that are potentially misaligned but require a comprehensive transportation area study to determine misalignment and/or alternate routes. The 1,181 centerline miles translate to 2,653 lane miles and are comprised of 151 individual segments. These segments range in length from 0.05 centerline miles to 36 centerline miles, with a median length of 6.47 centerline miles.

Primary Reasons for Misalignment

The primary reasons for misalignment are presented in Chart 1.

Chart 1. Primary reasons for misalignment



Misaligned segment mileage by implementation tracks

The misaligned miles were broken into three tracks (tracks 1 to track 3) based on the simplicity or ease of transfers. The intent of the prioritization is not to identify specific segments that can be transferred first – but to categorize them for planning purposes.

Segments in Track 1 are identified as the routes that would be simpler to transfer due to the current condition, prior discussions between jurisdictions, as well as other conditions (such as not being a constitutional route).

This mileage is presented in Table 5, and is broken down by segments that are misaligned on the state system and segments that are misaligned on all other systems.

Table 5. Misaligned segment mileage by implementation tracks

Track	Misaligned on State System (Miles)	Misaligned on County System (Miles)	Misaligned on City System (Miles)
Track 1 (simplest/easiest to transfer)	Centerline: 354 Lane: 806	Centerline : 214 Lane: 518	Centerline : 0 Lane : 0
Track 2 (medium effort/complexity for transfer)	Centerline : 441 Lane: 882	Centerline : 13 Lane : 40	Centerline : 0 Lane : 0
Track 3 (most difficult/complex to transfer)	Centerline : 151 Lane : 374	Centerline : 8 Lane : 33	Centerline : 0 Lane : 0

Transfer Program Costs

This section presents the planning-level costs for the misalignment register/transfer program. The costs for all segments on the misalignment register/transfer program are largely based on the treatment to be applied to each segment to bring it up to design standards. This is based on:

- Condition of the road, and
- Whether the road meets design standards.

The total cost identified for the entire transfer program is $1.44 billion, which translates to $1.22 million per centerline mile, or about $542,000 for each lane mile (including bridges).

Details on the cost estimation process are presented in Section 5.2 of the detailed report.

The transfer program costs are presented in Table 6. Track 0 represents funds for segments that have already been transferred from the state to other agencies and the funds have been committed[2].

[2] The segment transfers and resulting fund commitments listed under Track 0 were conducted after negotiations between MnDOT and other jurisdictions.

Table 6: Transfer Program Costs

Track	Misaligned on State System (Miles)	Funds Required for *State to Other Agency* Transfers	Misaligned on Other Systems (Miles)	Funds Required for *Other Agencies to State* Transfers
Track 0 (Committed to prior transfers)	-	$242 m	-	-
Track 1 (simplest/easiest to transfer)	Centerline : 354 Lane : 806	$289 m	Centerline : 214 Lane: 518	$154 m
Track 2 (medium effort/complexity for transfer)	Centerline : 441 Lane : 882	$570 m	Centerline : 13 Lane : 40	$17 m
Track 3 (most difficult/complex to transfer)	Centerline : 151 Lane : 374	$399 m	Centerline : 8 Lane : 33	$9 m

Next Steps

The information presented in this report is intended to provide an understanding of the magnitude of misalignments and planning-level estimates of all transfers. This information can be used to:

- Communicate the business benefits of addressing misalignments to the traveling public and jurisdictional stakeholders
- Discuss misaligned segments and determine mutual benefits with other jurisdictions (e.g. better alignment of maintenance and capital expenditures)
- Utilize the provided framework to independently analyze parts of the road network that were not studied with this project
- Establish timing for misalignment transfers based on available funding
- Use the framework at a programmatic level in the scoping process to include criterion that asks the question, “is it owned by the right jurisdiction?”
- Guide future transfer priorities
- Discuss policy questions such as:
    - Transfer program queue
    - Transfer timing, given agency agreement and funding availability
    - How to better communicate benefits of transfers to all stakeholders, including the traveling public

Detailed Report

Table of Contents

1. Introduction

This document presents the final report of the Minnesota jurisdictional realignment project, divided into an executive summary and a detailed report.

The overall objective for this project was to ensure that Minnesota roads are owned and operated at the right jurisdictional level. This project developed and applied a methodology to identify roadway segments that are not owned by the right level of government (referred to as misaligned). This project also provides additional information that can be used as a basis from which a jurisdictional transfer process and program can be established to remedy the misalignments.

To accomplish these objectives, the project established a standard and consistent approach which can be used to identify segments the different jurisdictional interests in Minnesota—the state, counties, cities, and townships—agree are "misaligned." The project then applied this approach to build a misalignment register.

Looking forward, a guiding principle in Minnesota's 50-year vision is to "strategically fix the system," which includes reviewing parts of the system that may need to be reduced while other parts that may need to be enhanced or expanded to meet changing demand - ensuring that roads are aligned with the proper jurisdictional owner.

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The key issues with misaligned roads as identified in prior studies and through this study are as follows:

- Misaligned roads may not provide appropriate level of service for users in terms of both capacity and customer expectations, such as safety, ride quality and maintenance
- Misaligned roads may use the wrong source of funding, which may not contain required funds for improvements. This may result in a lower service level than if the road was properly aligned/owned by the appropriate jurisdiction
- Misaligned roads may lead to an "impaired" network of roads due to differing jurisdiction priorities (that is, the road conditions may change significantly while traveling and may not meet traveler's expectations)
- Misaligned roads may not receive the priority for funding or improvements, and as a result, misaligned roads that are widely used may be underserved while others may be over-served

This study goes beyond the scope of prior studies, in that this project identifies specific segments that are misaligned and considered candidates for transfer from one jurisdiction to another. This study also identifies a planning-level cost estimate for transfers, providing decision makers with data to make informed decisions.

The overall project has been divided into two phases.

Phase 1 established guiding principles, evaluated the history and prior studies of jurisdictional transfers, developed an approach for identifying misalignments, piloted the approach, and defined an agreed-upon process for applying the approach.

A 14-member project steering committee comprising of representatives from counties, cities, townships and MnDOT guided the project from start to the end. The representatives included members from both urban and rural areas of the state to ensure a holistic approach.

Phase 2 applied the process defined in Phase 1 to build a misalignment register including planning-level cost estimates, which will act as a basis for initiating transfers based on interagency agreement and available funding.

This report combines the approach and findings from both phases to provide a comprehensive report.

2. Project objectives

The overall objective for this project is to ensure that Minnesota roads are owned and operated at the right jurisdictional level. Phase 1 of the project defined a methodology, which in Phase 2 has been implemented on a subset of all Minnesota roads to identify specific segments that are not at the right level of government. This information was used to establish a preliminary transfer program – a listing of segments that are misaligned along with planning-level cost estimates.

2.1 Guiding Principles

The guiding principles of the methodology include the following:

- Holistic approach—the project focuses on all jurisdictions and in both directions of transfer (e.g., state to county and vice versa)
- Aid in achieving 50-year goal—the project looks at ways to "strategically fix the system"—that is, get the right roads at the right level of government and develop a realignment method that can be used in the future
- Collaboration and constant feedback—the project is transparent and collaborative amongst a broad project team
- Implementable—the project creates an approach that can be easily and consistently implemented across the state, subject to agreement between parties

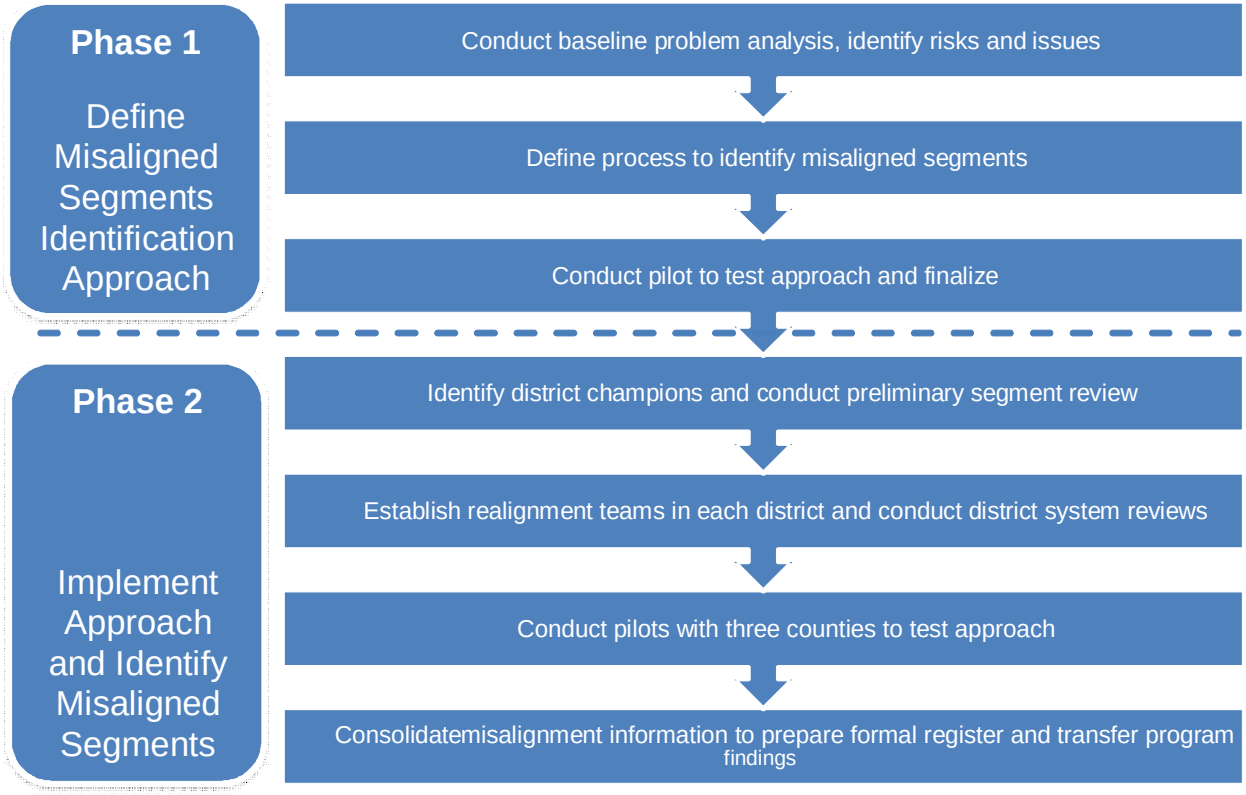
3. Overall Project Approach

This section presents the overall approach for the project.

As mentioned earlier in this document, Phase 1 of the project established guiding principles, evaluated the history and prior studies, developed an approach for identifying misalignments, piloted the approach, and defined an agreed-upon process for applying the approach. Phase 2 applied the process defined in Phase 1 to build a misalignment register, which is intended to act as a basis for initiating transfers based on interagency agreement and available funding.

A high level approach is presented in Chart 2, followed by short description of each task.

Chart 2. High-level approach



3.1 Phase 1 Approach

Conduct baseline problem analysis, identify risks and issues

This task consisted of conducting a literature review of completed studies that address realignment related issues, understanding and reviewing available network data, and identifying key issues with misaligned roadways.

Define process to identify misaligned segments

This task formed the majority of the phase and included defining a process to identify misaligned segments. The segment identification approach is detailed in *Section 5 – Detailed Approach Elements*.

Conduct pilot to test approach and finalize

This task consisted of piloting the segment identification process/approach with two districts to validate it and revise as necessary. The final output of this phase was a Phase 1 report that explains the segment identification approach in detail.

3.2 Phase 2 Approach

Identify district champions and conduct preliminary segment review

This task included identifying champions and facilitators in each district to help apply the segment identification approach and facilitate discussions with local partners. The planning directors from each district were identified as district champions for the project, and district state-aid engineers were identified as the facilitators for the project. The district champions' role of the project was as follows:

- Primary point of contact for local partners (counties, cities, local/municipal agencies)
- Helped apply segment identification approach
- Helped coordinate and plan district work efforts
- Helped identify and agree upon candidate transfer segments

The primary role of project facilitators was to facilitate discussions with local partners and provide local partner input.

The project team[3] reviewed the segment identification approach with the district champions and facilitators, explained the approach and answered any questions.

The team prepared a listing of a subset of segments[4] that were identified as preliminary misalignments using the criteria in Phase 1 and prepared accompanying maps to view the segments.

The district champions then identified segments that were not deemed to be misaligned, thus filtering the list for discussions with local partners. The primary outcome of this task was a revised preliminary misalignment register listing segments by each district.

[3] For the purposes of this document, the project team is defined as Parsons Brinckerhoff Consultants, MnDOT Planning Director and State Aid Staff.

[4] The subset of segments that were in scope for this project included Tier 1 segments that are either owned by MnDOT or functionally classified as principal arterials and Tier 2 segments that are owned by MnDOT. These tiers are explained in *Section 5.1 - Misaligned Segments Identification Process/Approach, Step 2*.

Establish realignment teams in each district and conduct district system reviews

Realignment teams were established in each district as a part of this task working with the district champions and facilitators. These district realignment teams consisted of:

- District champion
- District facilitator
- County engineers
- City engineer representatives
- Township representatives

> The project team formed a total of eight realignment teams (one realignment team in each district), and these teams included a total of over 110 team members - including MnDOT, counties, cities and township representatives.

The second part of this task included conducting a review of the preliminary misalignment register in each district. A meeting was conducted in each district to discuss all segments on the register, reasons for misalignment, risks associated with segment transfers (if any), and agreed if the segments were misaligned or not.

The outcome of this task was a revised misalignment register which included misaligned segments by each district.

Conduct pilots with counties to test approach

This task included piloting the segment identification approach with three counties to ensure the approach is feasible and applicable to all parts of the road network within the state. The project team invited all counties to volunteer, and identified three volunteers to test the approach.

The volunteer counties included Kandiyohi, Otter Tail and Douglas counties. The project team first prepared an inventory of all preliminarily misaligned segments and accompanying maps that were not in the subset used for prior tasks. The project team then met with the county engineers as well as township and city representatives to discuss the segments. The project team then tweaked the segment identification process to ensure standard applicability across the state. The project team then conducted discussions with each county to review all segments and prepare a misalignment register for each county. Further details on the county pilots are presented in *Section 5.5 –County Pilots Details*.

Consolidate misalignment information to prepare formal register and transfer program findings

This task consisted of consolidating all misalignment information from districts to create a central, formal register. The team then sent the register to the district realignment teams for validation, ensuring that the identified segments were recorded correctly. The transfer program development included the following activities:

- Establishing planning-level cost estimates for misaligned segments
- Establishing prioritization criteria
- Establishing transfer program based on priorities and available funding

Establish planning-level cost estimates for misaligned segments

This task consisted of the following steps:

- Determine standard treatment categories for roads and bridges through discussions with state aid engineers and district planners
- Determine planning-level unit costs for the standard treatment categories through discussions with state aid engineers, county engineers and district planners
- Obtain existing condition information from MnDOT pavement and bridge management systems to determine treatment required
- Obtain current condition information (including compliance to design standards) and recommended treatments from county engineers
- Utilize planning-level cost information to calculate costs to transfer all misaligned segments

Establish prioritization criteria

This task consisted of defining criteria to prioritize segments for transfer into three tracks (from easiest to most difficult to transfer). The criteria were defined based on feedback received from the realignment teams through the course of the project.

Establish transfer program based on priorities and available funding

This task included developing the transfer program by combining the planning-level cost estimates with the prioritization criteria.

4. Detailed Approach Elements

4.1 Misaligned Segments Identification Process/Approach

This section presents the process/approach to identify segments that may be misaligned and are candidates for transfer from one jurisdiction to another. The project team first divided the network into three tiers for analysis based on the probability of misalignment by cross-referencing the route system and functional class.

The route system defines the owner of the segments, while the functional class defines the primary purpose of the road. The project team used the overarching goals of each agency to cross-reference the route system and functional class. For example, MnDOT's key goal of mobility means that routes with a functional class of principal arterial, many minor arterials and major collectors should be owned by MnDOT. Roads with a functional class of minor collectors and local roads are primarily intended to serve a local purpose, such as providing direct access to homes, businesses, and farms. The definitions for route systems and functional classifications which aid the segment analysis and identification process are presented in Appendix A of this document. The route system definitions presented below are derived from Minnesota statutes and clarified through feedback from the project's steering committee, while the functional classification definitions are obtained from FHWA functional classification guidelines[5].

The segment identification analysis is based on a set of metrics, or properties of road segments and the current owner.

Exclusions

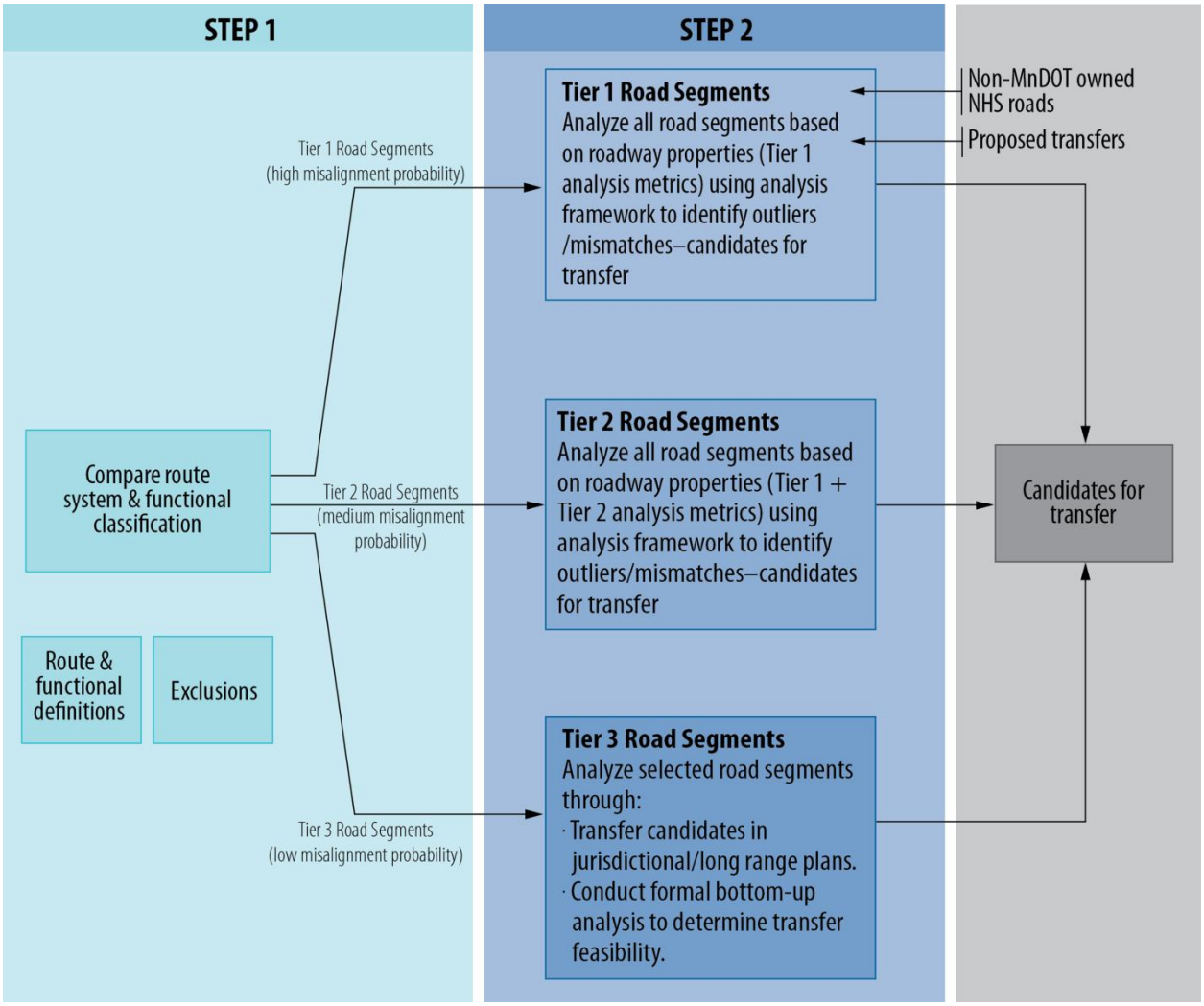
The following roads will be excluded from the analysis since their ownership is well-established. Any special roads that may be identified as candidates for transfer (by any involved parties) will be treated on a case-by-case basis:

- Interstate routes
- "Special roads"
- National park roads
- National forest development roads
- Indian reservation roads
- State forest roads
- State park roads
- Military roads
- National monument roads
- National wildlife refuge roads
- State game reserve roads
- Metropolitan Airports Commission (MAC) Minneapolis-St. Paul International Airport

Chart 3 presents the high-level approach for identifying candidate segments for transfer.

[5] http://www.fhwa.dot.gov/planning/processes/statewide/related/functional_classification/fc02.cfm#ad

Chart 3. High-level segment analysis approach



Step 1: Divide network into three tiers for analysis based on probability of misalignment

The project team divided the network into three tiers for analysis based on the probability of misalignment by cross-referencing the route system and functional class.

These tiers are presented in Table 7 in the form of a mileage chart that cross-references the route system (shown in rows) and the functional class (shown in columns) to indicate the number of miles that fall within each grouping. Tier 1 indicates segments that have the highest probability of being misaligned, and are marked in red in the tables. Tier 2, marked in yellow, indicates segments with a medium probability of misalignment. Tier 3, marked in green, indicates segments with a low probability of misalignment. The segments that were excluded from the analysis are marked in gray.

Table 8. summarizes the mileage information by tiers (shown in rows) and segment owners (shown in columns).

Table 7. Analysis tiers and mileage chart

Road System	Owner	Principal Arterial			Minor Arterial	Major Collector	Minor Collector	Local	Total	Total by Jurisdiction
		Interstate	Other Freeway/ Expressway	Other						
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Total	10,942	46,600	22,199	53,717	138,702

Step 2: Obtain detailed information for segments for further analysis

The team then obtained detailed information for each road segment to prepare a listing of all segments for analysis. This information included current owner, mile beginning and end points, functional class, and location (county and city). The team also prepared maps to present the same information visually, allowing reviewers to view both the road network and individual segments for further review and analysis.

The project team discussed the scope of the project to identify a subset of the road network that could be analyzed and further discussed in the allotted project schedule. This subset was identified as all Tier 1 segments that are either owned by MnDOT or functionally classified as principal arterials and Tier 2 segments that are owned by MnDOT.

This allowed the project team to further prepare an approach that could be thoroughly tested, but could be ultimately applied to the entire road network by the involved jurisdictions.

The listing of segments and maps was then prepared for this subset of road network.

Step 3: Review segments with appropriate team members against established parameters

The first part in this step involved establishing a set of consistent parameters against which all the segments can be reviewed. The project team reviewed and discussed various parameters before agreeing upon a set of unambiguous parameters that are reviewed qualitatively for each segment. The parameters included the following:

- Road system continuity preferences (road begins or ends with another a different jurisdiction)
- System spacing (the road network is relatively too dense or too sparse in the vicinity for the owning jurisdiction)
- Location (the segment is located within specific boundaries inconsistent with the owning jurisdiction)
- Relative traffic volume
- Length of segment/road (segment is short, with other jurisdiction owning most of the road from the start/end point or intersection)
- Truck traffic volume (higher truck traffic volume than surrounding roads)
- Site of national, state, or local interest (site of national, state, or local interest that requires being on a state-connected road)
- Road restrictions (any restrictions for travel on the road) Intermodal facilities (segment serves an intermodal facility and is of statewide importance)

Specifically, traffic volume information (in the form of Average Annual Daily Traffic [AADT]) was found to be particularly helpful to further segregate Tier 2 segments. Further, for Tier 2, the team agreed on some additional factors:

- Identifying new alternative routes that have altered, or may alter, traffic patterns significantly (e.g., a new highway that bypasses a city would result in an old state road to become a city road)
- Identifying other considerations based on location, geography, etc.

Step 4: Prepare a revised preliminary misalignment register

This step involved revising the preliminary misalignment register to remove any segments that were not deemed as misaligned and adding any segments that may be additionally identified during the process.

These misaligned segments are deemed as candidates for inter-agency transfer contingent upon a discussion and agreement among agencies as well as funding availability.

Table 9 and Figure 1 present samples of the misalignment register in tabular and map formats.

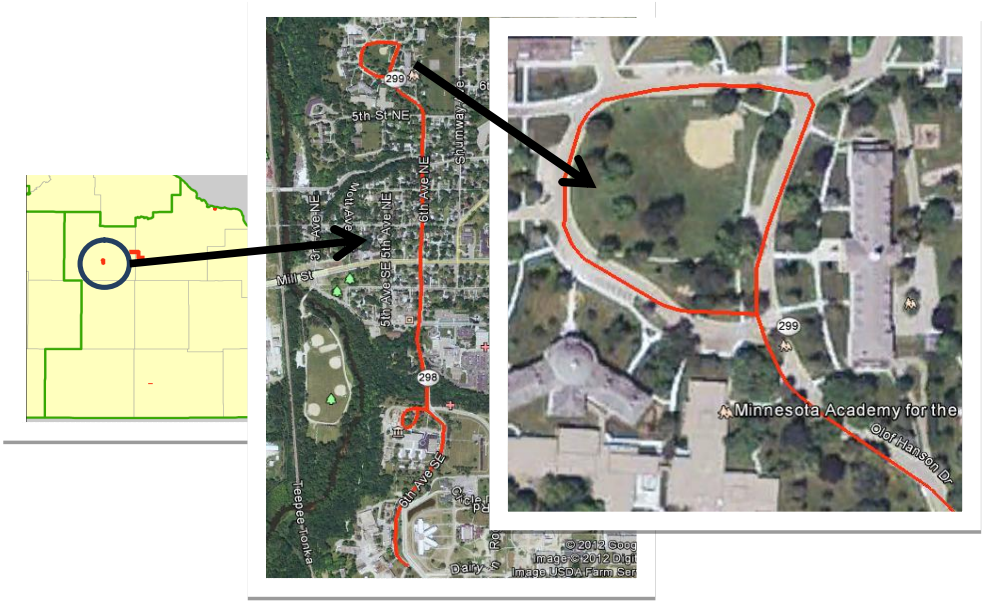
Table 9. Preliminary misalignment register (table)

Preliminary Misalignment Register

Segment Information

District	Tier & Classificat	Route #	Route System	Owner	Functional Cla	County	City	Street Name	Segment Miles	Beg. Pt.	End Pt.	Candidate	Notes
6	Tier 2 SO	0251	Minnesota State Highway	State	Major Collector	Freeborn, Mower	Clarks Grove (terminus), Hollandale,	-	16.374	0.000	16.374	Yes	System spacing to Hwy 30 and I-90...transfer risk is that heavy loads may want to use it..
6	Tier 1 SO	0292	Minnesota State Highway	State	Local	Goodhue	Red Wing	Highway 292	0.314	0.5	0.814	Yes	Behind the fence of the Red Wing correctional facility. Should be transferred to the city of Red Wing. Due for an overlay.
6	Tier 1 SO	0298	Minnesota State Highway	State	Local	Rice	Faribault	6th Ave NE	0.759	0	0.759	Yes	Planned to be transferred to the dept of corrections (from the loop close to state ave to the south end), the northern end hasn't been discussed with the city of Fairbault
6	Tier 1 SO	0298	Minnesota State Highway	State	Local	Rice	Faribault	6th Ave NE	0.151	1	1.151	Yes	Planned to be transferred to the dept of corrections (from the loop close to state ave to the south end), the northern end hasn't been discussed with the city of Fairbault
6	Tier 1 SO	0299	Minnesota State Highway	State	Local	Rice	Faribault	6th Ave NE	0.674	0	0.674	Yes	None
6	Other	CO 14	County State-Aid Highway	County	Minor Collector	Olmsted	Rochester	-	4.22	8.22	12.44	Yes	None
6	Tier 2 SO	0109	Minnesota State Highway	State	Minor Arterial	Freeborn	Alden (terminus)	-	4.835	27.998	32.833	Yes	None

Figure 1. Preliminary misalignment register (map)

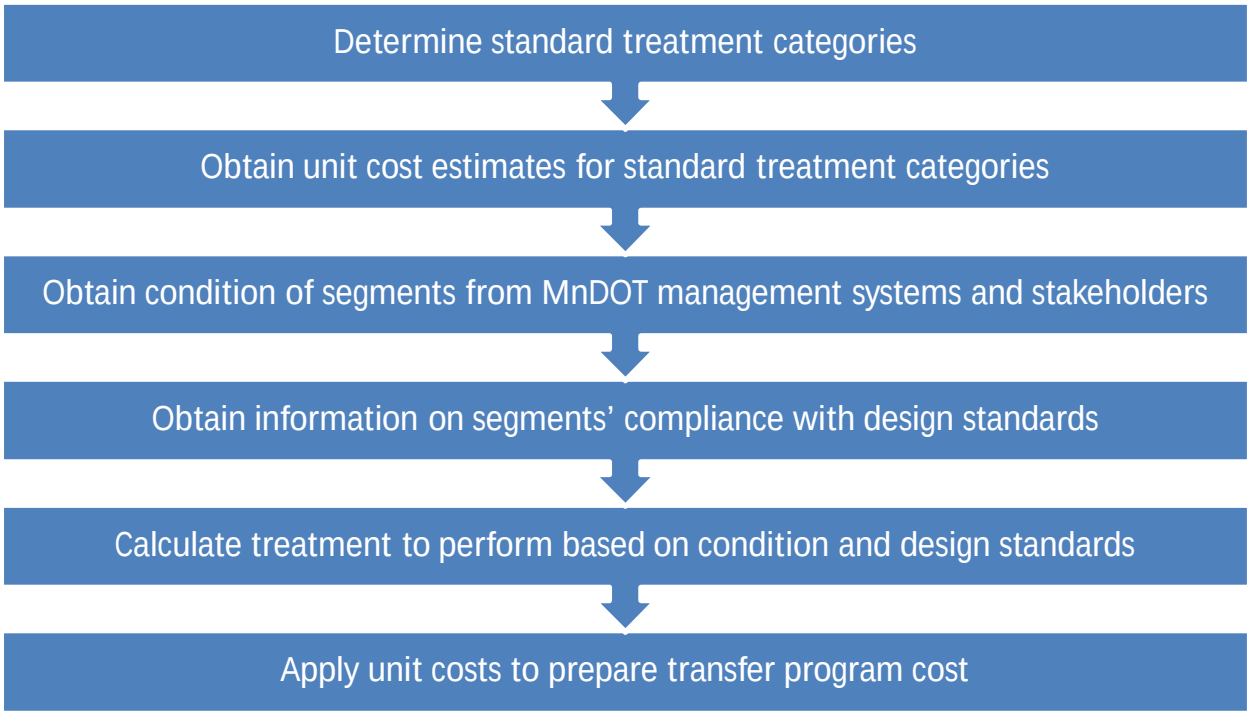


Source: Google Maps ©2012 Google

4.2 Cost Estimation Approach

The primary objective of this task was to establish planning-level costs for all segments on the misalignment register to ensure they are in good condition before a segment could be considered for a transfer. The project team approached this by considering various treatments that may need to be applied to roads and bridges to bring them up to good condition and design standards. Since requirements and practices vary, each segment will need to be discussed by involved parties in further detail before a transfer can be negotiated. A mutual agreement among the agencies on scope of work and funding is required before a transfer can occur. Chart 4 presents the cost estimation approach and is followed by a short description of the approach and unit costs.

Chart 4. Cost estimation approach



The team first discussed standard treatment categories and unit cost estimates with state aid engineers and district planners, and established both. The team then obtained unit cost estimates from MnDOT pavement and bridge management systems to compare MnDOT unit cost estimates to the district unit estimates.

Determine standard treatment categories

The project team identified three key treatments for both roads and bridges through discussions with state aid engineers and district planners. These are:

- Mill and Overlay:
    - Pavements and bridges: This includes milling the road/bridge deck and overlaying with up to 2 inches of new asphalt material. This may also be known as "mill and pave" or just "overlay" for bridges
- Rehabilitation:
    - Pavements: This includes milling and overlaying the road to a greater depth to significantly extend the pavement life. This may also be known as "reconditioning"
- Re-decking
    - Bridges: This includes replacing the deck by remove the barriers and all deck concrete to the top of the girders and rebuilding it
- Reconstruction:
    - Reconstructing the road, which generally means replacing the road except for the base and widening the road if needed
    - Reconstructing the bridge, which generally means replacing the superstructure and updating the substructure

Obtain unit cost estimates for standard treatment categories

The team interviewed state aid engineers in different districts to obtain their unit cost estimates for the aforementioned treatments and discussed factors that may affect costs. According to the staff interviewed, the primary factor that affects pavement costs is whether the project is located in an urban area vs. a rural area. This cost difference may be a result of higher material costs as well as other design requirements such as wider shoulder requirements, sidewalk requirements, or other requirements specific to urban areas. There was no identified variation between bridge costs in urban or rural areas. That said, many urban bridges have bicycle/pedestrian lanes (which are included in the bridge square footage) while many rural bridges don't.

The project team, in parallel, obtained unit cost estimates from MnDOT's pavement and bridge management systems.

The unit costs that were identified for pavements and bridges through both sources are presented in Table 10 and Table 11.

Table 10. Pavement unit costs

Source	Mill/Overlay (per lane mile)	Rehabilitation (per lane mile)	Reconstruction (per lane mile)	Staff Interviewed
District Averages	$125,000	$425,000	$800,000 (rural) $1,750,000 (urban)	State-Aid Engineers & District Planners
Statewide	$150,000	$250,000	$1,000,000 (rural) $2,000,000 (urban)	MnDOT Office of Materials and Road Research

Table 11. Bridge unit costs

Source	Mill/Overlay (per sq ft)	Re-Decking (per sq ft)	Reconstruction (per sq ft)	Staff Interviewed
District Averages	$11	$95	$130	State-Aid Engineers & District Planners
Statewide	$12	$60	$145	MnDOT Bridge Office

As seen in the above tables, the district averages are similar to the statewide values used in the pavement management system for both *mill/overlay* and *reconstruction*, while they are higher for rehabilitation and re-decking. The project team recommended using statewide unit prices for both pavements and bridges since these are supported by historical data and are MnDOT statewide standards. In addition, the team has added 10% to the above costs to account for preliminary engineering costs as recommended by the project team.

Obtain condition of segments from MnDOT management systems and stakeholders

The project team obtained condition data from MnDOT's pavement and bridge management systems to determine the condition of the misaligned segments. The team contacted the state aid and county engineers to obtain the condition for segments for which data was missing.

Obtain information on segments' compliance with design standards

The project team asked the state aid engineers and county engineers to identify whether each segment met or did not meet design standards.

Calculate recommended treatment based on condition and design standards

The team then developed condition thresholds that would determine treatment to be applied to each segment and calibrated the thresholds based on MnDOT's pavement management system recommendations. The team reviewed this information with the project management team and calculated the treatment recommended on each segment based on the condition.

The team then asked the stakeholders (state aid engineers, county engineers and others) for feedback, and revised the treatments per the stakeholder feedback. Most of the revisions to the treatments were made to account for the design standards of the segments. For example, a road in average condition that does not meet design standards was recommended for reconstruction, while a road in average condition that meets design standards was recommended for mill/overlay or rehabilitation.

Apply unit costs to prepare transfer program cost

The team combined the proposed treatments with the unit cost information to identify a planning-level cost estimate for the transfer program.

4.3 Project Prioritization Criteria and Implementation Tracks

The project prioritization criteria were used to categorize misaligned segments into three implementation tracks (Tracks 1 to 3) based on the simplicity or ease of transfers.

The intent of the prioritization is not to identify specific segments that can be transferred first – but to categorize them for planning purposes.

The project team identified five criteria for project prioritization and assigned weights to each criteria. These factors, weights and values that lead to simpler transfers are presented in Table 12.

Table 12. Prioritization factors and weights

Prioritization Factors	Weight
Constitutional route	25.0%
Bridge on route	20.0%
Discussed between parties	20.0%
Design Standard	15.0%
Condition	20.0%

Segments in Track 1 are identified as the ones that would be simpler to transfer due to the current condition, prior discussions between jurisdictions, as well as other conditions such as not being a constitutional route. On the other hand, Track 3 segments would be most difficult or complex to transfer.

The project team then added Track 0 to account for segments that have already been transferred from state to other agencies and the funds have been committed to the transfers. These transfers were conducted after negotiations between MnDOT and other jurisdictions.

5. Findings

This section presents the findings of the project and includes the following elements:

- Misaligned segment mileage
- Primary reasons for misalignment
- Misaligned segment mileage by implementation tracks
- Transfer program costs

5.1 Misaligned Segment Mileage

The project team initially began the analysis with a total of 138,702 centerline miles – the total number of miles in the state of Minnesota.

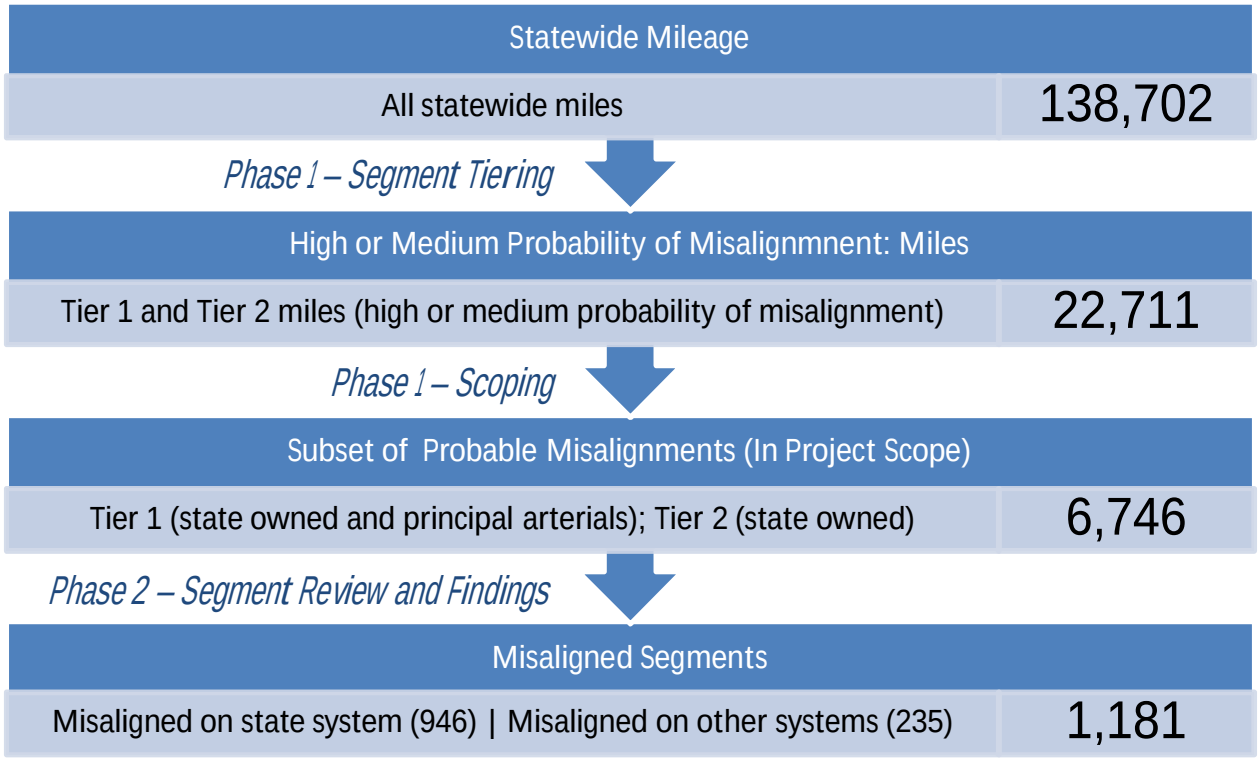
The analysis mileage was then narrowed to 22,711 centerline miles based on the tiering process (explained in *Section 4.1 - Misaligned Segments Identification Process/Approach*). These miles include all segments in Tier 1 and Tier 2.

As the project progressed, the project scope was further defined to include a subset of segments. This included Tier 1 segments that are either owned by MnDOT or functionally classified as principal arterials and Tier 2 segments that are owned by MnDOT. These tiers are explained in *Section 5.1 - Misaligned Segments Identification Process/Approach, Step 2*. This mileage equaled 6,746 centerline miles, and the analysis process primarily focused on these miles.

A total of 1,181 centerline miles were ultimately identified as misaligned at the end of the segment review process of Phase 2. This number of misaligned miles includes 97 miles of segments that are considered potentially misaligned but require a detailed area study to determine misalignment and/or alternate routes.

The focus on misaligned miles explained above is presented in Chart 5 in a graphical format.

Chart 5. Misaligned miles identification and number of centerline miles



The 1,181 centerline miles translate to 2,653 lane miles and are comprised of 151 individual segments. These segments range in length from 0.05 centerline miles to 36 centerline miles, with a median length of 6.47 centerline miles.

Appendix B presents a map showing the misaligned segments while Appendix C presents a comprehensive listing of all segments that are identified as misaligned.

5.2 Primary Reasons for Misalignment

The primary reasons for misalignment are based on the parameters used to identify misalignments.

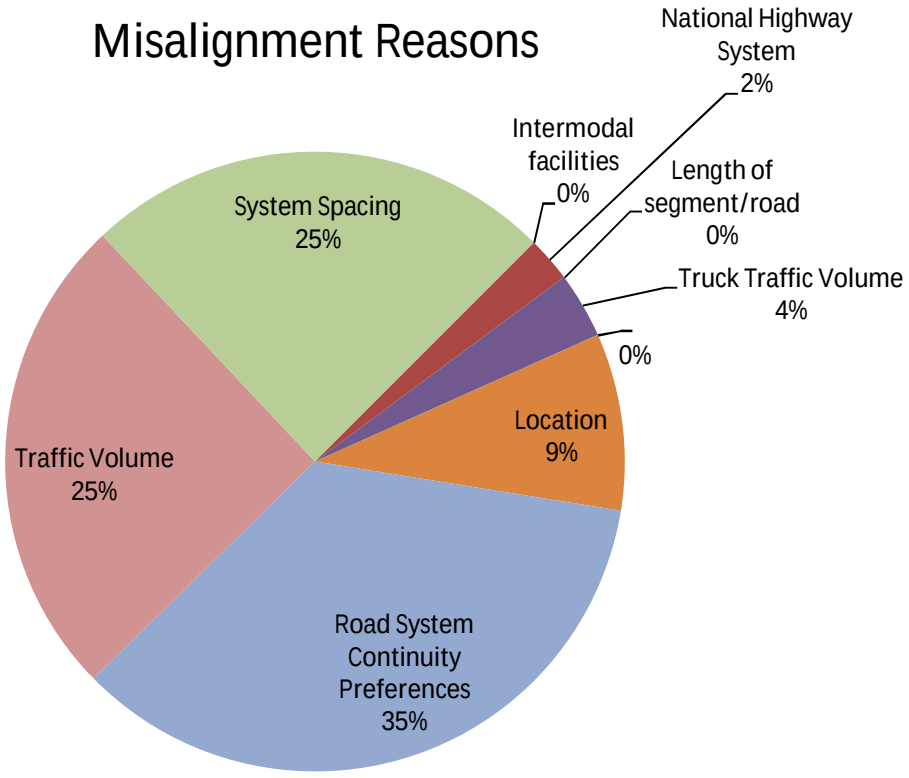
These reasons, in the order of most frequent to least frequent, are as follows:

- Relative Traffic Volume (relative traffic volume is inconsistent with other roads owned by the jurisdiction in the vicinity)
- Road System Continuity Preferences (road begins or ends with another jurisdiction, or the primary purpose is misaligned with the goals of the owning jurisdiction)
- System Spacing (the road network is relatively too dense or too sparse in the vicinity for the owning jurisdiction)
- Location (the segment is located within specific boundaries inconsistent with the owning jurisdiction)
- Truck Traffic Volume (higher truck traffic volume than surrounding roads)

- National Highway System (road on National Highway System)
- Intermodal facilities (segment serves an intermodal facility and is of statewide importance)
- Length of segment/road (segment is short, with other jurisdiction owning most of the road from the start/end point or intersection)

The information presented above is presented graphically in Chart 6.

Chart 6. Primary reasons for misalignment



5.3 Misaligned Segment Mileage by Implementation Tracks

As explained in *Section 5.3 Project Prioritization Criteria and Implementation Tracks,* the misaligned miles were broken into three tracks -tracks 1 to track 3 (with an additional track 0 to account for transfers that have already been undertaken). This mileage is presented in Table 13, and is broken down by segments that are misaligned on the state system and on all other systems.

Table 13. Misaligned segment mileage by implementation tracks

Track	Misaligned on State System (Miles)	Misaligned on County System (Miles)	Misaligned on City System (Miles)
Track 1 (simplest/easiest to transfer)	Centerline: 354 Lane: 806	Centerline : 214 Lane: 518	Centerline : 0 Lane : 0
Track 2 (medium effort/complexity for transfer)	Centerline : 441 Lane: 882	Centerline : 13 Lane : 40	Centerline : 0 Lane : 0
Track 3 (most difficult/complex to transfer)	Centerline : 151 Lane : 374	Centerline : 8 Lane : 33	Centerline : 0 Lane : 0

5.4 Transfer Program Costs

This section presents the planning-level costs for the misalignment register/transfer program. The costs for all segments on the misalignment register/transfer program are largely based on the treatment to be applied to each segment to bring it up to design standards. As explained earlier in *Section 5.2, Cost Estimation Approach*, the costs for transfers are based on:

- Condition of the road and
- Whether the road meets design standards

The total cost identified for the entire transfer program is $1. 44 billion, which translates to $1.22 m per centerline mile, or about $542,000 for each lane mile (including bridges).

The transfer program costs are presented in Table 14. Track 0 represents funds for segments that have already been transferred and the funds have been committed[6] .

[6] The segment transfers and resulting fund commitments listed under Track 0 were conducted after negotiations between MnDOT and other jurisdictions.

Table 14. Transfer Program Costs

Track	Misaligned on State System (Miles)	Funds Required for *State to Other Agency* Transfers	Misaligned on Other Systems (Miles)	Funds Required for *Other Agencies to State* Transfers
Track 0 (Committed to prior transfers)	-	$242 m	-	-
Track 1 (simplest/easiest to transfer)	Centerline : 354 Lane : 806	$289 m	Centerline : 214 Lane: 518	$154 m
Track 2 (medium effort/complexity for transfer)	Centerline : 441 Lane : 882	$570 m	Centerline : 13 Lane : 40	$17 m
Track 3 (most difficult/complex to transfer)	Centerline : 151 Lane : 374	$399 m	Centerline : 8 Lane : 33	$9 m

5.5 County Pilots Details

As discussed in Section 4.2, the segment identification approach was piloted with three counties to ensure the approach is feasible and applicable to all parts of the road network within the state. The three pilot counties included Kandiyohi, Otter Tail, and Douglas counties.

The first step of the pilot included conducting a discussion with the counties and reviewing preliminary misaligned segments. Representatives from cities as well as townships participated in the preliminary review meetings. The team then tweaked the segment identification process to add additional details for misalignment reasons to ensure standard applicability across the state. The project team then conducted follow-up sessions with each county to review all preliminary misaligned segments and prepare a misalignment register by county. Table 15 presents the number of miles misaligned in each of the pilot county. Appendix D presents the misalignment maps and listing of misaligned segments from the county pilots.

Table 15. County Misalignments

County	Misaligned on County System	Misaligned on City System	Misaligned on Township System
	(Centerline Miles)		
Kandiyohi	175	-	2
Otter Tail	16	5	3
Douglas	105	2	-

6. Next Steps

The information presented in this report is intended to provide an understanding of the magnitude of misalignments and planning-level estimates of all transfers. This information can be used to:

- Communicate the business benefits of addressing misalignments to the traveling public and jurisdictional stakeholders
- Discuss misaligned segments and determine mutual benefits with other jurisdictions (e.g. better alignment of maintenance and capital expenditures)
- Utilize the provided framework to independently analyze parts of the road network that were not studied with this project
- Establish timing for misalignment transfers based on available funding
- Use the framework at a programmatic level in the scoping process to include criterion that asks the question, “is it owned by the right jurisdiction?”
- Guide future transfer priorities
- Discuss policy questions such as:
    - Transfer program queue
    - Transfer timing, given agency agreement and funding availability
    - How to better communicate benefits of transfers to all stakeholders, including the traveling public

Appendix A: Definitions

This section presents the definitions for route systems and functional classifications which aid the segment analysis and identification process. The route system definitions presented below are derived from Minnesota statutes and clarified through feedback from the project's steering committee, while the functional classification definitions are obtained from FHWA functional classification guidelines.[7]

Route system definitions

The route system definitions below provide information presented in the statutes and as well as more detailed information/definition as agreed upon by the project's multi-jurisdictional team.

State roads (also known as "state highways")

Statute 160.02, Subd. 29—*"State highways or trunk highways" includes all roads established or to be established under the provisions of article 14, section 2 of the Constitution of the State of Minnesota.*

State roads provide the primary backbone of Minnesota's transportation network. These roads are critical to providing mobility across the state for people and goods, as well as ensuring economic development and growth. The state highway system in Minnesota includes about 10,942 centerline miles.

System primary goal—Statewide mobility (high speed)

County roads

Statute 160.02, Subd. 17—*"County highways" includes those roads which have heretofore been or which hereafter may be established, constructed, or improved under authority of the several county boards, including all roads lying within the county or on the line between counties established by judicial proceedings, except those roads established, constructed, or improved by the counties that have been maintained by the towns for a period of at least one year prior to July 1, 1957. All roads heretofore designated prior to July 1, 1957 as county-aid highways shall be county highways until abandoned or changed in accordance with law.*

County roads link different cities and townships within a county. A road within an unorganized territory, by default, is a county road. County roads provide mobility within the county and may have different (lower) speed limits than on state roads.

County state-aid highways (CSAH)

Statute 160.02, Subd. 18—*"County state-aid highways" includes all roads established in accordance with law as county state-aid highways.*

Municipal state-aid streets (MSAS)

Statute 160.02, Subd. 21—*"Municipal state-aid streets" includes all streets within the cities having a population of 5,000 or more, established in accordance with law as municipal state-aid streets.*

[7] http://www.fhwa.dot.gov/planning/processes/statewide/related/functional_classification/fc02.cfm#ad

City roads

City roads primarily serve residents of a particular city. They are designed to provide access to homes and commercial establishments and provide intra-city mobility. City roads primarily consist of local streets with multiple access points. These local streets tie to collectors with less access points. City roads act as the first and last leg of connectivity for most trips. City roads may include roads with high AADT—for example, a road that leads to a major shopping location (e.g., Mall of America). Typically, a road with the primary use of "passing-by" a city, including trucks, is not owned by cities.

Township roads

Statute 160.02, Subd. 28—*"Town roads" includes those roads and cartways which have heretofore been or which hereafter may be established, constructed, or improved under the authority of the several town boards, roads established, constructed, or improved by counties that have been maintained by the towns for a period of at least one year prior to July 1, 1957.*

Minnesota Administrative Rules (8820.0100), Subp. 17b—*"Town road" means a road that is maintained by a town or any other local unit of government acting as a town and open to the traveling public a minimum of eight months of the year as certified by the county highway engineer.*

Township roads primarily serve residents of the town and transport people to and from cities, larger roads, or other township roads. These roads also provide connectivity to farm lands as well as recreational areas (e.g., summer cabins). Township roads act as the first and last leg of connectivity for most trips.

Functional classification definitions

This section presents functional classification definitions derived from FHWA functional classification guidelines. Although the FHWA guidelines include separate definitions for urban and rural classifications, they have been merged here for consistency.

Principal arterial system

Urban principal arterial system

In every urban environment there exists a system of streets and highways which can be identified as unusually significant to the area in which it lies in terms of the nature and composition of travel it serves. In smaller urban areas (under 50,000), these facilities may be very limited in number and extent and their importance may be primarily derived from the service provided to travel passing through the area. In larger urban areas, their importance also derives from service to rural-oriented traffic but equally, or even more, important from service for major movements within these urbanized areas.

This system of streets and highways is the urban principal arterial system and should serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires and should carry a high proportion of the total urban area travel on a minimum of mileage. The system should be integrated, both internally and between major rural connections.

The principal arterial system should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. In addition, significant intra-area travel, such as between central business districts and outlying residential areas between

major inner city communities, or between major suburban centers should be served by this system. Frequently the principal arterial system will carry important intra-urban as well as intercity bus routes. Finally, this system in small urban and urbanized areas should provide continuity for all rural arterials which intercept the urban boundary.

Because of the nature of the travel served by the principal arterial system, almost all fully and partially controlled access facilities will be part of this functional system. However, this system is not restricted to controlled access routes. In order to preserve the identification of controlled access facilities, the principal arterial system is stratified as follows:

- Interstate
- Other freeways and expressways
- Other principal arterials (with no control of access)

The spacing of urban principal arterials will be closely related to the trip-end density characteristics of particular portions of the urban areas. While no firm spacing rule can be established which will apply in all—or even most—circumstances, the spacing of principal arterials (in larger urban areas) may vary from less than 1 mile in the highly developed central business areas to 5 miles or more in the sparsely developed urban fringes.

For principal arterials, the concept of service to abutting land should be subordinate to the provision of travel service to major traffic movements. It should be noted that only facilities within the "other principal arterial" system are capable of providing any direct access to adjacent land, and such service should be purely incidental to the primary functional responsibility of this system.

Rural principal arterial system

The rural principal arterial system consists of a connected rural system of continuous routes having the following characteristics:

- Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel
- Serve all, or virtually all, urban areas of 50,000 and over population and a large majority of those with population of 25,000 and over
- Provide an integrated system without stub connections except where unusual geographic or traffic flow conditions dictate otherwise (e.g., international boundary connections and connections to coastal cities)

In the more densely populated states, this system of highways may not include all heavily traveled routes which are multi-lane facilities. It is likely, however, that in the majority of states, the principal arterial system will include all existing rural freeways.

The principal arterial system is stratified into the following two subsystems:

- Interstate System—The Interstate System consists of all presently designated routes of the Interstate System.
- Other principal arterials—This system consists of all non-Interstate principal arterials.

Minor arterial road/street system

Urban minor arterial street system

The minor arterial street system should interconnect with and augment the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. This system also distributes travel to geographic areas smaller than those identified with the higher system.

The minor arterial street system includes all arterials not classified as principal, contains facilities that place more emphasis on land access than the higher system, and offers a lower level of traffic mobility. Such facilities may carry local bus routes and provide intra-community continuity but ideally should not penetrate identifiable neighborhoods. This system should include urban connections to rural collector roads where such connections have not been classified as urban principal arterials.

The spacing of minor arterial streets may vary from 1/8 to 1/2 mile in the central business district to 2 to 3 miles in the suburban fringes but should normally be no more than 1 mile in fully developed areas.

Rural minor arterial road system

The rural minor arterial road system should, in conjunction with the principal arterial system, form a rural system having the following characteristics:

- Link cities and larger towns (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and form an integrated system providing interstate and inter-county service.
- Be spaced at such intervals, consistent with population density, so that all developed areas of the state are within a reasonable distance of an arterial highway.
- Provide (because of the two characteristics defined above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems. Minor arterials, therefore, constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to through movement.

Collector road/street system

Urban collector street system

The collector street system provides both land access service and traffic circulation within residential, commercial, and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system. In the central business district, and in other areas of like development and traffic density, the collector system may include the street grid which forms a logical entity for traffic circulation.

Rural collector road system

The rural collector routes generally serve travel of primarily intra-county rather than statewide importance and constitute those routes on which (regardless of traffic volume) predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical on average.

In order to define more clearly the characteristics of rural collectors, this system should be sub-classified according to the following criteria:

- Major collector roads—These routes should (1) provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance, such as consolidated schools, shipping points, county parks, important mining and agricultural areas, etc. ; (2) link these places with nearby larger towns or cities or with routes of higher classification; and (3) serve the more important intra-county travel corridors.
- Minor collector roads—These routes should (1) be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators with their rural hinterland.

Local road/street system

Urban local street system

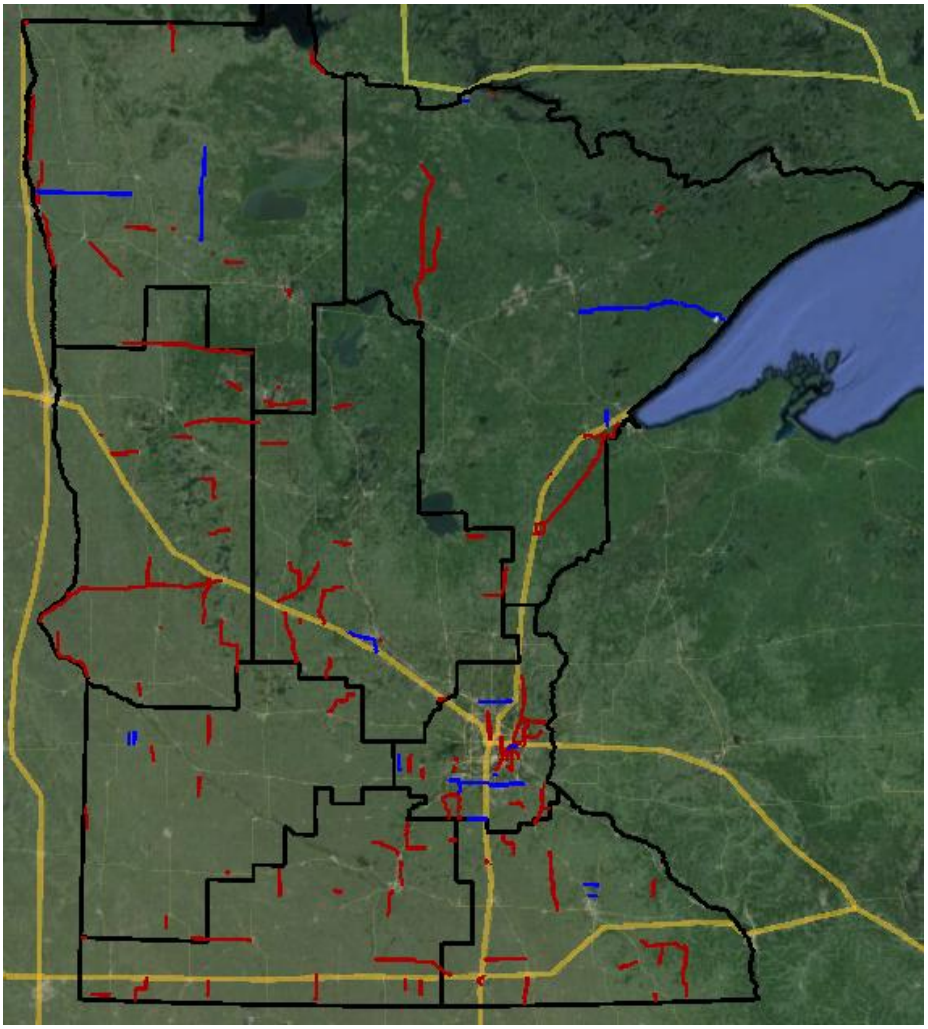
The urban local street system comprises all facilities not on one of the higher systems. It serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through traffic movement usually is deliberately discouraged.

Rural local road system

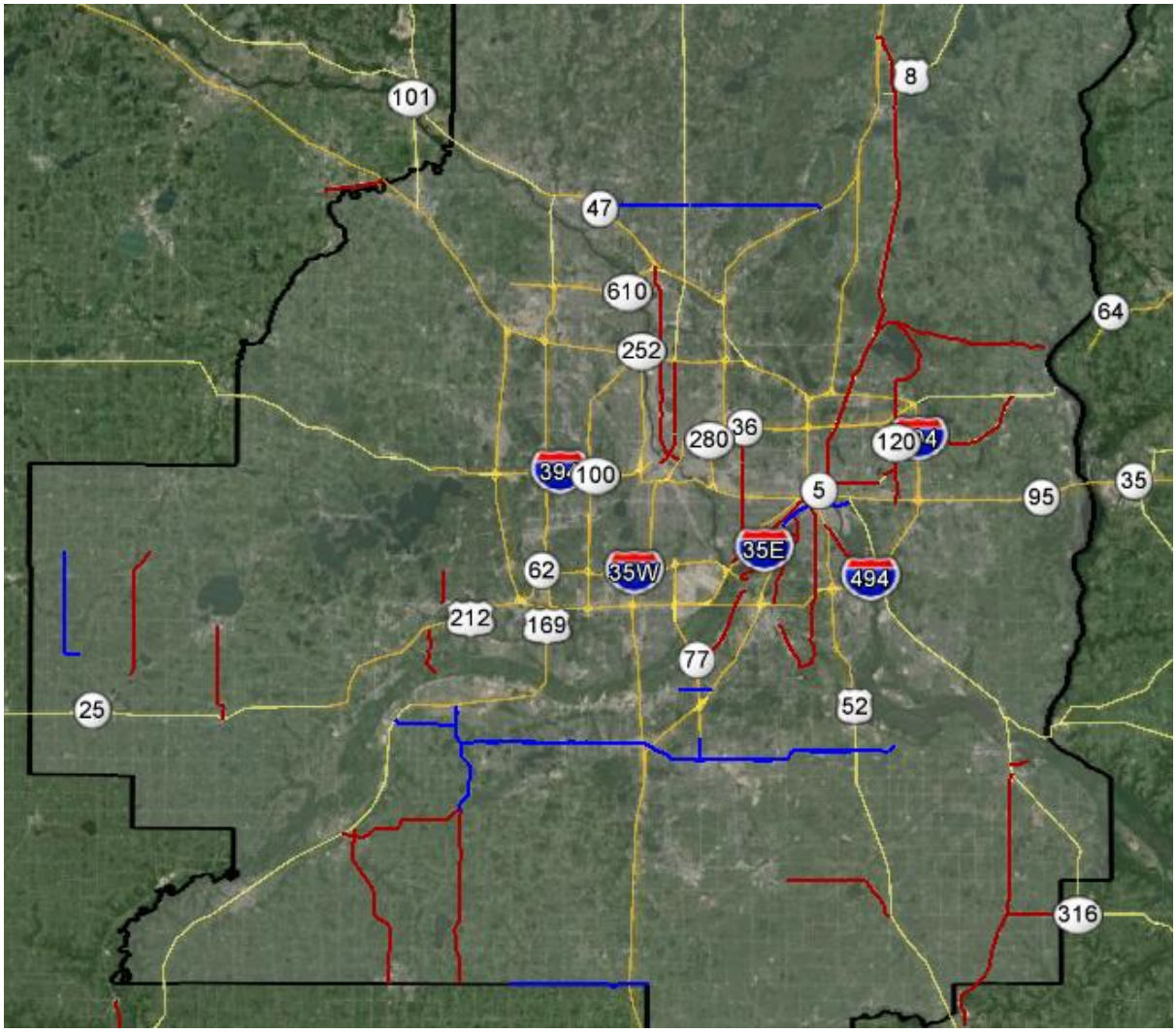
The rural local road system should have the following characteristics: (1) serve primarily to provide access to adjacent land and (2) provide service to travel over relatively short distances as compared to collectors or other higher systems. Local roads will constitute the rural mileage not classified as part of the principal arterial, minor arterial, or collector systems.

Appendix B: Misalignment Map Overview

1. Statewide



2. Metro District



Appendix C: Listing of Misaligned Segments

This section presents a listing of all segments identified as misaligned through this project process. The segments indicated with an asterisk (*) are potentially misaligned but require a detailed study before their misalignment can be confirmed.

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
1	0011	Minnesota State Highway	State	Minor Arterial	Koochiching	International Falls (terminus), Ranier	1.828	208.143	209.971	County	Koochiching	• Road system continuity preferences • Location
1	0027	Minnesota State Highway	State	Major Collector	Carlton	Moose Lake (terminus)	1.365	246.258	247.623	County	Carlton	• Traffic volume • System spacing
1	0169	Minnesota State Highway	State	Major Collector	St Louis, Lake	Ely (terminus), Winton (terminus)	4.199	415.07	419.269	County	St Louis, Lake	• Road system continuity preferences • Location
1	0289	Minnesota State Highway	State	Local	Carlton	Moose Lake	0.512	0	0.512	State prison system City (~.25 mi)	Moose Lake	• Road system continuity preferences
1	0023	Minnesota State Highway	State	Minor Arterial	Pine, Carlton, St Louis	Sandstone (terminus), Askov, Bruno, Kerrick, West Duluth (terminus)	4.445	281.266	285.711	County	Pine Carlton St Louis	• System spacing
1	0038	Minnesota State Highway	State	Minor Arterial	Itasca	Grand Rapids (terminus), Bigfork, Effie (terminus)	18.67	28.096	46.766	County	Itasca	• System spacing • Traffic volume
1	0123	Minnesota State Highway	State	Major Collector	Pine	Sandstone (terminus), Askov (Near)	8.037	0.000	8.037	County	Pine	• System spacing • Site of national, state, or local interest
1	13	County State-Aid Highway	County	Minor Arterial	St Louis	Duluth (near)	6.84	0.73	7.57	State	MnDOT	• System spacing

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
1	0015 (Forest Highway 11)	County State-Aid Highway	County	Minor Collector	Lake St. Louis	Makinen, Brimson (near)	6.25	0	6.25	State	MnDOT	• System spacing • Truck traffic volume • Site of national, state, or local interest
1	0015 (Forest Highway 11)	County State-Aid Highway	County	Minor Collector	Lake St. Louis	Makinen, Brimson (near)	17.476	7.34	24.816	State	MnDOT	• System spacing • Truck traffic volume • Site of national, state, or local interest
1	0016 (Forest Highway 11)	County State-Aid Highway	County	Major Collector	Lake St. Louis	Makinen, Brimson (near)	35.71	31.876	67.586	State	MnDOT	• System spacing • Truck traffic volume • Site of national, state, or local interest
1	0210	Minnesota State Highway	State	Major Collector	Carlton, St. Louis	Carlton, Thomson, Duluth (terminus)	11.696	216.22	227.916	Other State Agency	Department of Natural Resources	• Location
2	0002B	US Highway	State	Minor Arterial	Polk	East Grand Forks	0.334	0	0.334	City	East Grand Forks	• Location
2	0075	US Highway	State	Minor Arterial	Polk, Marshall, Kittson	Crookston, Warren, Argyle, Stephen, Donaldson, Kennedy, Hallock, Humboldt, Noyes (terminus)	2.09	410.21	412.3	County	Polk, Marshall, Kittson	• Traffic volume
2	0087	Minnesota State Highway	State	Major Collector	Hubbard	Park Rapids (near),	18.72	39.436	58.156	County	Hubbard	• Traffic volume • Location
2	0089	Minnesota State Highway	State	Minor Arterial	Roseau	Roseau (near)	12.548	131.102	143.65	County	Roseau	• Traffic volume
2	0102	Minnesota State Highway	State	Minor Arterial	Polk	Crookston (near), Fertile (near)	19.297	0.000	19.297	County	Polk	• Road system continuity preferences

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
2	0172	Minnesota State Highway	State	Major Collector	Lake of the Woods	Baudette (terminus)	11.515	0	11.515	County	Lake of the Woods	• Road system continuity preferences
2	0220	Minnesota State Highway	State	Major Collector	Marshall, Polk	Oslo (near),	17.921	29.489	47.410	County	Marshall Kittson	• Traffic volume • Truck traffic volume • Location
2	0220	Minnesota State Highway	State	Major Collector	Marshall, Kittson	Oslo (near),	26.128	52.408	78.536	County	Marshall Kittson	• Traffic volume • Truck traffic volume • Location
2	0220	Minnesota State Highway	State	Major Collector	Polk	Climax (terminus)	23.371	0.426	23.797	County	Polk	• Traffic volume
2	0222	Minnesota State Highway	State	Minor Arterial	Red Lake	Oklee (terminus)	1.474	0	1.474	County	Red Lake	• Road system continuity preferences
2	0223	Minnesota State Highway	State	Minor Collector	Clearwater	Leonard (terminus)	7.57	0	7.57	County	Clearwater	• Road system continuity preferences
2	0226	Minnesota State Highway	State	Major Collector	Hubbard	Park Rapids (near), Nevis (near)	1.494	0	1.494	County	Hubbard	• Road system continuity preferences • Traffic volume
2	0308	Minnesota State Highway	State	Minor Collector	Roseau	Badger (near), Roseau (near)	1.277	0	1.277	County	Roseau	• Traffic volume
2	0317	Minnesota State Highway	State	Major Collector	Marshall	Grafton, ND (near)	1.444	0	1.444	County	Marshall	• Traffic volume • Location

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
2	92	Minnesota State Highway	State	Minor Arterial	Red Lake	Red Lake Falls (near)	12.854	0	12.854	County	Red Lake	• Location
2	197	Minnesota State Highway	State	Principal Arterial - Other	Beltrami	Bemidji	5.295	1.032	6.327	City	Bemidji	• Location
2	CSAH 21	County State-Aid Highway	County	Minor Arterial		Thief River Falls, East Grand Forks	25.591	0	25.591	State	MnDOT	• NHS • Traffic volume
2	CSAH 3	County State-Aid Highway	County	Minor Arterial		Thief River Falls, East Grand Forks	12.760	0	12.76	State	MnDOT	• Traffic volume
2	CSAH 2*	County State-Aid Highway	County	Major Collector	Polk		11.930	6.09	18.02	State	MnDOT	• Truck traffic volume
2	CSAH 27*	County State-Aid Highway	County	Major Collector	Pennington		13.230	0	13.23	State	MnDOT	• Truck traffic volume
2	CSAH 28*	County State-Aid Highway	County	Major Collector	Pennington		3.500	0	3.5	State	MnDOT	• Truck traffic volume
2	CSAH 54*	County State-Aid Highway	County	Major Collector	Marshall		8.490	0	8.49	State	MnDOT	• Truck traffic volume
3	0237	Minnesota State Highway	State	Major Collector	Stearns	New Munich (terminus)	2.754	0	2.754	County	Stearns	• Road system continuity preferences
3	0241	Minnesota State Highway	State	Minor Arterial	Wright	St. Michael (terminus)	3.56	0.000	3.560	County	Wright	• Road system continuity preferences

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
3	0301	Minnesota State Highway	State	Minor Arterial	Sherburne	Saint Cloud (terminus)	1.059	0	1.059	County	Sherburne	• Road system continuity preferences
3	0309	Minnesota State Highway	State	Local	Crow Wing	Brainerd	0.274	0	0.274	Department of Administration	Department of Administration	• Road system continuity preferences
3	0004	Minnesota State Highway	State	Major Collector	Stearns	Lake Henry, Greenwald, Meire Grove	20.761	146.375	167.136	County	Lake Henry, Greenwald, Meire Grove	• Traffic volume
3	0070	Minnesota State Highway	State	Major Collector	Kanabec	Grasston (near)	7.223	0	7.223	County	Kanabec	• Location
3	0087	Minnesota State Highway	State	Major Collector	Wadena	Menahga (terminus)	3.327	27.963	31.29	County	Wadena	• Location
3	0087	Minnesota State Highway	State	Minor Arterial	Cass	Backus (terminus)	12.117	62.194	74.311	County	Cass	• Traffic volume Location
3	0107	Minnesota State Highway	State	Minor Arterial	Isanti, Kanabec	Braham (terminus), Grasston (terminus)	11.452	6.119	17.571	County	Isanti, Kanabec	• System spacing
3	0287	Minnesota State Highway	State	Major Collector	Todd	Grey Eagle (terminus), Long Prairie (terminus)	14.423	0	14.423	County	Todd	• Road system continuity preferences
3	0075*	Minnesota State Highway	County	Principal Arterial - Other	Stearns	St Augusta (terminus), Saint Cloud (terminus)	7.368	5.6	12.968	State	MnDOT	• Traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
3	0075*	Minnesota State Highway	County	Principal Arterial - Other	Stearns	Saint Cloud (terminus), Waite Park, St Joseph	8.296	13.144	21.44	State	MnDOT	• Traffic volume
3	0087	Minnesota State Highway	State	Minor Arterial	Cass		7.795	75.406	83.201	County	Cass	• Traffic volume
4	0029	Minnesota State Highway	State	Minor Arterial	Douglas	Alexandria	1.007	124.719	125.726	City	Wadena	• Traffic volume
4	0054	Minnesota State Highway	State	Major Collector	Grant	Elbow Lake (terminus)	10.851	0	10.851	County	Grant	• Road system continuity preferences • Traffic volume
4	0104	Minnesota State Highway	State	Major Collector	Pope	Glenwood (terminus)	22.441	18.454	40.895	County	Pope	• System spacing
4	0114	Minnesota State Highway	State	Major Collector	Pope	Starbuck (terminus), Lowry (terminus)	6.595	0.000	6.595	County	Pope	• System spacing • Traffic volume • Location
4	0114	Minnesota State Highway	State	Major Collector	Pope, Douglas	Lowry (near)	12.697	7.258	19.955	County	Pope, Douglas	• System spacing • Traffic volume • Location
4	0117	Minnesota State Highway	State	Minor Arterial	Traverse	Wheaton (near)	1.797	0	1.797	County	Traverse	• Location
4	0119	Minnesota State Highway	State	Minor Arterial	Swift	Appleton (terminus)	5.298	9.810	15.108	County	Appleton (terminus)	• Traffic volume • Location

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0225	Minnesota State Highway	State	Major Collector	Becker	Pine Point (near)	8.809	0	8.809	County	Becker	• Road system continuity preferences
4	0228	Minnesota State Highway	State	Major Collector	Otter Tail	Vergas (terminus)	7.785	0	7.785	County	Otter Tail	• System spacing
4	0235	Minnesota State Highway	State	Major Collector	Otter Tail	Parkers Prairie & Urbank (both terminus)	10.027	0.000	10.027	County	Otter Tail	• System spacing
4	0329	Minnesota State Highway	State	Minor Collector	Stevens	Morris (Near)	0.68	0.432	1.112	U of M	U of M	• Road system continuity preferences • Minimum length of segment/road
4	0034*	Minnesota State Highway	State	Minor Arterial	Clay, Otter Tail	Barnesville (terminus),	1.202	0	1.202	County	Clay	• Location
4	0087	Minnesota State Highway	State	Major Collector	Becker	Frazee (terminus), Menahga (near)	27.963	0	27.963	County	Becker	• Location
4	0108	Minnesota State Highway	State	Minor Arterial	Wilkin, Otter Tail	Pelican Rapids (terminus)	11.948	0.080	12.028	County	Wilkin, Otter Tail	• Traffic volume
4	0108	Minnesota State Highway	State	Minor Arterial	Otter Tail	Pelican Rapids (terminus), Dent	13.925	47.526	61.451	County	Otter Tail	• Traffic volume
6	0020	Minnesota State Highway	State	Minor Arterial	Goodhue	Cannon Falls	3.064	0.000	3.064	County	Goodhue	• System spacing • Traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
6	0021*	Minnesota State Highway	State	Minor Arterial	Rice	Faribault (terminus), Shieldsville	1.932	0	1.932	City	Faribault	
6	0030	Minnesota State Highway	State	Minor Arterial	Olmsted, Fillmore	Rushford (terminus)	20.794	244.840	265.634	County	Olmsted, Fillmore	• System spacing • Traffic volume
6	0057	Minnesota State Highway	State	Minor Arterial	Dodge, Goodhue	Kasson (terminus), Mantorville, Wanamingo	24.578	0.000	24.578	County	Dodge, Goodhue	• Location
6	0074	Minnesota State Highway	State	Major Collector	Winona, Wabasha	St Charles (terminus), Elba	8.552	43.075	51.627	County DNR	Winona and Wabasha Counties, DNR	• Traffic volume
6	0080	Minnesota State Highway	State	Major Collector	Fillmore	Wykoff, Fountain (terminus)	8.431	0.000	8.431	County	Fillmore	• System spacing • Location
6	0086	County State-Aid Highway	County	Minor Arterial	Rice	Webster (near), Elko New Market (near)	4.077	3.943	8.02	State	MnDOT	• Included in Scott County Comprehensive Plan (Metro) • Scott County taking lead on transfer
6	0105	Minnesota State Highway	State	Major Collector	Mower	Austin (terminus)	12.065	0.000	12.065	City, County	City of Austin (part), Mower county	• Traffic volume • System spacing
6	0139	Minnesota State Highway	State	Major Collector	Fillmore	Harmony (terminus)	3.913	0.000	3.913	County	Fillmore	• Traffic volume • Road system continuity preferences
6	0246	Minnesota State Highway	State	Minor Arterial	Rice	Northfield (terminus), Nerstrand (near)	6.627	0	6.627	County	Rice	• Road system continuity preferences • Traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
6	0246	Minnesota State Highway	State	Minor Collector		Northfield (terminus), Nerstrand (near)	4.603	6.627	11.23	County	Rice	• Road system continuity preferences • Traffic volume
6	0250	Minnesota State Highway	State	Major Collector	Fillmore	Lanesboro (terminus)	9.479	0.000	9.479	County	Fillmore	• Traffic volume • Location
6	0251	Minnesota State Highway	State	Major Collector	Freeborn, Mower	Clarks Grove (terminus), Hollandale,	16.374	0.000	16.374	County	Freeborn, Mower	• System spacing • Truck traffic volume
6	0292	Minnesota State Highway	State	Local	Goodhue	Red Wing	0.314	0.5	0.814	Red wing correctional facility	Red wing correctional facility	• Road system continuity preferences
6	0298	Minnesota State Highway	State	Local	Rice	Faribault	0.759	0	0.759	Department of Corrections, City	Department of Corrections City of Faribault	• Road system continuity preferences
6	0298	Minnesota State Highway	State	Local	Rice	Faribault	0.151	1	1.151	Department of Corrections, City	Department of Corrections City of Faribault	• Road system continuity preferences
6	0299	Minnesota State Highway	State	Local	Rice	Faribault	0.674	0	0.674	City	Faribault	• Road system continuity preferences
6	CO 14	County State-Aid Highway	County	Minor Collector	Olmsted	Rochester	4.22	8.22	12.44	State	MnDOT	• System spacing
6	0109	Minnesota State Highway	State	Minor Arterial	Freeborn	Alden (terminus)	4.835	27.998	32.833	County	Freeborn	• Road system continuity preferences
7	0021*	Minnesota State Highway	State	Major Collector	Le Sueur	Montgomery (terminus)	2.998	17.088	20.086	County	Le Sueur	• System spacing

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
7	0022	Minnesota State Highway	State	Minor Arterial	Nicollet, Sibley	St Peter (terminus), Gaylord (terminus)	9.775	52.61	62.385	County	Nicollet, Sibley	• System spacing • Traffic volume
7	0091	Minnesota State Highway	State	Major Collector	Nobles	Ellsworth, Adrian, Lismore (near)	13.807	0.000	13.807	County	Nobles	• Traffic volume • Location
7	0093	Minnesota State Highway	State	Major Collector	Sibley	Le Sueur (terminus)	0.825	0.000	0.825	County	Sibley	• Location • Truck traffic volume • Site of national, state, or local interest
7	0093	Minnesota State Highway	State	Minor Arterial	Sibley	Le Sueur (terminus), Henderson (terminus)	3.899	1.700	5.599	County	Sibley	• Location
7	0109	Minnesota State Highway	State	Major Collector	Faribault	Winnebago (terminus), Delavan, Easton, Wells (terminus)	22.581	0.000	22.581	County	Faribault	• Road system continuity preferences • System spacing
7	0109	Minnesota State Highway	State	Minor Arterial	Faribault	Wells (terminus)	5.243	22.755	27.998	County	Faribault	• Road system continuity preferences • System spacing
7	112	Minnesota State Highway	State		Le Sueur	LeCenter to LeSueur	15.012	0.000	15.012	County	Le Sueur	• Traffic volume
7	0253	Minnesota State Highway	State	Major Collector	Faribault	Bricelyn (terminus)	6.472	0	6.472	County	Faribault	• Road system continuity preferences
7	0254	Minnesota State Highway	State	Major Collector	Faribault	Frost (terminus)	4.796	5.852	10.648	County	Faribault	• Road system continuity preferences

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
7	0257	Minnesota State Highway	State	Major Collector	Brown	Hanska (terminus)	3.991	0.000	3.991	County	Brown	• Road system continuity preferences
7	0258	Minnesota State Highway	State	Major Collector	Brown	Comfrey (terminus),	10.811	0.000	10.811	County	Brown	• Road system continuity preferences
7	0263	Minnesota State Highway	State	Major Collector	Martin	Ceylon (terminus), Welcome	11.226	0.000	11.226	County	Martin	• Road system continuity preferences
7	0264	Minnesota State Highway	State	Major Collector	Nobles	Round Lake (terminus),	7.394	0	7.394	County	Nobles	• Road system continuity preferences
7	0270	Minnesota State Highway	State	Major Collector	Rock	Hills (terminus), Steen (near)	7.659	0	7.659	County	Rock	• Road system continuity preferences
7	0913	Minnesota State Highway	State	Local	Waseca	Waseca	0.49	30.73	31.22	Township	Woodville	• Road system continuity preferences
7	0913	Minnesota State Highway	State	Local	Waseca	Waseca	0.08	31.467	31.547	City	Waseca	• Road system continuity preferences
7	860D	Minnesota State Highway	State	Principal Arterial - Other	Nicollet	Mankato/North Mankato	0.046	0.054	0.1	City	Mankato/North Mankato	• Road system continuity preferences
8	0267	Minnesota State Highway	State	Major Collector	Murray	Iona (terminus)	5.353	0.000	5.353	County	Murray	• Road system continuity preferences • Traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
8	0274	Minnesota State Highway	State	Major Collector	Yellow Medicine	Wood Lake (terminus),	8.515	0.000	8.515	County	Yellow Medicine	• Location • Traffic volume
8	0275	Minnesota State Highway	State	Major Collector	Lac qui Parle	Boyd (terminus)	6.519	0	6.519	County	Lac qui Parle	• Road system continuity preferences
8	0330	Minnesota State Highway	State	Local	Redwood	Revere (near), Lamberton (near)	2.02	0	2.02	Township		• Location
8	Co Hwy 25*	County State-Aid Highway	County	Minor Arterial	Lac Qui Parle	Dawson	5.28	0	5.28	State	MnDOT	• Road system continuity preferences
8	0024	Minnesota State Highway	State	Major Collector	Meeker	Litchfield (terminus),	15.608	0.000	15.608	County	Meeker	• Road system continuity preferences • Location
8	0277	Minnesota State Highway	State	Major Collector	Chippewa	Clara City (near)	11.025	0	11.025	County	Chippewa	• Road system continuity preferences
M	0003*	Minnesota State Highway	State	Minor Arterial	Dakota	Northfield (terminus), Farmington, Rosemount, Inver Grove Heights (terminus)	5.437	38.312	43.749	County	Dakota	• Road system continuity preferences • Study: potential principal arterial route
M	0005	Minnesota State Highway	State	Minor Arterial	Ramsey	St Paul (terminus)	6.655	64.694	71.349	County	Ramsey	• Road system continuity preferences

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
M	0005	Minnesota State Highway	State	Minor Arterial	Ramsey	St Paul (terminus), Maplewood (terminus)	3.039	71.939	74.978	County	Ramsey	• Road system continuity preferences
M	0005	Minnesota State Highway	State	Minor Arterial	Ramsey	St Paul (terminus), Maplewood (terminus)	0.816	75.531	76.347	County	Ramsey	• Road system continuity preferences
M	0005	Minnesota State Highway	State	Minor Arterial	Washington	Oakdale (terminus), Lake Elmo, Oak Park Heights (terminus)	8.221	77.834	86.055	County	Washington	• Road system continuity preferences
M	0013*	Minnesota State Highway	State	Minor Arterial	Dakota	Burnsville	5.137	101.098	106.235	County	Dakota	• Requires further discussion to determine if misaligned • Road system continuity preferences
M	0013	Minnesota State Highway	State	Minor Arterial	Dakota	Mendota Hts.	5.459	106.235	111.694	County	Dakota	• Road system spacing • Road system continuity preferences
M	0013	Minnesota State Highway	State	Minor Arterial	Scott	New Prague (near), Jordan (near), Prior Lake (near)	10.182	71.951	82.133	County	Scott	• Included in Scott County Comprehensive Plan
M	0014	County State-Aid Highway	County	Principal Arterial - Other	Anoka	Coon Rapids (terminus), Blaine, Lino Lakes (terminus)	13.273	2.031	15.304	State	MnDOT	• Road system continuity preferences
M	0020	Minnesota State Highway	State	Minor Arterial	Dakota	Cannon Falls (near), Miesville (near)	4.407	3.064	7.471	County	Dakota, Goodhue	• Road system continuity preferences
M	0021	Minnesota State Highway	State	Minor Arterial	Scott	New Prague (terminus), Jordan (terminus)	9.923	28.13	38.053	County	Scott	• Included in Scott County Comprehensive Plan

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
M	0023	County State-Aid Highway	County	Principal Arterial - Other	Dakota	Apple Valley (terminus)	1.255	19.493	20.748	State	MnDOT	• Road system continuity preferences
M	0032	County State-Aid Highway	County	Principal Arterial - Other	Dakota	Burnsville (terminus), Eagan (terminus)	1.921	2.689	4.61	State	MnDOT	• Road system continuity preferences
M	0036*	County State-Aid Highway	County	Principal Arterial - Other	Ramsey	St Paul (terminus)	2.45	0	2.45	State	MnDOT	• I-35E Truck Route • Cross-reference with Rt. 0194 (same road)
M	0037*	County State-Aid Highway	County	Principal Arterial - Other	Ramsey	St Paul (terminus)	2.16	0	2.16	State	MnDOT	• I-35E Truck Route • Cross-reference with Rt. 0194 (same road)
M	0042	County State-Aid Highway	County	Principal Arterial - Other	Dakota	Burnsville (terminus), Apple Valley, Rosemount (terminus)	17.525	0	17.525	State	MnDOT	• Road system continuity preferences
M	0042	County State-Aid Highway	County	Principal Arterial - Other	Scott	Prior Lake (terminus), Savage	3.89	4.64	8.53	State	MnDOT	• Included in Scott County Comprehensive Plan
M	0047	Minnesota State Highway	State	Minor Arterial	Hennepin, Anoka	Minneapolis (terminus), Columbia Heights, Fridley, Coon Rapids (terminus)	10.994	1.906	12.900	County	Hennepin, Anoka	• Road system continuity preferences
M	0050*	Minnesota State Highway	State	Minor Arterial	Dakota	Farmington (terminus), Hampton, Miesville (near)	7.255	11.898	19.153	County	Dakota	• Further study needed, possible principal arterial
M	0051	Minnesota State Highway	State	Minor Arterial	Ramsey	St Paul (terminus), Roseville, Arden Hills (terminus)	7.674	0.000	7.674	County	Ramsey	• System spacing

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
M	0061*	US Highway	State	Minor Arterial	Dakota	Miesville	3.113	104.136	107.249	County	Dakota	• Further study needed, possible principal arterial
M	0061	US Highway	State	Minor Arterial	Dakota	Miesville (near), Hastings (terminus)	8.207	107.249	115.456	County	Dakota	• System spacing
M	0061	US Highway	State	Minor Arterial	Ramsey, Washington, Chisago	St Paul (terminus), Ramsey, Vadnais Heights, White Bear Lake, Hugo, Forest Lake, Wyoming (terminus)	28.681	136.496	165.177	County	Ramsey, Washington, Chisago	• Road system continuity preferences
M	0065	Minnesota State Highway	State	Minor Arterial	Hennepin, Anoka	Minneapolis (terminus), Columbia Heights, Hilltop, Fridley (terminus)	6.232	1.861	8.093	County	Hennepin, Anoka	• System spacing
M	0096	Minnesota State Highway	State	Minor Arterial	Ramsey, Washington	White Bear Lake (terminus), Dellwood, Grant, Stillwater (terminus)	10.179	9.544	19.723	County	Ramsey, Washington	• Road system continuity preferences
M	0078	County State-Aid Highway	County	Minor Arterial	Scott	Shakopee (near)	3.684	0	3.684	State	MnDOT	• Included in Scott County Comprehensive Plan
M	0086	County State-Aid Highway	County	Minor Arterial	Scott	New Prague (near), Cedar Lake (near)	3.943	0	3.943	State	MnDOT	• Included in Scott County Comprehensive Plan
M	0101	Minnesota State Highway	State	Minor Arterial	Carver	Chanhassen (terminus)	0.574	8.328	8.902	County	Carver	• Road system continuity preferences

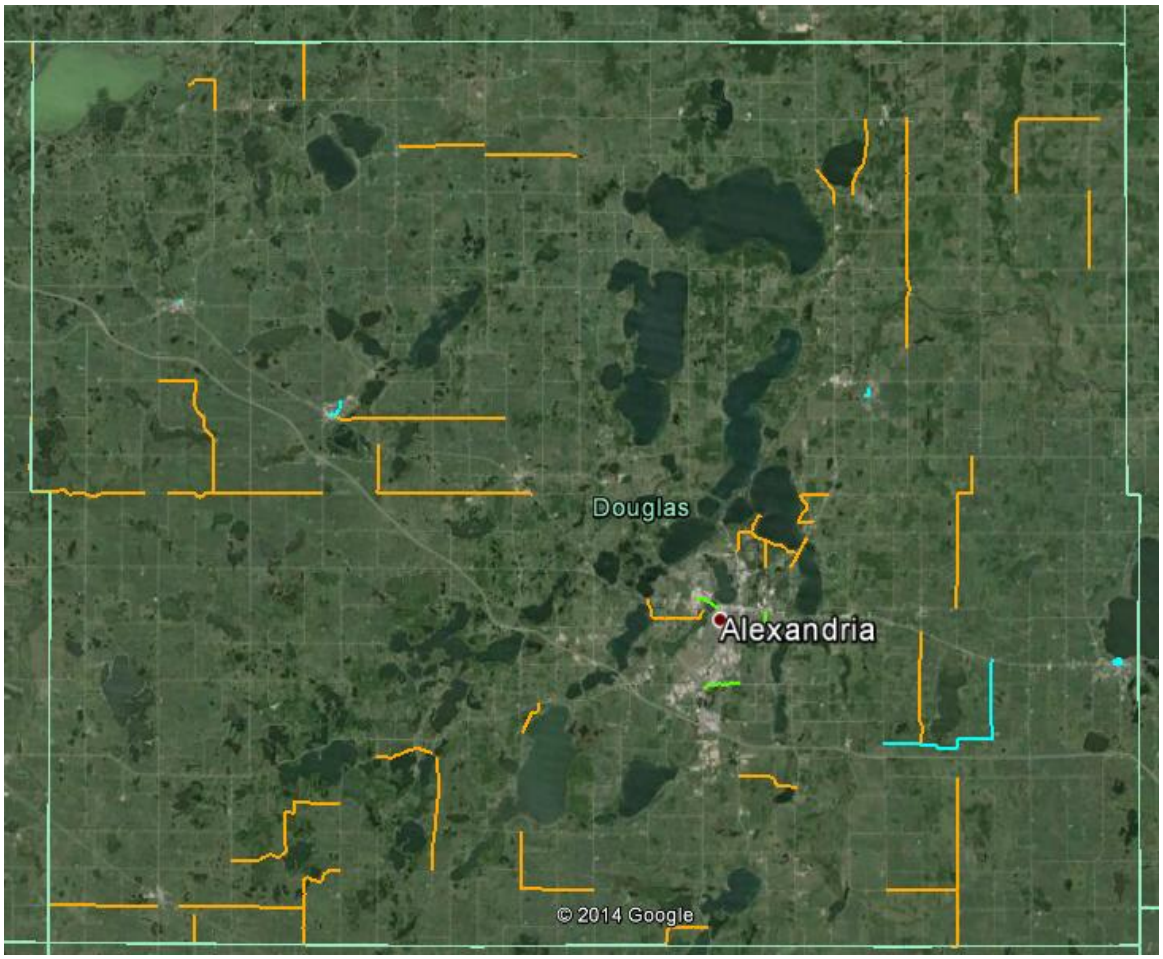
Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
M	0101	Minnesota State Highway	State	Minor Arterial	Carver	Chanhassen (terminus)	2.34	9.037	11.377	County	Carver	• Road system continuity preferences
M	0101	Minnesota State Highway	State	Minor Arterial	Carver, Hennepin	Chanhassen (terminus)	2.034	13.432	15.466	County	Carver, Hennepin	• Road system continuity preferences
M	0120	Minnesota State Highway	State	Minor Arterial	Ramsey	Maplewood (terminus), Oakdale, North St Paul (terminus)	7.233	2.114	9.347	County	Ramsey	• Road system continuity preferences
M	0149	Minnesota State Highway	State	Minor Arterial	Dakota	Inver Grove Heights (terminus), Eagan (terminus)	2.862	0.000	2.862	County	Inver Grove Heights (terminus), Eagan (terminus)	• Road system continuity preferences
M	0149	Minnesota State Highway	State	Minor Arterial	Dakota, Ramsey	Eagan (terminus), Mendota, St Paul (terminus)	5.779	4.145	9.924	County	Dakota, Ramsey	• Road system continuity preferences
M	0156	Minnesota State Highway	State	Minor Arterial	Dakota, Ramsey	South St Paul (terminus), St Paul (terminus)	4.201	0.000	4.201	County	Dakota, Ramsey	• Road system continuity preferences
M	0244	Minnesota State Highway	State	Minor Arterial	Washington	Mahtomedi (terminus), Dellwood (terminus)	4.705	2.525	7.230	County	Washington	• Traffic volume • Road system continuity preferences
M	0282	Minnesota State Highway	State	Minor Arterial	Scott	Jordan (terminus)	7.655	0.000	7.655	County	Scott	• Road system continuity preferences
M	0284	Minnesota State Highway	State	Minor Arterial	Carver	Cologne (terminus), Waconia (terminus)	5.651	0.000	5.651	County	Carver	• Road system continuity preferences

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
M	0291	Minnesota State Highway	State	Local	Dakota	Hastings (terminus)	1.198	0.000	1.198	County	Hastings	• Road system continuity preferences
M	0291	Minnesota State Highway	State	Local	Dakota	Hastings (terminus)	0.12	2	2.12	County	Hastings	• Road system continuity preferences
M	0913	Minnesota State Highway	State	Major Collector	Dakota	Mendota Heights (terminus)	1.377	105.43	106.807	City/Remove road (retire road)	Mendota Heights	• Road system continuity preferences
M	952A	US Highway	State	Minor Arterial	Dakota, Ramsey	Inver Grove Heights (terminus), West St Paul, St Paul (terminus)	5.418	126.869	132.287	County	Dakota, Ramsey	• Road system continuity preferences
M	952A	US Highway	State	Minor Arterial	Hennepin	Minneapolis (terminus)	0.643	140.168	140.811	County	Hennepin	• Road system continuity preferences
M	17	County State-Aid Highway	County	Minor Arterial	Scott	Shakopee (near)	6.523	0	6.523	State	MnDOT	• Included in Scott County Comprehensive Plan
M	33*	County State-Aid Highway	County	Minor Arterial	Carver	Waconia (near)	6.97	10.44	17.41	State	MnDOT	• Included in Carver County Comprehensive Plan
M	25	Minnesota State Highway	State	Minor Arterial	Carver	Waconia (near)	7.556	27.296	34.852	County	Carver	• Included in Carver County Comprehensive Plan

Appendix D: County Pilots – Misalignment Maps & Registers

This section presents the misalignment maps and a listing of all segments identified as misaligned from the county pilots.

1a. Douglas County – Map



1b. Douglas County – Register

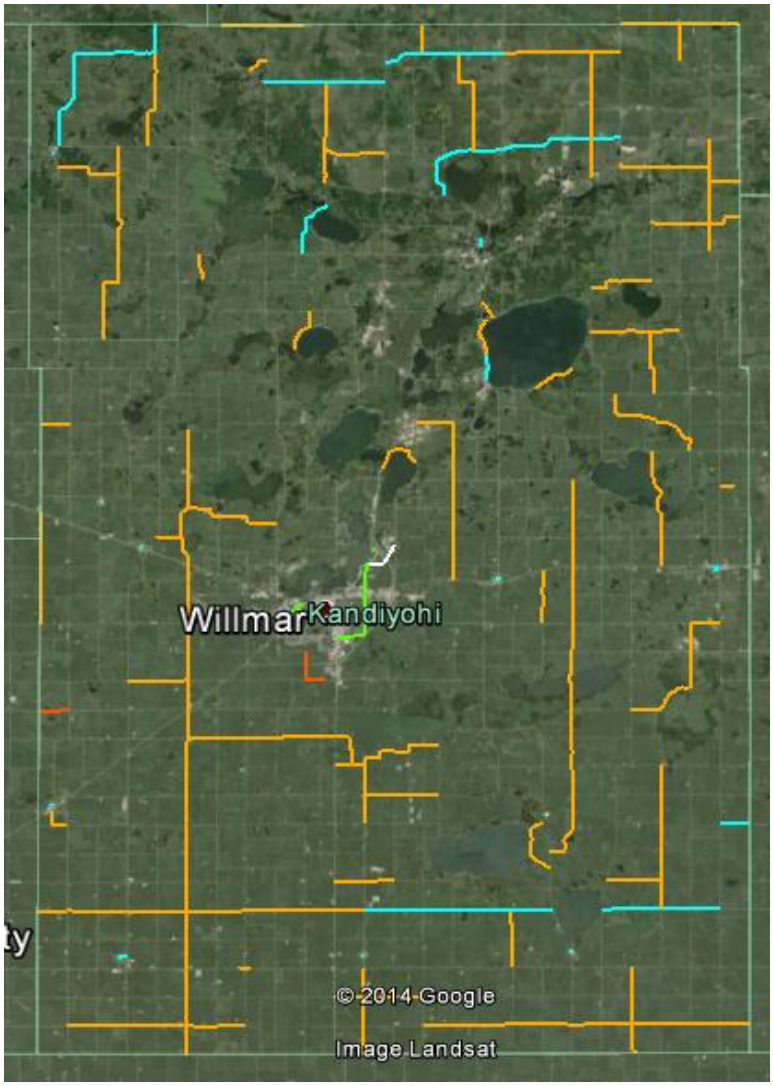
Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0070	County Road	County	Local	Douglas	Alexandria	0.72	0	0.72	City	Alexandria	• Already turned back to city
4	0070	County Road	County	Local	Douglas	Alexandria	2.254	2.08	4.334	City	Alexandria	• Already turned back to city
4	0070	County Road	County	Local	Douglas	Alexandria	0.575	5.2	5.775	City	Alexandria	• Already turned back to city
4	0090	County Road	County	Local	Douglas	Alexandria	2.06	0	2.06	City	Alexandria	• Serves local purpose
4	0111	County Road	County	Local	Douglas	Alexandria	0.91	0	0.91	City	Alexandria	• Already turned back to city
4	0115	Municipal State-Aid Street	City	Minor Arterial	Douglas	Alexandria	0.75	0	0.75	County	Douglas	• Location
4	0122	Municipal State-Aid Street	City	Minor Arterial	Douglas	Alexandria	0.41	0	0.41	County	Douglas	• Location
4	0125	Municipal State-Aid Street	City	Minor Arterial	Douglas	Alexandria	0.94	0	0.94	County	Douglas	• Location
4	0085	County Road	County	Local	Douglas	Alexandria (near)	1.37	0	1.37	Township	Alexandria	• Serves local purpose
4	0086	County Road	County	Local	Douglas	Alexandria (near)	1.79	0	1.79	Township	Hudson	• Serves local purpose
4	0089	County Road	County	Local	Douglas	Alexandria (near)	3.5	0	3.5	Township	Lake Mary, LaGrande	• Serves local purpose
4	0091	County Road	County	Local	Douglas	Alexandria (near)	1	0	1	Township	Lake Mary, LaGrande	• Serves local purpose
4	0093	County Road	County	Local	Douglas	Alexandria (near), Farwell (near)	3.049	0	3.049	Township	Holmes City	• Serves local purpose
4	0031	County State-Aid	County	Local	Douglas	Alexandria (near), Nelson (near),	5.35	0	5.35	Township	Alexandria, Orange, Osakis	• Serves local purpose

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
		Highway				Osakis (near)						
4	0051	County Road	County	Local	Douglas	Ashby (near)	0.56	0	0.56	Township	Lund	• Serves local purpose
4	0054	County Road	County	Local	Douglas	Barrett (near), Evansville (near)	2.017	0	2.017	Township	Evansville	• Serves local purpose
4	0056	County Road	County	Local	Douglas	Hoffman (near)	1.583	0	1.583	Township	Evansville, Urness	• Serves local purpose
4	0056	County Road	County	Local	Douglas	Hoffman (near)	1.637	1.66	3.297	Township	Evansville, Urness	• Serves local purpose
4	0057	County Road	County	Local	Douglas	Brandon	4.715	0	4.715	City	Brandon	• Already turned back part to township. Discussing segment within city limits with city for transfer
4	0155	County State-Aid Highway	County	Local	Douglas	Brandon	0.64	0	0.64	City	Brandon	• Serves local purpose
4	0056	County Road	County	Local	Douglas	Brandon (near), Garfield	5.54	11.34	16.88	City, townships	Brandon, Ida, LaGrande, Moe	• Location
4	0158	County State-Aid Highway	County	Local	Douglas	Carlos	0.28	0	0.28	City	Carlos	• Serves local purpose
4	0159	County State-Aid Highway	County	Local	Douglas	Carlos	0.11	0	0.11	City	Carlos	• Serves local purpose
4	0153	County State-Aid Highway	County	Local	Douglas	Evansville	0.07	0	0.07	City	Evansville	• Serves local purpose
4	0055	County Road	County	Local	Douglas	Evansville (near)	4.18	0	4.18	Township	Evansville	• Serves local purpose
4	0056	County Road	County	Local	Douglas	Evansville (near), Brandon (near)	4.314	3.94	8.254	Township	4 townships: Evansville, Brandon, Moe, Urness	• Serves local purpose
4	0097	County Road	County	Local	Douglas	Kensington (near)	2.98	0	2.98	Township	Holmes City Township	• Serves local purpose

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0077	County Road	County	Local	Douglas	Forada (near)	1.97	0	1.97	Township	Hudson, Orange Townships	• Serves local purpose
4	0088	County Road	County	Local	Douglas	Forada (near)	2.56	0	2.56	Township	Lake Mary Township	• Serves local purpose
4	0110	County Road	County	Local	Douglas	Forada (near), Osakis (near)	4.72	0	4.72	Township	Orange Township	• Serves local purpose
4	0094	County Road	County	Local	Douglas	Holmes City	1.58	0	1.58	Township	Holmes City Township	• Serves local purpose
4	0099	County Road	County	Local	Douglas	Kensington	3.01	0	3.01	Township	Solem Township	• Serves local purpose
4	0096	County Road	County	Local	Douglas	Kensington (near)	4.41	0	4.41	Township	Holmes City, Solem Townships	• Serves local purpose
4	0099	County Road	County	Local	Douglas	Kensington (near)	3.42	3.91	7.33	Township	Solem, Holmes City Townships	• Serves local purpose
4	0098	County Road	County	Local	Douglas	Kensington (near), Farwell (near)	0.78	0	0.78	Township	Solem Township	• Serves local purpose
4	0060	County Road	County	Local	Douglas	Millerville	2.33	0	2.33	Township	Millerville Township	• Serves local purpose
4	0052	County Road	County	Local	Douglas	Millerville (near)	1.571	0	1.571	Township	Lund Township	• Serves local purpose
4	0053	County Road	County	Local	Douglas	Millerville (near)	1.53	0	1.53	Township	Millerville Township	• Serves local purpose
4	0060	County Road	County	Local	Douglas	Millerville (near)	2.53	2.58	5.11	Township	Leaf Valley Township	• Serves local purpose
4	0064	County Road	County	Local	Douglas	Miltona (near)	2.11	0	2.11	Township	Miltona Township	• Serves local purpose
4	0065	County Road	County	Local	Douglas	Miltona (near)	6.17	0	6.17	Township	Miltona, Spruce Hill, Carlos, Belle River Townships	• Serves local purpose
4	0066	County Road	County	Local	Douglas	Miltona (near)	4.27	0	4.27	Township	Spruce Hill Township	• Serves local purpose
4	0068	County Road	County	Local	Douglas	Miltona (near)	2.11	0	2.11	Township	Spruce Hill Township	• Serves local purpose
4	0102	County Road	County	Local	Douglas	Miltona (near)	1.1	0	1.1	Township	Miltona Township	• Serves local purpose

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0078	County Road	County	Local	Douglas	Nelson	3.03	0	3.03	Township	Alexandria, Osakis, Hudson, Orange Townships	• Serves local purpose
4	0074	County Road	County	Local	Douglas	Nelson (near)	4.41	0	4.41	Township	Belle River, Osakis Townships	• Serves local purpose
4	0163	County State-Aid Highway	County	Local	Douglas	Osakis	0.14	0	0.14	City	Osakis	• System spacing
4	0164	County State-Aid Highway	County	Local	Douglas	Osakis	0.38	0	0.38	City	Osakis	• Serves local purpose

2a. Kandiyohi County – Map



2b. Kandiyohi County – Register

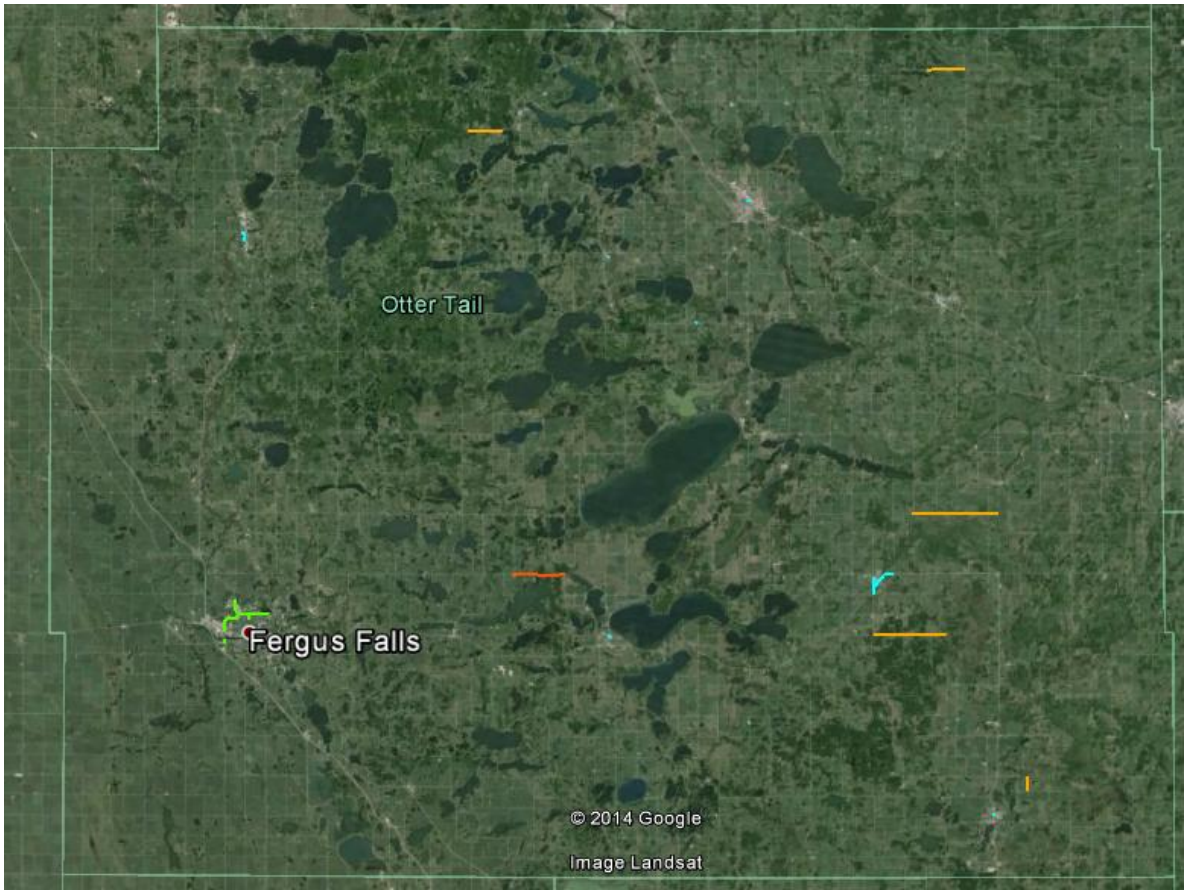
Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
8	0057	County State-Aid Highway	County	Local	Kandiyohi	Atwater	0.23	0	0.23	City	Atwater	• Serves local purpose
8	0057	County State-Aid Highway	County	Local	Kandiyohi	Atwater	0.13	0.3	0.43	City	Atwater	• Serves local purpose
8	0057	County State-Aid Highway	County	Local	Kandiyohi	Atwater	0.12	0.5	0.62	City	Atwater	• Serves local purpose
8	0139	County Road	County	Local	Kandiyohi	Atwater (near)	0.5	0	0.50	Township	Harrison Towship	• Road system continuity preferences
8	0067	County Road	County	Local	Kandiyohi	Belgrade (near)	2.755	0	2.76	Township	Colfax, Crow Lake	• Serves local purpose
8	0051	County State-Aid Highway	County	Local	Kandiyohi	Blomkest	0.07	0	0.07	City	Blomkest	• Serves local purpose • Road system continuity preferences
8	0122	County Road	County	Local	Kandiyohi	Blomkest	3.02	0	3.02	Township	Roseland	• Serves local purpose
8	0070	County Road	County	Local	Kandiyohi	Blomkest (near)	1	0	1.00	Township	Roseland, Winfield	• Serves local purpose
8	0078	County Road	County	Local	Kandiyohi	Blomkest (near)	3	0	3.00	Township	Roseland, Lake Lillian	• System spacing
8	0082	County Road	County	Local	Kandiyohi	Blomkest (near)	2.01	0	2.01	Township	Roseland	• Serves local purpose
8	0103	County Road	County	Local	Kandiyohi	Hawick (near)	3.135	0	3.14	Township	Irving	• Serves local purpose • System spacing
8	0105	County Road	County	Local	Kandiyohi	Hawick (near)	1	0	1.00	Township	Roseville	• Relative traffic volume
8	0143	County Road	County	Local	Kandiyohi	Hawick (near)	3.929	0	3.93	Township	Roseville, Irving	• Relative traffic volume • System spacing
8	0056	County State-Aid Highway	County	Local	Kandiyohi	Kandiyohi	0.21	0	0.21	City	Kandiyohi	• Serves local purpose

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
8	0133	County Road	County	Local	Kandiyohi	Kandiyohi (near)	1.85	0	1.85	Township	Kandiyohi, Lake Elizabeth + others	• Road system continuity preferences
8	0134	County Road	County	Local	Kandiyohi	Kandiyohi (near), Atwater (near)	13.523	0	13.52	Township	Kandiyohi, Lake Elizabeth + others	• Road system continuity preferences
8	0052	County State-Aid Highway	County	Local	Kandiyohi	Lake Lillian	0.07	0	0.07	City	Lake Lillian	• Serves local purpose • Road system continuity preferences
8	0074	County Road	County	Local	Kandiyohi	Lake Lillian (near)	3.1	0	3.10	Township	East Lake Lillian	• Serves local purpose
8	0077	County Road	County	Local	Kandiyohi	Lake Lillian (near)	10.902	0	10.90	Township	Multiple townships	• Relative traffic volume
8	0083	County Road	County	Local	Kandiyohi	Lake Lillian (near)	1.85	0	1.85	Township	East Lake Lillian, Lake Elizabeth	• Serves local purpose
8	0129	County Road	County	Local	Kandiyohi	Lake Lillian (near)	2.03	0	2.03	Township	Lake Lillian	• Serves local purpose
8	0132	County Road	County	Local	Kandiyohi	Lake Lillian (near)	2.17	0	2.17	Township	Fahlun	• Location
8	0136	County Road	County	Local	Kandiyohi	Lake Lillian (near)	4.986	0	4.99	Township	East Lake Lillian, Lake Elizabeth	• Serves local purpose
8	0059	County State-Aid Highway	County	Local	Kandiyohi	New London	0.14	0	0.14	City	New London	• Serves local purpose
8	0038	County State-Aid Highway	County	Local	Kandiyohi	New London (near)	2.08	0	2.08	Township	Lake Andrew	• System spacing
8	0107	County Road	County	Local	Kandiyohi	New London (near)	2.03	0	2.03	Township	Colfax	• System spacing
8	0120	County Road	County	Local	Kandiyohi	New London (near)	2	0	2.00	Township	Lake Andrew	• Already turned back • Serves local purpose
8	0126	County Road	County	Local	Kandiyohi	New London (near)	1	0	1.00	Township	Burbank	• Relative traffic volume • System spacing
8	0128	County Road	County	Local	Kandiyohi	New London (near)	3.86	0	3.86	Township	Burbank	• Relative traffic volume • System spacing
8	0130	County Road	County	Local	Kandiyohi	New London (near)	2.28	0	2.28	Township	Irving	• Relative traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
8	0135	County Road	County	Local	Kandiyohi	New London (near)	4.41	0	4.41	Township	Roseville	• System spacing
8	0089	County Road	County	Local	Kandiyohi	Pennock (near)	0.81	0	0.81	Township	St Johns, Mamre	• Relative traffic volume • System spacing
8	0094	County Road	County	Local	Kandiyohi	Pennock (near)	0.97	0	0.97	Township	Mamre	• Relative traffic volume • System spacing
8	0075	County Road	County	Local	Kandiyohi	Prinsburg (near)	5.96	0	5.96	Township	Holland, Roseland	• Serves local purpose
8	0080	County Road	County	Local	Kandiyohi	Prinsburg (near)	1	0	1.00	Township	Holland, Roseland	• Relative traffic volume • Serves local purpose
8	0080	County Road	County	Local	Kandiyohi	Prinsburg (near), Blomkest (near)	2.01	1.03	3.04	Township	Holland, Roseland	• Relative traffic volume Serves local purpose
8	0080	County Road	County	Local	Kandiyohi	Prinsburg (near), Blomkest (near)	7.909	3.08	10.99	Township	Holland, Roseland	• Relative traffic volume
8	0116	County Road	County	Local	Kandiyohi	Prinsburg (near), Willmar (near), Pennock (near)	21.943	0	21.94	Township	Holland, Edwards, Mamre	• Relative traffic volume
8	0111	County Road	County	Local	Kandiyohi	Raymond	1.051	0	1.05	City, Township	Raymond, Edwards	• Serves local purpose
8	0068	County Road	County	Local	Kandiyohi	Regal (near), Hawick (near)	3.988	0	3.99	Township	Roseville	• System spacing
8	0142	County Road	County	Local	Kandiyohi	Regal (near), Hawick (near)	1.31	0	1.31	Township	Roseville	• Relative traffic volume • System spacing
8	0079	County Road	County	Local	Kandiyohi	Roseland	0.41	0	0.41	Township	Roseland	• System spacing
8	0144	County Road	County	Local	Kandiyohi	Spicer	1.431	0	1.43	Township	Spicer	• Road system continuity preferences
8	0095	County Road	County	Local	Kandiyohi	Spicer (near)	1.51	0	1.51	Township	Greenlake	• Serves local purpose
8	0138	County Road	County	Local	Kandiyohi	Spicer (near)	2.27	0	2.27	Township	Irving, Harrison	• Serves local purpose
8	0140	County Road	County	Local	Kandiyohi	Spicer (near)	3.95	0	3.95	Township	Harrison	• Relative traffic volume • System spacing
8	0112	County Road	County	Local	Kandiyohi	Sunburg	2.295	0	2.30	Township	Norway Lake	• Serves local purpose
8	0101	County Road	County	Local	Kandiyohi	Sunburg (near)	1.01	0	1.01	Township	Arctander	• Relative traffic volume

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
8	0113	County Road	County	Local	Kandiyohi	Sunburg (near)	7.305	0	7.31	Township	Arctander, Norway Lake (~2 miles North segment)	• Relative traffic volume • System spacing
8	0115	County Road	County	Local	Kandiyohi	Sunburg (near)	3.449	0	3.45	Township	Norway Lake	• Relative traffic volume • System spacing
8	0044	Township Road	Township	Minor Collector	Kandiyohi	Willmar	1.02	0	1.02	County	Kandiyohi	• Relative traffic volume
8	0170	Township Road	Township	Minor Collector	Kandiyohi	Willmar	0.637	3.99	4.627	County	Kandiyohi	• Relative traffic volume
8	0065	County Road	County	Local	Kandiyohi	Willmar (near)	3.87	3	6.87	Township	St Johns, Mamre	• Relative traffic volume • System spacing
8	0084	County Road	County	Local	Kandiyohi	Willmar (near)	2.5	0	2.50	Township	Whitefield, Fahlun	• Relative traffic volume • System spacing
8	0085	County Road	County	Local	Kandiyohi	Willmar (near)	4.932	0	4.93	Township	Whitefield	• Relative traffic volume
8	0087	County Road	County	Local	Kandiyohi	Willmar (near)	2	0	2.00	Township	St Johns	• Relative traffic volume
8	0093	County Road	County	Local	Kandiyohi	Willmar (near)	1.796	0	1.80	Township	Green lake, Dovre	• Serves local purpose
8	0123	County Road	County	Local	Kandiyohi	Willmar (near)	1.968	0	1.97	Township	Lakefield	• Relative traffic volume • System spacing
8	0123	County Road	County	Local	Kandiyohi	Willmar (near)	1.477	2.44	3.92	Township	Lakefield	• Relative traffic volume • System spacing
8	0127	County Road	County	Local	Kandiyohi	Willmar (near)	6.665	0	6.67	Township	Green lake	• Relative traffic volume

3a. Otter Tail County – Map



3b. Otter Tail County – Register

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0065	County State-Aid Highway	County	Local	Otter Tail	Henning	0.84	10.65	11.49	City	Henning	• Location
4	0067	County State-Aid Highway	County	Local	Otter Tail	Henning	1.333	0	1.333	City	Henning	• Location
4	0090	County State-Aid Highway	County	Local	Otter Tail	Battle Lake	0.29	0	0.29	City	Battle Lake	• Location
4	0091	County State-Aid Highway	County	Local	Otter Tail	Dent	0.07	0	0.07	City	Dent	• Location
4	0094	County State-Aid Highway	County	Local	Otter Tail	New York Mills	0.07	0	0.07	City	New York Mills	• Location
4	0095	County State-Aid Highway	County	Local	Otter Tail	Parkers Prairie	0.14	0	0.14	City	Parkers Prairie	• Location
4	0096	County State-Aid Highway	County	Local	Otter Tail	Pelican Rapids	0.24	0	0.24	City	Pelican Rapids	• Location
4	0098	County State-Aid Highway	County	Local	Otter Tail	Perham	0.21	0	0.21	City	Perham	• Location
4	0099	County State-Aid Highway	County	Local	Otter Tail	Richville	0.09	0	0.09	City	Richville	• Location
4	0100	County State-Aid Highway	County	Local	Otter Tail	Pelican Rapids	0.29	0	0.29	City	Pelican Rapids	• Location
4	0140	County Road	County	Local	Otter Tail	Deer Creek (near)	4.11	0	4.11	Township	Deer Creek, Inman	• Relative traffic volume
4	0134	County Road	County	Local	Otter Tail	Henning (near)	3.53	0	3.53	Township	Henning, Folden, Inman, Elmo	• Location

Dist.	Route #	Route System	Owner	Functional Class	County	City/ Closest terminus	Miles	GIS Beg. Pt.	GIS End Pt.	Proposed Jurisdiction	Jurisdiction Stakeholder	Misalignment Reasons
4	0139	County Road	County	Local	Otter Tail	Parkers Prairie (near)	0.78	0	0.78	Township	Parkers Prairie	• Relative traffic volume
4	0148	County Road	County	Local	Otter Tail	Perham (near), New York Mills (near)	1.85	0	1.85	Township	Butler	• Location
4	0130	County Road	County	Local	Otter Tail	Vergas (near)	1.63	0	1.63	Township	Candor	• Location
4	0104	Municipal State-Aid Street	City	Minor Arterial	Otter Tail	Fergus Falls	1.53	1.575	3.105	County	Otter Tail	• Relative traffic volume • Location
4	0125	Municipal State-Aid Street	City	Minor Arterial	Otter Tail	Fergus Falls	1.918	0	1.918	County	Otter Tail	• Relative traffic volume • Location
4	0137	Municipal State-Aid Street	City	Minor Arterial	Otter Tail	Fergus Falls	1.06	0	1.06	County	Otter Tail	• Relative traffic volume • Location
4	1012	Township Road	Township	Minor Collector	Otter Tail	Underwood (near), Battle Lake (near)	2.56	0	2.56	County	Otter Tail	• Relative traffic volume • Location