

RAPIDTRIP 2040

Long Range Transportation Plan Update

SEPTEMBER 2015

**RAPID CITY AREA
METROPOLITAN PLANNING ORGANIZATION
RAPIDTRIP 2040
LONG RANGE TRANSPORTATION PLAN**

Prepared for:

Rapid City Area MPO
300 Sixth Street
Rapid City, SD 57701

Prepared by:

Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303.721.1440

Principal: Lyle DeVries, PE, PTOE
Project Manager: Steven Marfitano, PE

In Association with:

BBC Research & Consulting
1999 Broadway Suite 2200
Denver, CO 80202
303.321.2547

Resource Systems Group
55 Railroad Row
White River Junction, VT 05001
802.295.4999

FHU Reference No. 114259-01
September 2015

The Rapid City Metropolitan Planning Organization (MPO) provides services without regard to race, color, gender, religion, national origin, age or disability, according to the provisions contained in SDCL 20-13, Title VI of the Civil Rights Act of 1964, the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990 and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994.

Any person who has questions concerning this policy or who believes they have been discriminated against should contact the Rapid City MPO at 605-394-4120.

"The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation."

TABLE OF CONTENTS

	<u>Page</u>
I. EXECUTIVE SUMMARY	1
A. INTRODUCTION.....	1
B. PLANNING PROCESS AND CONTEXT	2
C. MAP-21 PERFORMANCE-BASED PLANNING	2
D. PLAN ELEMENTS	3
II. COMMUNITY INVOLVEMENT	5
A. MARKET RESEARCH STUDY.....	5
B. PUBLIC MEETINGS.....	5
C. PROJECT WEBSITE.....	6
D. DRAFT PLAN PUBLIC COMMENT PERIOD	7
III. GROWTH IN THE REGION	8
A. HOUSEHOLD AND EMPLOYMENT GROWTH.....	8
B. TRAVEL DEMAND MODEL UPDATE	11
C. SAFETY AND SECURITY	14
D. INTELLIGENT TRANSPORTATION SYSTEMS.....	16
IV. FINANCIAL ANALYSIS AND FUNDING RESOURCES	17
A. ANTICIPATED RESOURCES.....	17
<i>i. Summary</i>	<i>17</i>
<i>ii. Methodology.....</i>	<i>17</i>
<i>iii. Capital Improvements and Expansion.....</i>	<i>20</i>
<i>iv. Maintenance and Preservation.....</i>	<i>20</i>
<i>v. Public Transit.....</i>	<i>22</i>
B. POTENTIAL STRATEGIES FOR ADDITIONAL REVENUE	23
<i>i. Strategies for Targeted Improvements.....</i>	<i>23</i>
<i>ii. City/County Wide Strategies.....</i>	<i>24</i>
V. 2040 NEEDS PLAN.....	25
A. BICYCLE	26
B. PEDESTRIAN	35
C. ROADWAY.....	38
D. TRANSIT	46
E. INTERMODAL TRANSPORTATION.....	49
<i>i. Aviation.....</i>	<i>49</i>
<i>ii. Railroads</i>	<i>51</i>
<i>iii. Freight and Truck Routes.....</i>	<i>53</i>
F. PLANS, STUDIES, AND POLICY APPROACHES.....	54

VI. ENVIRONMENTAL REVIEW	59
A. ENVIRONMENTAL RESOURCES.....	59
<i>i. Parks and Recreational Resources.....</i>	60
<i>ii. Cultural Resources.....</i>	62
<i>iii. Floodways, 100-year Floodplains and Water Quality.....</i>	64
<i>iv. Wetlands and Waters of the US.....</i>	67
<i>v. Wildlife/Threatened and Endangered Species.....</i>	69
<i>vi. Hazardous Materials.....</i>	71
<i>vii. Environmental Justice.....</i>	73
B. ENVIRONMENTAL SCREENING RESULTS.....	75
VII. PERFORMANCE-BASED PLANNING	104
A. PERFORMANCE MEASURES AND COMMUNITY VALUES.....	104
B. RCAMPO GOALS.....	104
C. PERFORMANCE MEASURE GOAL AREAS.....	105
D. PROJECT PRIORITIZATION.....	113
VIII. 2040 FISCALLY CONSTRAINED PLAN	114
A. TIP PROJECT LISTING.....	118
B. BOX ELDER FISCALLY CONSTRAINED PROJECTS.....	136
C. RAPID CITY FISCALLY CONSTRAINED PROJECTS.....	136
D. RAPID TRANSIT FISCALLY CONSTRAINED PROJECTS.....	138
E. MEADE COUNTY FISCALLY CONSTRAINED PROJECTS.....	140
F. PENNINGTON COUNTY FISCALLY CONSTRAINED PROJECTS.....	141
G. SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION FISCALLY CONSTRAINED PROJECTS.....	142
H. RAPID CITY REGIONAL AIRPORT FISCALLY CONSTRAINED PROJECTS.....	143
IX. CONCLUSION.....	146

Appendices

APPENDIX A. RAPIDTRIP 2040 MODEL USER'S GUIDE & MODEL CALIBRATION
 AND VALIDATION REPORT

APPENDIX B. RAPID CITY AREA LONG RANGE TRANSPORTATION MARKET
 RESEARCH STUDY AND SURVEY

APPENDIX C. PUBLIC OPEN HOUSE MEETING SUMMARIES

APPENDIX D. PUBLIC COMMENT TO DRAFT PLAN

LIST OF FIGURES

	<u>Page</u>
Figure 1. Rapid City Area Metropolitan Planning Organization Boundaries -----	1
Figure 2. RapidTRIP 2040 Website -----	6
Figure 3. Neighborhood Boundaries -----	9
Figure 4. Existing Congested Corridors -----	12
Figure 5. 2040 Congested Corridors -----	13
Figure 6. STRAHNET System -----	15
Figure 7. Bicycle Needs Plan -----	27
Figure 8. Pedestrian Needs Plan -----	36
Figure 9. Roadway Needs Plan -----	39
Figure 10. Existing Transit Services -----	47
Figure 11. Railroads -----	52
Figure 12. Truck and Delivery Routes -----	53
Figure 13. Parks and Recreation Resources -----	61
Figure 14. Cultural Resources -----	63
Figure 15. Floodways, Floodplains, and Water Quality Resources -----	66
Figure 16. Wetland Resources -----	68
Figure 17. Wildlife and Threatened and Endangered Resources -----	70
Figure 18. Hazardous Materials -----	72
Figure 19. Minority Persons -----	73
Figure 20. Low-Income Persons -----	74
Figure 21. RCAMPO Goal Alignment with Federal and State Goals -----	105
Figure 22. Bicycle Fiscally Constrained Plan -----	115
Figure 23. Pedestrian Fiscally Constrained Plan -----	116
Figure 24. Roadway Fiscally Constrained Plan -----	117
Figure 25. 2040 Congested Corridors with Implementation of Fiscally Constrained Plan -----	148

LIST OF TABLES

	<u>Page</u>
Table 1. Historical Population Growth -----	8
Table 2. Household Growth by Neighborhood-----	10
Table 3. Employment Growth by Neighborhood -----	10
Table 4. Safety Documents-----	14
Table 5. Funding Resource Forecast Summary -----	17
Table 6. Funding Programs and Descriptions -----	19
Table 7. Estimated Capital Resources -----	20
Table 8. Estimated Maintenance and Preservation Resources -----	21
Table 9. Estimated Local Operations and Maintenance Resources -----	22
Table 10. Public Transit Resources-----	22
Table 11. Bicycle Needs Plan -----	28
Table 12. Pedestrian Needs Plan -----	37
Table 13. Roadway Needs Plan -----	40
Table 14. Transit Needs Plan-----	48
Table 15. Proposed Plans and Studies -----	54
Table 16. Environmental Screening Results-----	76
Table 17. 2016–2019 SDDOT TIP Listing-----	119
Table 18. 2016–2019 City of Box Elder TIP Listing-----	126
Table 19. 2016–2019 City of Rapid City TIP Listing-----	127
Table 20. 2016–2019 City of Rapid City Transit TIP Listing-----	130
Table 21. 2016–2019 Meade County TIP Listing-----	132
Table 22. 2016–2019 Pennington County TIP Listing-----	134
Table 23. Box Elder Fiscally Constrained Projects-----	136
Table 24. Rapid City Fiscally Constrained Projects-----	136
Table 25. Rapid Transit Fiscally Constrained Projects-----	139
Table 26. Meade County Fiscally Constrained Projects-----	140
Table 27. Pennington County Fiscally Constrained Projects-----	141
Table 28. SDDOT Fiscally Constrained Projects-----	142
Table 29. Rapid City Regional Airport Fiscally Constrained Projects-----	143
Table 30. Demonstration of Fiscal Constraint-----	146

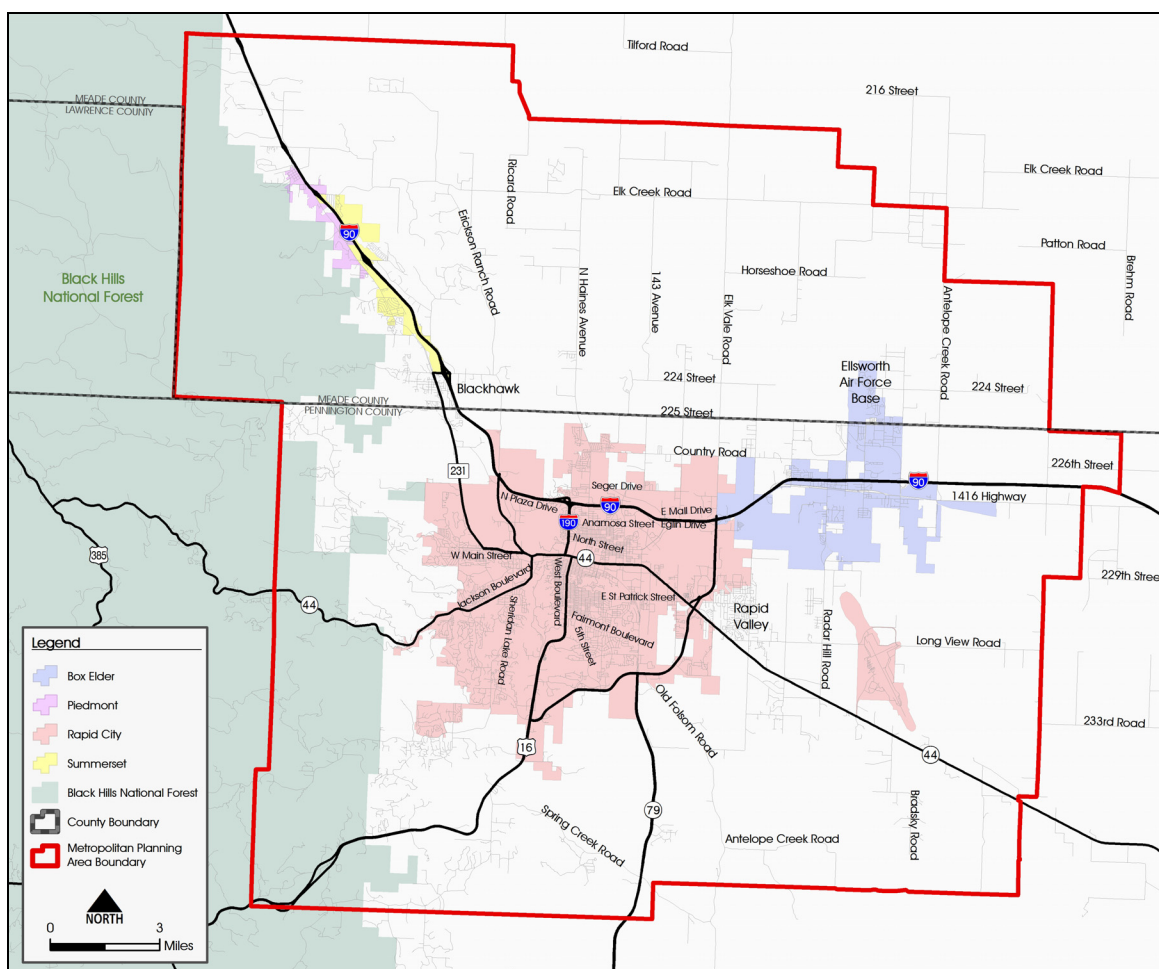
I. EXECUTIVE SUMMARY

A. Introduction

The Rapid City Area is a diverse, vibrant region dependent on a robust and efficient transportation network to support the residents and many visitors to the region. It is expected that continued steady growth in the region's population will require the continued improvement of transportation facilities to maintain the area's high quality of life.

The Rapid City Area Metropolitan Planning Organization (RCAMPO) is responsible for the regional coordination of transportation services throughout the 478-square-mile planning area. The metropolitan planning area, depicted in **Figure 1**, includes the cities of Box Elder, Piedmont, Rapid City, and Summerset, and portions of unincorporated Meade and Pennington Counties. Significant institutions within the planning area include Ellsworth Air Force Base and South Dakota School of Mines, along with major tourist destinations in the region, including Mount Rushmore National Memorial and Badlands National Park.

Figure 1. Rapid City Area Metropolitan Planning Organization Boundaries





RapidTRIP 2040 is the long-range transportation plan for the Rapid City Metropolitan Planning Area. It is a comprehensive study of the transportation network emphasizing the transportation modes of automobile, bicycle, pedestrian, and transit including interaction of these modes with aviation and freight movement by railroad and trucking throughout the region. RapidTRIP 2040 identifies the transportation Needs Plan for the region, identifies

anticipated future funding availability, and establishes the Fiscally Constrained Plan for the region over the next 25 years.

B. Planning Process and Context

The transportation planning process undertaken during RapidTRIP 2040 has built on planning processes established in past long range transportation plans while providing a fresh look at the region's anticipated needs and incorporating the recommendations from recently completed studies. Many elements in RapidTRIP 2040 can be attributed to separate planning efforts completed throughout the region, including municipal and county comprehensive and transportation plans, bicycle and pedestrian facility studies, transit studies, and site-specific transportation plans.

The RCAMPO travel demand model was updated as a portion of this planning effort. Travel demand models play an important role in transportation planning because they serve as a bridge between anticipated land use development and the transportation network to help determine where future deficiencies in the road network are expected to occur. The updated model was used during the planning process to identify future congestion and recommend Needs Plan elements to maintain satisfactory operation of the system into the future.

Appendix A contains the *RapidTRIP 2040 Model User's Guide & Model Calibration and Validation Report*.

Public input has been incorporated in all stages of RapidTRIP 2040 to ensure that this plan represents community values and needs. This process began with the completion of the *Rapid City Area Long Range Transportation Market Research Study and Survey* (included in **Appendix B**) and was carried throughout this plan through the presentation of plan details at two public open houses.

C. MAP-21 Performance-Based Planning

Performance-based planning offers a strategic approach to transportation planning that analyzes data to determine how effectively transportation investments are working toward achieving identified transportation goals. Recognizing that limited funding is available to maintain and upgrade the transportation system, performance-based planning affords a structure to ensure that scarce resources are used effectively and equitably. Moving Ahead for

Progress in the 21st Century Act (MAP-21) is the current federal transportation funding and policy bill. MAP-21 emphasizes performance-based planning and identifies seven national goals that individual states and MPOs are to work toward. Agencies seeking federal funds will demonstrate their progress toward achieving local, state, and national goals included in MAP-21. States and MPOs that don't demonstrate adequate progress toward achieving the goals will be required to take corrective action.

Consistent with MAP-21, RapidTRIP 2040 incorporates performance-based planning techniques. The community values of transportation are woven into the goals, objectives, performance measures, and evaluation criteria used to identify the Fiscally Constrained Plan. Performance-based planning is a new approach for the region that helps evaluate the transportation system and prioritize investments. This plan includes a range of performance measures that reflect the expressed values of the community, while reflecting national and state standards.

Chapter VII provides a thorough discussion of the performance-based planning process implemented throughout this plan, including establishment of goals and objectives, performance measures and desired trends, and implementation strategies.

D. Plan Elements

RapidTRIP 2040 provides a view of the region's anticipated priorities for the next 25 years. This Plan documents processes undertaken to develop a comprehensive long range transportation plan that represents the region's goals and works to maintain an efficient transportation network capable of supporting all users throughout the region. Chapters of the plan are described as follows:

- Chapter II, Community Involvement – Documents opportunities for public involvement in the Plan preparation and approval process
- Chapter III, Growth in the Region – Documents the anticipated socioeconomic changes to the region
- Chapter IV, Financial Analysis and Funding Resources – Documents the anticipated funding sources through 2040 available for maintenance and preservation of the existing system and for capital programs to improve the transportation system, and potential options for additional funding sources
- Chapter V, 2040 Needs Plan – Establishes the desired improvements for each transportation mode: roadway, bicycle, pedestrian, and transit
- Chapter VI, Environmental Review – Documents a preliminary review of environmental resources affected by items in the 2040 Needs Plan
- Chapter VII, Performance-Based Planning – Establishes the goals, objectives, and performance measures for the plan to be consistent with MAP-21 policies, and outlines the methodologies used to compile the 2040 Fiscally Constrained Plan

-
- Chapter VIII, 2040 Fiscally Constrained Plan – Combines the financial analysis, 2040 Needs Plan, and performance-based planning to establish a constrained listing of improvements for the region
 - Chapter IX, Conclusion – Summarizes the impacts of the plan and demonstrates fiscal constraint

II. COMMUNITY INVOLVEMENT

Active community involvement has been a primary goal for the RapidTRIP 2040 planning process. To attract attention and foster discussion about the transportation network, the community has been approached through a comprehensive public education and outreach effort. Tools used to accumulate public sentiment have included the *Rapid City Area Long Range Transportation Market Research Study and Survey*, public open house meetings, a plan website (RapidTRIP2040.com), and a Draft Plan public comment period.

The overall planning process has been overseen by a Study Advisory Team consisting of representatives from the Rapid City Area Metropolitan Planning Organization, City of Box Elder, City of Rapid City, Meade County, Pennington County, Ellsworth Air Force Base, Rapid Transit System, South Dakota Department of Transportation, Federal Highway Administration, and Federal Transit Administration. This group has provided input throughout the planning process by participating in meetings, reviewing plan documents, and participating in the public involvement process.

A. Market Research Study

The *Rapid City Area Long Range Transportation Market Research Study and Survey* was initiated in anticipation of the Long Range Transportation Plan Update to gauge transportation needs from critical components of the public. The study process included several facets:

- Focus Groups and In-Depth Interviews – Three focus groups were conducted: one with residents of Piedmont and Summerset, one with persons with disabilities, and one with representatives of the area’s business community.
- Public Meetings – Two open house meetings were conducted, one in Rapid City and one in Box Elder.
- Survey – A survey was developed measuring satisfaction with aspects of the transportation system including roads, highways, the airport, public transit, parking, and bicycle and pedestrian facilities. The survey was developed to sample representative populations from three groups: residents, underserved populations, and employers.

The results of the Market Research Study served as an input into the Long Range Transportation Plan Update, with particular benefit during the Needs Plan development process and in refining the performance-based planning process. See **Appendix B** for the full report.

B. Public Meetings

During the Long Range Transportation Plan Update, two public open-house meetings were held to present progress and solicit input. These meetings were held during the planning process to provide the opportunity for the public to participate at critical junctions.

- Public Open House Meeting #1 – June 17, 2015 – This meeting provided the public an opportunity to comment on the Draft Needs Plan and the performance-based planning structure. Following this meeting, the Final Needs Plan was established and performance-based planning performance measures were quantified.

- Public Open House Meeting #2 – July 15, 2015 – This meeting provided the public an opportunity to comment on the performance measures and Draft Fiscally Constrained Plan. Following this meeting, the Fiscally Constrained Plan was finalized and the draft plan was developed.



Appendix C contains the Public Open House Meeting Summaries.

C. Project Website

A project website (RapidTRIP2040.com) and Facebook page were used to convey project information to the public throughout the planning process. The website provided access to project documents, meeting information and announcements, and a Contact Us function for the public to e-mail the project team. Figure 2 includes a view of the website.

Figure 2. RapidTRIP 2040 Website



D. Draft Plan Public Comment Period

Public involvement during the planning process included a Draft Plan public comment period for two weeks where members of the public were invited to share their impression of the overall plan and recommend changes. **Appendix D** summarizes the comments received during this process. The Study Advisory Team reviewed the public comments that were received and made appropriate changes to the Final Plan.

III. GROWTH IN THE REGION

Household and employment growth, along with visitor growth, will continue to require enhanced transportation options to ensure that a high-quality transportation system is maintained into the future. During preparation of this Plan, the socioeconomic characteristics of the region were reviewed for the base year and further refinement of anticipated land use development patterns were incorporated into the future planning period. The following sections summarize the household and employment growth trends followed by a brief discussion of the travel demand model update, safety and security within the region, and intelligent transportation systems.



A. Household and Employment Growth

The Metropolitan Planning Area covers urbanized portions of Meade and Pennington Counties, including the entirety of the cities of Box Elder, Piedmont, Rapid City, and Summerset. To provide growth context for the region, **Table 1** provides historical US Census population growth trends for the City of Rapid City, Meade County, and Pennington County in 10-year increments. Due to unavailability of planning area specific data for Meade and Pennington Counties, the full county statistics are provided. The historical population growth data quantify annual growth rates over the entire period, along with the last 10 years, and identify a general slowing in growth over time.

Table 1. Historical Population Growth

Year	Rapid City	Meade County	Pennington County
1940	13,844	9,735	23,799
1950	25,310	11,516	34,053
1960	42,399	12,044	58,195
1970	43,836	16,618	59,349
1980	46,492	20,717	70,361
1990	54,523	21,878	81,343
2000	59,607	24,253	88,565
2010	67,956	25,434	100,948
Annual Growth Rate (1940–2010)	2.3 %/year	1.4 %/year	2.1 %/year
Annual Growth Rate (2000–2010)	1.3 %/year	0.5 %/year	1.3 %/year

The socioeconomic data update process first focused on establishing base year data, which defined 2013 as the base year. Following establishment of base year characteristics, long range land use forecasts were developed for the region. To provide spatial definition to the regional growth trends, neighborhoods have been used to characterize growth in different subareas of the region. **Figure 3** locates each neighborhood within the planning area.

Figure 3. Neighborhood Boundaries

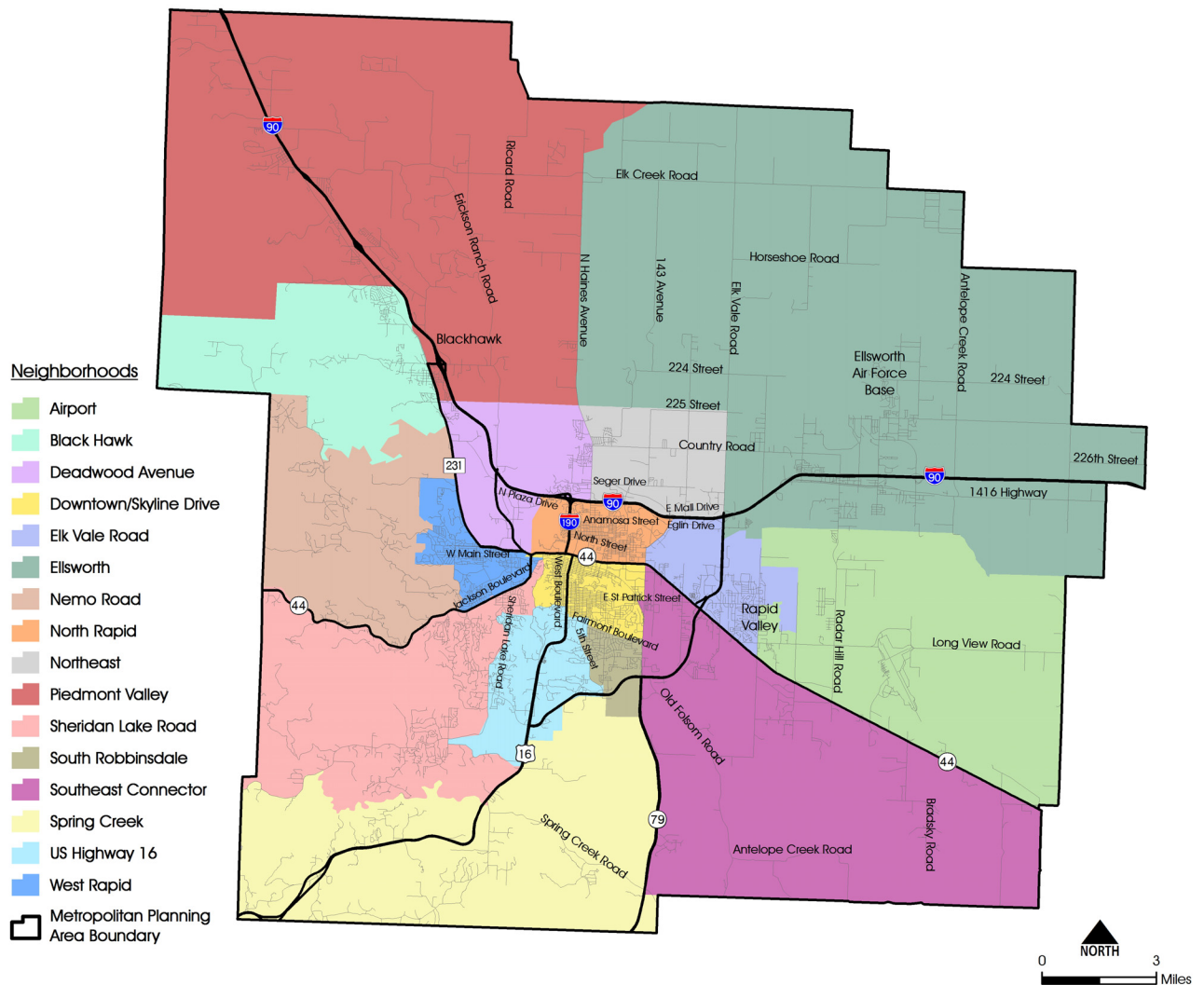


Table 2 identifies the 2013 and 2040 household totals within each neighborhood. A spatial review identifies the highest quantity household growth areas to be in the Elk Vale Road, US Highway 16, Southeast Connector, and Deadwood Avenue neighborhoods. Overall growth throughout the planning area anticipates annualized household growth of 1.3 percent per year.

Table 2. Household Growth by Neighborhood

Neighborhood Area Name	2013 Households	2013–2040 Household Growth	2040 Households	Annual % Change
Airport	883	593	1,476	1.9%
Black Hawk	1,795	242	2,037	0.5%
Deadwood Avenue	2,016	2,130	4,146	2.7%
Downtown/Skyline Drive	6,215	240	6,455	0.1%
Elk Vale Road	3,267	3,455	6,722	2.7%
Ellsworth	2,441	994	3,435	1.3%
Nemo Road	808	222	1,030	0.9%
North Rapid	5,810	110	5,920	0.1%
Northeast	796	1,217	2,013	3.4%
Piedmont Valley	2,469	1,333	3,802	1.6%
Sheridan Lake Road	4,435	478	4,913	0.4%
South Robbinsdale	2,813	822	3,635	0.9%
Southeast Connector	1,477	2,548	4,025	3.7%
Spring Creek	534	193	727	1.1%
US Highway 16	2,977	2,629	5,606	2.3%
West Rapid	4,483	334	4,817	0.3%
Total	43,219	17,540	60,759	1.3%

Table 3 identifies the 2013 and 2040 employment totals within each neighborhood. A spatial review identifies the highest quantity employment growth areas to be in the Downtown/Skyline Drive, US Highway 16, Elk Vale Road, and Deadwood Avenue neighborhoods. Overall growth throughout the planning area anticipates annualized employment growth of 2.5 percent per year.

Table 3. Employment Growth by Neighborhood

Neighborhood Area Name	2013 Employment	2013 to 2040 Employment Growth	2040 Employment	Annual % Change
Airport	795	374	1,169	1.4%
Black Hawk	709	320	1,029	1.4%
Deadwood Avenue	6,908	5,149	12,057	2.1%
Downtown/Skyline Drive	10,813	9,682	20,495	2.4%
Elk Vale Road	3,634	5,612	9,246	3.5%

Neighborhood Area Name	2013 Employment	2013 to 2040 Employment Growth	2040 Employment	Annual % Change
Ellsworth	1,442	1,366	2,808	2.5%
Nemo Road	258	-15	243	-0.2%
North Rapid	6,888	4,773	11,661	1.9%
Northeast	4,526	4,133	8,659	2.4%
Piedmont Valley	1,547	794	2,341	1.5%
Sheridan Lake Road	1,631	955	2,586	1.7%
South Robbinsdale	772	2,775	3,547	5.6%
Southeast Connector	4,915	3,347	8,262	1.9%
Spring Creek	547	384	931	2.0%
US Highway 16	2,171	5,690	7,861	4.8%
West Rapid	4,178	3,831	8,009	2.4%
Total	51,734	49,170	100,904	2.5%

B. Travel Demand Model Update

Relating expected land use development to the transportation network with the goal of identifying future transportation network capacity deficiencies is accomplished through travel demand modeling. This planning effort included an update to the Rapid City Area Travel Demand Model with the goal of establishing a 2040 travel demand model for the long range planning effort.

Appendix A contains the *RapidTRIP 2040 Model User's Guide & Model Calibration and Validation Report*.

A critical output of the travel demand modeling process was the identification of anticipated congested corridors throughout the transportation network. For this evaluation, capacity has been defined as any roadway with volumes greater than 70 percent of the capacity. **Figure 4** displays the location and extents of existing congestion, and **Figure 5** displays the location and extents of congestion forecast in 2040 by the travel demand model. The 2040 roadway network is based on the existing system including committed improvements only. These locations have been targeted for future capacity improvements within the Needs Plan based on this analysis process.

The sole location indicating existing congested conditions occurs along Canyon Lake Drive. This location has likely been impacted by reconstruction along Jackson Boulevard over the last three years, which may have influenced the regional travel patterns causing overcapacity conditions.

Figure 4. Existing Congested Corridors

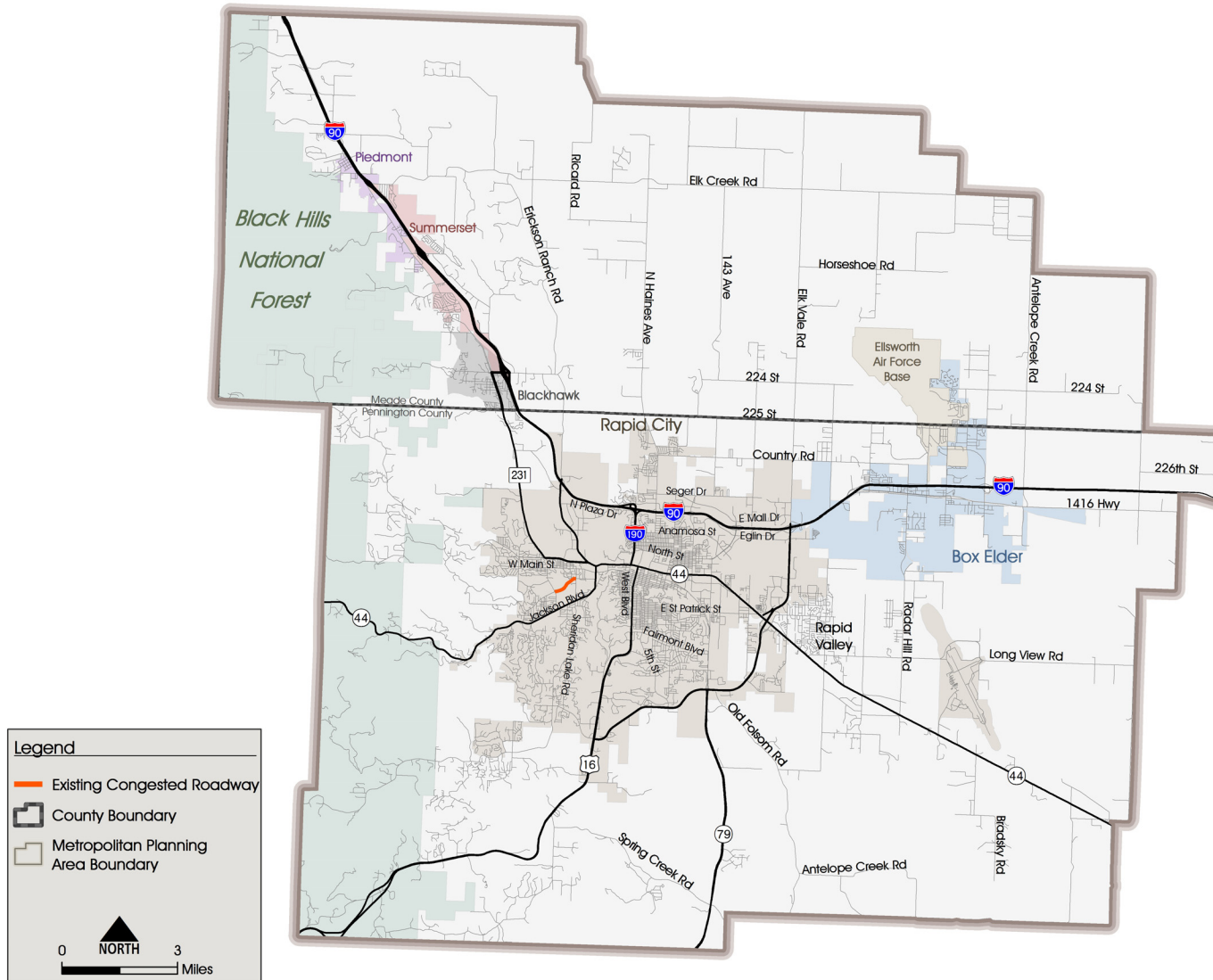
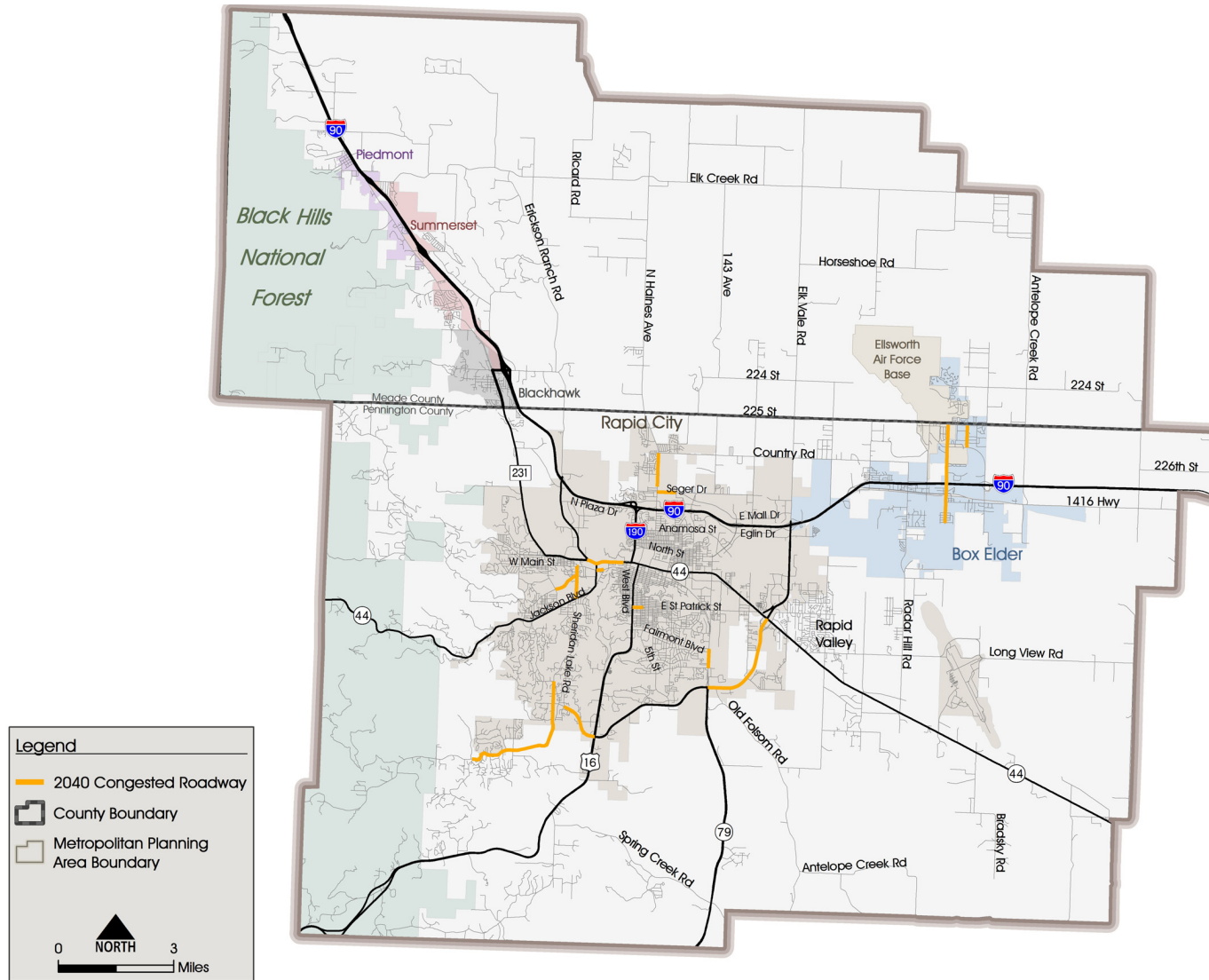


Figure 5. 2040 Congested Corridors



C. Safety and Security

Transportation safety needs contributed to the overall RapidTrip 2040 Needs Plan. Safety concerns, goals, strategies, and/or projects were addressed in the following contributing documents identified in **Table 4**.

Table 4. Safety Documents

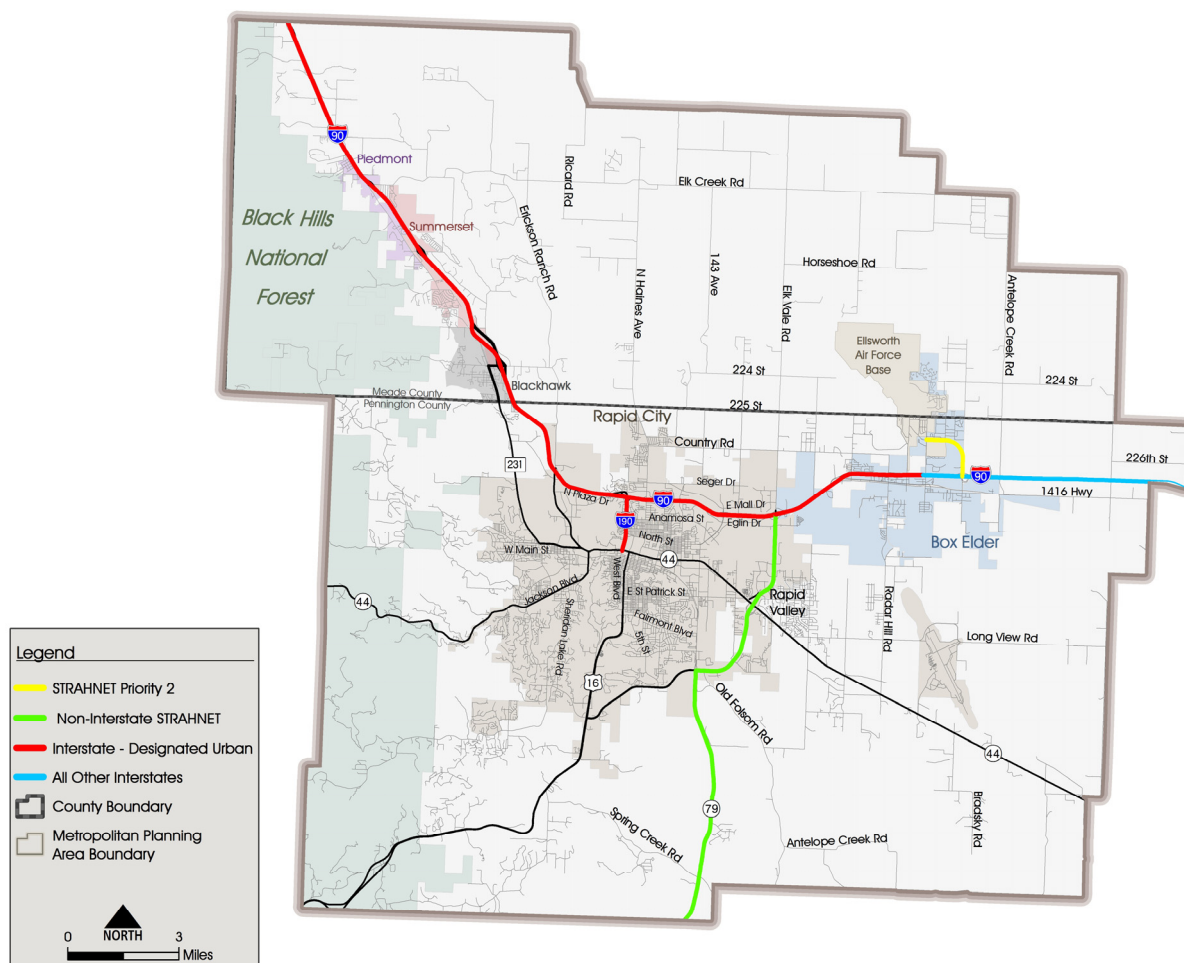
Document	Safety Information
Box Elder Strategic Transportation Plan (2014)	Identified high crash frequency locations and potential improvements
Meade County Transportation Plan (2008)	
Pennington County Connecting Hills and Plains Study (2012)	
SDDOT Decennial Interstate Corridor Study (2010)	
Meade County Elk Creek Road Corridor Study (2010)	
Sheridan Lake Road Extension Study (2008)	
I-90/La Crosse Street Interchange Exit 59 Modification Justification Report (2014)	
RapidTRIP 2035 (2010)	Gathered public input on safety concerns in the region
Rapid City Area Bicycle and Pedestrian Master Plan (2011)	Considered traveler safety a prime concern during plan development; safety analysis considered history of non-motorized crashes
Rapid City Arterial Streets Safety Study (2012)	Created and ranked a list of top arterial segment safety concerns and recommended improvements for top tier locations
Plan Rapid City Comprehensive Plan (2014)	Included safety goals and policies oriented toward improving safety for users of all travel modes
South Dakota Strategic Highway Safety Plan (2014)	Established statewide goals and benchmarks for crash reduction
South Dakota Statewide Long Range Transportation Plan (2010)	Included goal of promoting transportation safety
Chapel Valley Access and Route Alignment Study (2010)	Analyzed the potential for improved access to an isolated residential area, with safety and security as major considerations
High Meadows Road Corridor Study (2015)	
Piedmont Valley Regional Shared-Use Path Summary and Recommendations (2013)	Considered safety in conceptual design recommendations

RapidTrip 2040 reflects the body of safety analysis and information contained in these documents.

Security of the transportation network is reflected in the Needs Plan. Security considerations include:

- The Strategic Highway Network (STRAHNET) is a network of roads considered necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support U.S. military operations. STRAHNET routes within the Rapid City Metropolitan Planning Area are included as **Figure 6** and include Interstates 90 and 190, Liberty Boulevard, US Highway 16B between SD 79 and I-90, and SD 79. Roadway needs identified in the Needs Plan include improvements that would assist traffic in reaching these routes more efficiently.
- Evacuation routes/Emergency response – Catastrophic events such as floods, fires, and major storms have had an impact on the Rapid City region in the past. Needs identified in RapidTrip 2040 will assist in conveying vehicles from areas affected by emergencies to safety via evacuation routes.

Figure 6. STRAHNET System



D. Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) include the use of methodologies aimed at maximizing the existing transportation network capacity by coordinating the transportation system and communicating issues to the traveling public. Such operations strategies rely primarily on technology and have the potential to improve the safety, efficiency, and cost-effectiveness of the transportation system.

The Rapid City Metropolitan Planning Organization uses the report *Intelligent Transportation Systems Plan for Integration Strategies* developed in 2003 to implement ITS throughout the region. This plan coordinates the technology and systems among the various transportation provider agencies and governmental organizations and recommends strategies for integrating ITS into capital improvements plans and into the transportation system to address the region's needs.

IV. FINANCIAL ANALYSIS AND FUNDING RESOURCES

This chapter presents the financial resources anticipated for RCAMPO projects over the long range planning period (2016–2040). The resources listed in this chapter serve to fiscally constrain RapidTRIP 2040 in compliance with MAP-21 requirements. Also included is a discussion of potential financing strategies that could be used to generate additional revenue to address the financing gap between available resources and project priorities.

A. Anticipated Resources

i. Summary

Table 5 summarizes the funds reasonably expected to be available through 2040 (in millions of nominal dollars). Total funding for regional capital expansion projects for the long range planning period is estimated to be \$258 million; total funding for regionally significant maintenance/preservation projects is expected to be \$500 million.

Table 5. Funding Resource Forecast Summary

Resource Type	2016–2020 (\$Million)	2021–2025 (\$Million)	2026–2030 (\$Million)	2031–2035 (\$Million)	2036–2040 (\$Million)	Total	
						(\$Million)	Percent
Capital Improvements and Expansion	\$110.8	\$33.8	\$45.4	\$51.3	\$16.5	\$257.7	20%
Regionally Significant Maintenance and Preservation	\$48.2	\$84.6	\$108.0	\$101.0	\$119.8	\$462.0	36%
Maintenance and Operations	\$100.5	\$100.5	\$100.5	\$100.5	\$100.5	\$502.3	39%
Transit – Operating	\$8.7	\$9.6	\$10.7	\$11.8	\$13.0	\$53.8	4%
Transit – Capital	\$3.5	\$3.9	\$4.3	\$4.7	\$5.2	\$18.8	1%
Total	\$271.7	\$232.4	\$268.9	\$269.3	\$255.0	\$1,294.6	100%

A detailed description of financial forecast methodology and resource projections by funding program and resource type follows.

ii. Methodology

Transportation projects in the Rapid City metro area are funded through a combination of federal, state, and local sources. For planning purposes, the financial forecasts are organized around specific funding programs, described in **Table 6**. The methodology used to forecast available resources for each program is outlined below.

- The study team reviewed current and past funding sources, project expenditures, and relevant planning documents. For most funding programs, short-term financial commitments as identified in recent Transportation Improvement Programs (TIPs) were determined to be the best predictor of probable long-term financial resources.
- To smooth planning period anomalies while relying on the most current data possible, the study team calculated the average funding by program of the 2015–2018 TIP and

the 2016–2019 TIP as a baseline. The study team then compared the TIP funding commitments with supplementary documents, including local Capital Improvement Programs (CIPs), transportation plans, city/county budgets, and historic allocations.

- In collaboration with each member agency, the study team determined the portion of each funding program that is typically allocated to maintenance and preservation versus capital improvements. For planning purposes, the split between maintenance and capital expansion is held constant over the planning period. **Table 6** includes split assumptions for each program.
- Using the annual estimates for each funding program as a baseline, expected resources are forecasted for each year through 2040 to remain flat. The forecast methodology assumes a two percent per year rate of inflation offset by a two percent per year decline in real value (or purchasing power) resulting in no change to anticipated revenues during the planning period. All estimates are presented in year of expenditure dollars.
- RapidTRIP 2035 included an assumption that Summerset would begin receiving a direct Surface Transportation Program (STP) allocation by 2025. However, current population projections do not support this assumption for the current planning period.¹ As such, Summerset projects will continue to be eligible for funding through the Meade County STP allocation.
- The Transportation Alternatives Program funding is allocated through a project-specific application process through SDDOT. As such, these funds are not considered to be reliable resources and are omitted from the projections across the planning period. Special projects funded through one-time state or federal funding grants are excluded from the financial resource projections because they are not considered to be reliable and available resources. The nature of this grant and its competitive selection process affords an opportunity for the region to pursue funding for applicable projects throughout the planning horizon.
- SDDOT capital resource funding within the plan is based on the statewide planning process which balances the needs of all areas throughout the state. As such, the planning horizon revenues have been established to match anticipated transportation capital expenditures as outlined the SDDOT planning effort.
- SDDOT maintenance and preservation funding within the plan is based on the state's pavement management system. This planning tool analyzes the condition of all roadway segments throughout the state and prioritizes funding to the transportation system to optimize condition. As such, the planning horizon revenues have been established to match the anticipated transportation maintenance and rehabilitation expenditures as output from the SDDOT pavement management system.

Table 6 describes each funding program around which the financial forecasts are organized.

¹ Population projections are not available at the city level but if Summerset grows at the same rate as forecasted for the county overall, it will not reach the STP threshold of 5,000 people by 2020 or even 2030. County population projections are published by the South Dakota Department of Labor and Regulation.

Table 6. Funding Programs and Descriptions

Program	Description
Programs Receiving FHWA and/or State Funding (SDDOT): Interstate State Highway System Railroad Crossing Improvements Pavement Preservation National Highway Performance Program Surface Transportation Program Highway Safety Performance Program Transportation Alternative Program	Projects in these programs are selected by the South Dakota Department of Transportation (SDDOT). These programs are funded primarily by state and federal grants, though some projects may include a local match.
Programs Receiving FHWA and/or State Funding (Member Agencies): STP Exchange Bridge Improvement Grant Transportation Alternatives Program Local Bridge Replacement Projects Highway Safety Performance Program Railroad Crossing Improvements	Projects in these programs are selected by member agencies. STP Exchange funds are allocations of the Surface Transportation Program exchanged for state dollars. ² Rapid City, Box Elder, Meade County, and Pennington County currently receive direct STP allocations. Half of STP Exchange revenue is expected to fund capital expansion and half is expected to fund maintenance projects. TAP funds are distributed by application on an individual project basis and are assumed to be \$0 for the long range planning period.
Local Funding Programs: Rapid City Capital Improvement Program Box Elder Capital Improvement Program Pennington County Road and Bridge Meade County Road and Bridge	Projects in these programs are locally selected and locally funded. Only a portion of these funds are included in RapidTRIP 2040, commensurate with the proportion of local projects that are considered “regionally significant.” Local funding programs are assumed to be allocated fully to maintenance projects.
Federal Transit Administration (FTA): FTA 5307 FTA 5310 FTA 5311 FTA 5339	RTS provides fixed route and dial-a-ride service in Rapid City. RTS is funded through federal, state and local government funds along with enterprise revenue from fare and advertising sales. Several FTA funding sources are available for different transit projects including: <ul style="list-style-type: none"> • FTA 5307 which provides capital, operating, and planning assistance in urbanized areas • FTA 5310 which provides capital assistance to private non-profit organizations to serve the needs of elderly persons and persons with disabilities • FTA 5311 which provides capital, operating, and administrative expenses in rural communities • FTA 5339 which provides capital funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities

² SDDOT offers an exchange program by which STP allocations can be “exchanged” for state funds at \$.90 on the dollar. Exchanging federal funds for state funds allows recipients to avoid added complications of federal regulations. All STP recipients in the MPO are expected to participate in the exchange program.

iii. Capital Improvements and Expansion

Table 7 displays funding projections for capacity expansion through 2040. Capacity projects are those that provide additional transportation infrastructure or services, such as new and expanded roadways, bike and pedestrian paths, trails, and facilities, and transit services. Amounts are shown in year of expenditure dollars in five-year increments. The resources identified include funding for both roadway and non-motorized (bicycle and pedestrian) capital improvements.

Table 7. Estimated Capital Resources

Program/Source	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040	Total
Programs Receiving FHWA and/or State Funding (SDDOT)						
SDDOT	\$94,292,000	\$17,294,000	\$28,948,000	\$34,774,000	\$0	\$175,308,000
Programs Receiving FHWA and/or State Funding (MPO)						
STP Exchange						
Box Elder	\$540,000	\$540,000	\$540,000	\$540,000	\$540,000	\$2,700,000
Rapid City	\$6,960,000	\$6,960,000	\$6,960,000	\$6,960,000	\$6,960,000	\$34,800,000
Meade County	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000	\$20,475,000
Pennington County	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000	\$24,450,000
Transportation Alternatives Program	\$0	\$0	\$0	\$0	\$0	\$0
Railroad Crossing Improvements	\$0	\$0	\$0	\$0	\$0	\$0
Local Bridge Replacement	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$110,777,000	\$33,779,000	\$45,433,000	\$51,259,000	\$16,485,000	\$257,733,000

Note: See **Table 6** for a description of each program and the proportion of resources allocated to capital projects.

iv. Maintenance and Preservation

Maintenance and preservation of existing facilities are critical to the sustainability of the region’s transportation network. These projects include the maintenance and rehabilitation of the existing transportation network to maintain the system. Projects of this type include chip seals, resurfacing, reconstruction without capacity improvements, and bridge deck replacement.

Table 8 displays the maintenance and preservation resources available through federal and state funded programs, as well as locally funded programs contributing to regionally significant projects (for example, larger scale roadway and interchange reconstruction and resurfacing). Amounts are shown in year of expenditure dollars.

Table 8. Estimated Maintenance and Preservation Resources

Program/Source	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040	Total
Programs Receiving FHWA and/or State Funding (SDDOT)						
SDDOT	\$14,200,000	\$50,540,000	\$73,960,000	\$67,400,000	\$85,787,000	\$291,887,000
Programs Receiving FHWA and/or State Funding (MPO)						
STP Exchange						
Box Elder	\$540,000	\$540,000	\$540,000	\$540,000	\$540,000	\$2,700,000
Rapid City	\$6,960,000	\$6,960,000	\$6,960,000	\$6,960,000	\$6,960,000	\$34,800,000
Meade County	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000	\$20,475,000
Pennington County	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000	\$24,450,000
Transportation Alternatives	\$0	\$0	\$0	\$0	\$0	\$0
Local Bridge Replacement	\$625,000	\$625,000	\$625,000	\$625,000	\$625,000	\$3,125,000
Railroad Crossing Improvements	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000	\$1,450,000
Locally Funded, Regionally Significant Projects						
Box Elder Capital Improvements Program	\$0	\$0	\$0	\$0	\$0	\$0
Rapid City Capital Improvements Program	\$10,505,000	\$10,505,000	\$10,505,000	\$10,505,000	\$10,505,000	\$52,525,000
Rapid City Regional Airport Improvements Program	\$5,690,000	\$5,690,000	\$5,690,000	\$5,690,000	\$5,690,000	\$28,450,000
Meade County Road and Bridge Fund	\$430,000	\$430,000	\$430,000	\$430,000	\$430,000	\$2,150,000
Pennington County Road and Bridge Fund	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$48,225,000	\$84,565,000	\$107,985,000	\$101,425,000	\$119,812,000	\$462,012,000

Note: See **Table 6** for a description of each program and the proportion of resources allocated to capital projects.

While the long range transportation plan focuses on regionally significant projects and funding, it is also important to acknowledge the full operations and maintenance obligations of MPO jurisdictions. Operations and maintenance projects include the non-regionally significant maintenance and rehabilitation projects along with the addition of day to day system operations include snow removal, dust abatement, patching, street cleaning, and mowing. **Table 9** displays these operations and maintenance resources anticipated for local projects.

Table 9. Estimated Local Operations and Maintenance Resources

Program/Source	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040	Total
SDDOT (Rapid City Area MPO)	\$11,500,000	\$11,500,000	\$11,500,000	\$11,500,000	\$11,500,000	\$57,500,000
Box Elder	\$2,125,000	\$2,125,000	\$2,125,000	\$2,125,000	\$2,125,000	\$10,625,000
Rapid City	\$18,040,000	\$18,040,000	\$18,040,000	\$18,040,000	\$18,040,000	\$90,200,000
Summerset	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000	\$2,125,000
Meade County	\$25,000,000	\$25,000,000	\$25,000,000	\$25,000,000	\$25,000,000	\$125,000,000
Pennington County	\$43,370,000	\$43,370,000	\$43,370,000	\$43,370,000	\$43,370,000	\$216,850,000
Total	\$100,460,000	\$100,460,000	\$100,460,000	\$100,460,000	\$100,460,000	\$502,300,000

v. Public Transit

The Rapid Transit System (RTS) is funded through Federal Transit Administration, state, and local government sources, as well as program revenue in the form of transit fares, pass sales and advertising. About three-quarters of the current RTS budget is allocated to operations and the remaining one-quarter to capital costs, such as new paratransit vehicles. Given the relatively low proportion of funding allocated for capital projects, the long range forecasts assume existing transit services will continue without substantial expansion or reduction. **Table 10** shows estimated operating and capital funding for the transit system. Program revenue is included in the “Local Funds” category. Again, figures are shown in year of expenditure dollars.

Table 10. Public Transit Resources

Program/Source	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040	Total
Operations						
FTA Funds	\$4,620,000	\$5,106,000	\$5,643,000	\$6,237,000	\$6,893,000	\$28,499,000
State Funds	\$147,000	\$163,000	\$180,000	\$199,000	\$220,000	\$909,000
Local Funds	\$3,958,000	\$4,374,000	\$4,834,000	\$5,343,000	\$5,905,000	\$24,414,000
Total	\$8,725,000	\$9,643,000	\$10,657,000	\$11,779,000	\$13,018,000	\$53,822,000
Capital						
FTA Funds	\$3,048,000	\$3,375,000	\$3,731,000	\$4,122,000	\$4,556,000	\$18,832,000
State Funds	\$0	\$0	\$0	\$0	\$0	\$0
Local Funds	\$457,000	\$505,000	\$559,000	\$617,000	\$682,000	\$2,820,000
Total	\$3,505,000	\$3,880,000	\$4,290,000	\$4,739,000	\$5,238,000	\$21,652,000

B. Potential Strategies for Additional Revenue

This section identifies feasible funding opportunities to generate additional revenue for transportation funds in the Rapid City area. The potential strategies include funding mechanisms and administrative options commonly used to fund transportation capital investment and maintenance. They are intended to supplement current methods used by Rapid City, Box Elder, Meade County, and Pennington County. The most recent Rapid City Comprehensive Plan also includes many of these strategies.

i. Strategies for Targeted Improvements

The following revenue generation strategies are project and/or site specific mechanisms that can be used to incentivize new development or shift the cost of infrastructure to direct users. Revenue potential of these strategies is widely variable and based on specific geographic and/or project definition. In some cases, these strategies may require state statute to implement; in these cases, the region should coordinate with the Legislative Research Council to create desired statutes and send them through the Legislature.

- **Improvement districts.** Improvement districts allow additional property tax (or special assessment) to be charged to a specific area to fund infrastructure improvements in that area. Typically, improvement districts are designed to provide specific public improvements and are most effective when the improvement is clearly defined and limited in scope. This funding mechanism is difficult to apply on a broad scale but is an effective way to shift infrastructure costs to direct users of the improvement. Improvement districts are typically created and controlled at the municipal level. Revenue potential varies based on the project and geographic scope.
- **Special districts.** Similar to improvement districts, special districts provide a mechanism to shift infrastructure costs to direct users. Special districts are governmental units independent from cities/counties set up to provide specific services or projects over a period of time. The districts are funded through fees or taxes directly related to the services or improvements they provide. This potential funding option would best be implemented in unincorporated portion of Meade and/or Pennington County where specific infrastructure needs are identified. Again, revenue potential varies based on the purpose and location of the district.
- **System expansion fees.** These one-time development fees are used to fund improvements serving new development. They are relatively flexible in that they do not have to be used for improvements tied to a specific development site but can be used for regional improvements that serve new growth or oversizing development specific improvements with expectation of additional growth.
- **Public improvement fee (PIF).** A PIF is a fee that retail property owners require their commercial tenants to collect on their customers' retail sales transactions by a covenant in the deed or the lease. A PIF is imposed at the point of sale and is usually a percentage of the sales price of purchased goods. A PIF is used for targeted capital improvements adjacent to a retail center and is not used for systemwide capital improvements.

- **Sales tax sharing.** Sales tax sharing is a development incentive that structures a revenue sharing agreement between a jurisdiction and a developer such that the two parties “share” net sales tax revenue to fund public improvements. Agreements are typically created for a limited time and/or for specific improvements.

ii. City/County Wide Strategies

The following strategies are options for increasing systemwide transportation resources. The primary advantage of these strategies is that they share the cost of infrastructure across a larger pool of contributors and increase flexibility because they are not tied to specific facilities or sites.

- **Transportation maintenance fee.** Transportation maintenance fees are monthly fees imposed on property owners, typically through utility bills. The fees are determined by land use category and are designed to reflect direct use as determined by trip generation trends. The funds are designated for maintenance and preservation of the existing transportation system. A transportation maintenance fee between \$20 and \$40 per year for residential households would have the potential to generate between \$1 million and \$2 million in the RCAMPO. Fees for businesses vary widely (typically assessed per square foot) but could contribute substantial additional revenue.
- **Wheel tax.** A wheel tax is a tax or fee associated with registering a vehicle within a jurisdiction. Meade County enacted a \$4 per wheel tax on resident vehicles in 2015 with the potential to generate around \$400,000 per year. If a similar wheel tax were implemented in Pennington County, an additional \$2.5 million per year could be expected. Implementing a wheel tax has the added benefit of leveraging state funding: a recent highway funding bill passed in South Dakota requires counties to have a wheel tax to receive grants from the Bridge Improvement Grant Fund.³
- **Tax increase.** A substantial portion of locally generated transportation funds comes from city and county general funds supplied largely through property and sales taxes. An increase in tax rates and/or an increase in the tax base would generate additional city/county revenue from which transportation funds are drawn.
- **Dedicated sales tax.** An excise tax on retail goods dedicated to transportation has the ability to raise large amounts of revenue for transportation funds in the region. Advantages of this approach are that it diffuses the funding burden over many people and businesses, including tourists. However, a dedicated sales tax can be difficult to implement, depending on the political climate of the region.

³ http://rapidcityjournal.com/news/local/wheel-tax-gets-cold-reception-in-pennington-county/article_adb39058-580e-5ae8-b7b9-e34d416d9804.html

V. 2040 NEEDS PLAN

Plans and studies conducted within the MPO boundaries were reviewed to create the Needs Plan listing. The following is a comprehensive list of plans and studies reviewed:

- Box Elder Strategic Transportation Plan (2014)
- Chapel Valley Access and Route Alignment Study (2010)
- 2013 Coordinated Public Transit-Human Services Transportation Plan Update (2013)
- Decennial Interstate Corridor Study (2010)
- Meade County Elk Creek Road Corridor Study (2010)
- High Meadows Road Corridor Study (2015)
- I-90/La Crosse Street Interchange Exit 59 Modification Justification Report (2014)
- Meade County Transportation Plan (2008)
- Pennington County Connecting Hills and Plains Study (2012)
- Piedmont Valley Regional Shared-Use Path Summary and Recommendations (2013)
- Plan Rapid City Comprehensive Plan (2014)
- Rapid City Area Bicycle and Pedestrian Master Plan (2011)
- Rapid City Arterial Streets Safety Study (2012)
- Rapid City Community Walk Audit (2015)
- Rapid City Regional Airport Master Plan Update (2008)
- RapidTRIP 2035 (2010)
- Sheridan Lake Road Extension Study (2008)
- South Dakota Statewide Long Range Transportation Plan (2010)
- South Dakota Strategic Highway Safety Plan (2014)
- 2009-2013 Transit Development Plan (2008)

Projects listed within the current TIP are not included in the Needs Plan and have been listed in separate tables in **Chapter VIII**. In addition to the above plans and studies, output from the updated travel demand model and public input were used to develop the Needs Plan. MPO staff, SDDOT, and Rapid City Regional Airport provided additional changes.

Costs provided in the Needs Plan were taken from the element's respective plan where available. For elements without a cost, cost estimation methodologies outlined in RapidTRIP 2035 or the *Rapid City Area Bicycle and Pedestrian Master Plan* were used depending on the element. All costs were adjusted to 2016 dollars assuming an annual growth rate of 2 percent.

A. Bicycle

Bicycle needs identified within the Needs Plan are depicted in **Figure 7** and itemized in **Table 11**. Bicycle needs have been categorized as one of the following:

- Bike Lanes
- Crossing (improved crossing of a barrier, such as a major roadway)
- Off-Street Path (pathway not on the street, such as a bike or shared-use path)
- Shared Lanes (signed and/or sharrow-striped roadway as being a bicycle route)
- Signed Shoulder Bikeway (wide shoulder signed as a bicycle route)



Figure 7. Bicycle Needs Plan

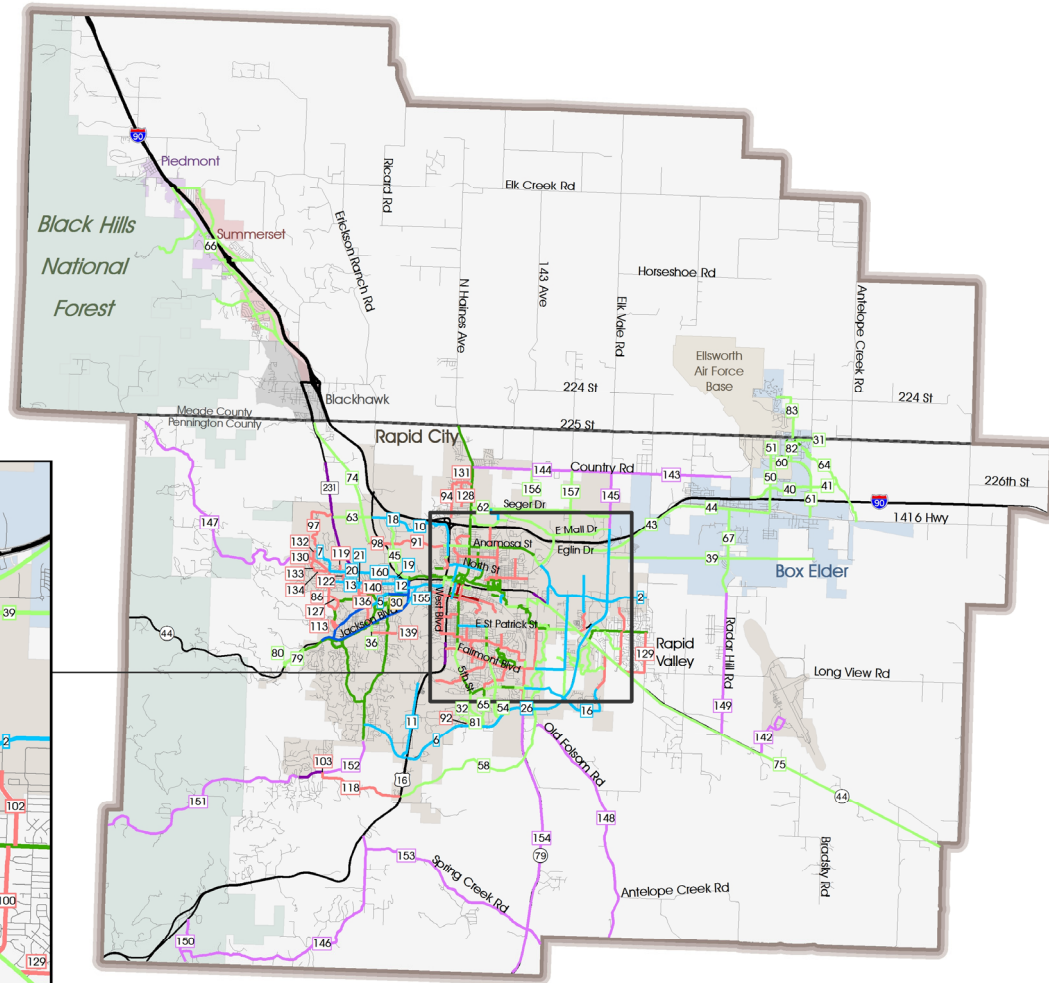
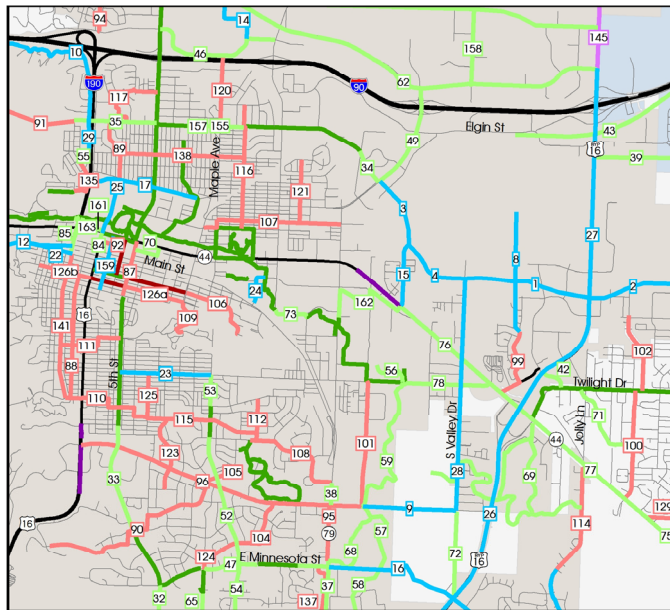
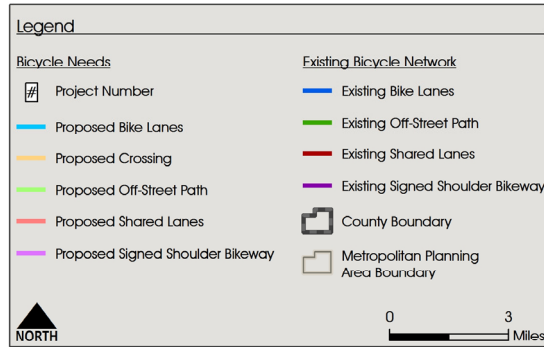


Table 11. Bicycle Needs Plan

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-1	Anamosa St	Bike Lanes	from Valley Dr to US 16B (Elk Vale Rd)	\$206,000
B-2	Anamosa St	Bike Lanes	from US 16B (Elk Vale Rd) to N Reservoir Rd	\$208,000
B-3	Anamosa St	Bike Lanes	from E North St to Mickelson Dr	\$117,000
B-4	Anamosa St	Bike Lanes	from Mickelson Dr to Valley Dr	\$117,000
B-5	Canyon Lake Dr	Bike Lanes	from Sheridan Lake Rd to Soo San Dr	\$76,700
B-6	US 16B (Catron Blvd) / Catron Blvd	Bike Lanes	from 5th St to Sheridan Lake Rd	\$428,000
B-7	City Springs Rd / N 44th St	Bike Lanes	from Galena Dr to W Chicago St	\$136,000
B-8	Copperfield Dr	Bike Lanes	from E Anamosa St to existing street	\$198,000
B-9	Fairmont Blvd	Bike Lanes	from Creek Dr to S Valley Dr	\$152,000
B-10	Harmony Heights Lane	Bike Lanes	from Plaza Blvd to Anamosa St	\$564,000
B-11	US 16 Service Road	Bike Lanes	from Skyline Dr / Tower Rd to Catron Blvd	\$400,000
B-12	W Main St	Bike Lanes	from Soo San Rd to West Blvd	\$380,000
B-13	W Main St	Bike Lanes	from 44th St to Soo San Dr	\$154,000
B-14	Maple Ave	Bike Lanes	from Mall Dr to Disk Dr	\$95,000
B-15	Mickelson Dr	Bike Lanes	from E Anamosa St to SD 44	\$103,000
B-16	Minnesota St	Bike Lanes	from Cambell St to Jolly Ln	\$550,000
B-17	North St	Bike Lanes	from West Blvd N to N 1st St	\$184,000
B-18	N Plaza Dr / Plaza Blvd	Bike Lanes	from SD 445 (Deadwood Ave) to Harmony Heights Ln	\$218,000
B-19	SD 231 (W Chicago St)	Bike Lanes	from Sheffer St to SD 445 (Deadwood Ave)	\$34,700
B-20	W Chicago St	Bike Lanes	from N 44th St to SD 231 (Sturgis Rd)	\$137,000
B-21	Soo San Rd	Bike Lanes	from W Main St to Brookside Rd	\$32,400
B-22	St Joseph St	Bike Lanes	from W Main St to West Blvd	\$32,300
B-23	St Patrick St	Bike Lanes	from 5th St to Elm Ave	\$148,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-24	Steele Ave	Bike Lanes	from Brennan Ave to railroad	\$56,600
B-25	US 16 (Mt Rushmore Rd)	Bike Lanes	from North St to SD 44 (Omaha St)	\$91,000
B-26	US 16B (Elk Vale Rd / Catron Blvd)	Bike Lanes	from SD 44 to 5th St	\$440,000
B-27	US 16B (Elk Vale Rd)	Bike Lanes	from Mall Dr to SD 44	\$338,000
B-28	Valley Dr	Bike Lanes	from Anamosa St to Fairmont St	\$378,000
B-29	West Blvd NW	Bike Lanes	from Anamosa St to Boegel St	\$53,000
B-30	Sheridan Lake Rd	Crossing	Grade-separated trail crossing of trail along Rapid Creek	\$87,500
B-31	225th St	Off-Street Path	on south side from 150 Pl to existing connection	\$55,200
B-32	5th St	Off-Street Path	from E Minnesota St to US 16B (Catron Blvd)	\$572,000
B-33	5th St	Off-Street Path	from Cleveland St to Texas St	\$503,000
B-34	Anamosa St	Off-Street Path	from Century Rd to E North St	\$168,000
B-35	Anamosa St	Off-Street Path	from Silver St to Haines Ave	\$381,000
B-36	Argyle St	Off-Street Path	from SD 44 (Jackson Blvd) to W Flormann St	\$116,000
B-37	SD 79 (Cambell St) / Cambell St	Off-Street Path	from Richland Dr (street just north of Minnesota St) to US 16B (Elk Vale Dr)	\$318,000
B-38	Cambell St	Off-Street Path	from E Oakland St to Fairmont Blvd	\$104,000
B-39	Cheyenne Blvd	Off-Street Path	from US 16B (Elk Vale Rd) to Spruce Dr	\$3,011,000
B-40	Cimarron alignment	Off-Street Path	from Ellsworth Rd to Liberty Blvd	\$123,000
B-41	Cimarron alignment	Off-Street Path	from Liberty Blvd to new shared use path	\$54,200
B-42	Concourse Dr	Off-Street Path	from US 16B (Elk Vale Rd) to Twilight Dr	\$116,000
B-43	Connection to Rapid City path system	Off-Street Path	near County Hwy 1416 (from West Gate to Rapid City)	\$191,000
B-44	County Hwy 1416	Off-Street Path	from Westgate Rd to Ellsworth Rd	\$143,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-45	SD 445 (Deadwood Ave)	Off-Street Path	from N Plaza Dr to SD 231 (Omaha St)	\$1,646,000
B-46	Disk Dr	Off-Street Path	from Haines Ave to N La Crosse St	\$653,000
B-47	E Minnesota St	Off-Street Path	from Parkview Dr to Odde Dr	\$254,000
B-48	Minnesota St	Off-Street Path	from Minnesota St Park to Cambell St	\$144,000
B-49	E North St	Off-Street Path	from Mall Dr to Anamosa St	\$509,000
B-50	Ellsworth Rd	Off-Street Path	from Liberty Blvd to County Hwy 1416	\$265,000
B-51	Ellsworth Rd	Off-Street Path	from Liberty Blvd to 225th St	\$42,500
B-52	Elm Ave	Off-Street Path	from E Oakland St to Field View Dr	\$769,000
B-53	Elm Ave	Off-Street Path	from E St Patrick St to Meade St	\$144,000
B-54	Elm Ave	Off-Street Path	from Field View Dr to US 16B (Catron Blvd)	\$324,000
B-55	I-190 / Drainageway	Off-Street Path	from Wesrt Blvd N to Silver St	\$57,800
B-56	Leonard "Swanny" Swanson Memorial Pathway Extension	Off-Street Path	from St Patrick St to E St Charles St	\$185,000
B-57	Leonard "Swanny" Swanson Memorial Pathway Extension	Off-Street Path	south of Fairmont Blvd to Minnesota St	\$399,000
B-58	Leonard "Swanny" Swanson Memorial Pathway Extension	Off-Street Path	from Minnesota St to US 16	\$3,236,000
B-59	Leonard "Swanny" Swanson Memorial Pathway Extension	Off-Street Path	from E St Patrick St to Fairmont Blvd	\$797,000
B-60	Liberty Blvd	Off-Street Path	Along north side from Tower Rd to Ellsworth Rd	\$74,300
B-61	Liberty Blvd	Off-Street Path	On east and north sides between County Hwy 1416 and Tower Rd	\$238,000
B-62	Mall Dr	Off-Street Path	from Haines Ave to N Elk Vale Rd	\$2,150,000
B-63	N Plaza Dr	Off-Street Path	from SD 231 (Sturgis Rd) to SD 445 (Deadwood Ave)	\$451,000
B-64	New Shared Use Path	Off-Street Path	from Prairie Rd to County Hwy 1416	\$170,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-65	Parkview Dr	Off-Street Path	from Parkview Park to 5th St	\$318,000
B-66	Piedmont Valley Shared Use Path	Off-Street Path	Along I-90	\$8,228,000
B-67	Radar Hill Rd	Off-Street Path	from County Hwy 1416 to 229th St	\$24,400
B-68	Rapid Creek	Off-Street Path	from Leonard "Swanny" Swanson Memorial Pathway Extension to Cambell St	\$1,173,000
B-69	Rapid Creek / Wally Byam	Off-Street Path	from Valley Dr to Jolly Ln	\$2,063,000
B-70	Rapid St / 3rd St	Off-Street Path	from 5th St to SD 44 (Omaha St)	\$158,000
B-71	Rapid Valley Drainage	Off-Street Path	from Twilight Dr to Covington St	\$327,000
B-72	S Valley Dr	Off-Street Path	from E Fairmont St to E Minnesota St	\$304,000
B-73	San Francisco St	Off-Street Path	from La Crosse St to Cherry Ave	\$168,000
B-74	SD 231 (Sturgis Rd) / Universal Dr	Off-Street Path	from Merritt Rd to Lien St	\$1,556,000
B-75	SD 44	Off-Street Path	from Long View Rd to MPO boundary (former rail conversion)	\$5,276,000
B-76	SD 44	Off-Street Path	from Mickelson Dr to St Patrick St	\$428,000
B-77	SD 44	Off-Street Path	from Twilight to Long View	\$541,000
B-78	SD 44 / E St Patrick St	Off-Street Path	from existing side path to Twilight Dr	\$659,000
B-79	SD 44 (Jackson Blvd)	Off-Street Path	from Cleghorn Canyon Rd to Cliffside Park	\$335,000
B-80	SD 44 (Jackson Blvd)	Off-Street Path	from Cliffside Park to existing trail	\$433,000
B-81	Stumer Rd	Off-Street Path	from Enchantment Rd to 5th St	\$358,000
B-82	Tower Rd	Off-Street Path	from Liberty Blvd to Patriot Dr	\$24,400
B-83	Tower Rd	Off-Street Path	Along east side from 224th St to 225th St	\$145,000
B-84	US 16 (Mt Rushmore Rd)	Off-Street Path	from SD 44 (Omaha St) to Main St	\$361,000
B-85	West Blvd	Off-Street Path	from Leonard "Swanny" Swanson Memorial Pathway to St Joseph St	\$202,000
B-86	44th St	Shared Lanes	from W Chicago St to Raider Rd	\$41,600

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-87	5th St	Shared Lanes	from Columbus St to SD 44 (Omaha St)	\$18,000
B-88	9th St	Shared Lanes	from Quincy St to Flormann St	\$7,600
B-89	Allen Ave	Shared Lanes	from Anamosa St to North St	\$4,000
B-90	Alta Vista Dr / Anaconda Rd	Shared Lanes	from east of City View Dr to E Fairmont Blvd	\$12,700
B-91	Anamosa St	Shared Lanes	from Commerce Rd to Silver St	\$44,600
B-92	Apolda St (Rapid St)	Shared Lanes	from US 16 (Mt Rushmore Rd) to 6th St	\$1,400
B-93	Black Hills Blvd	Shared Lanes	from E Stumer Rd to US 16B (Catron Blvd)	\$5,100
B-94	Bunker Dr	Shared Lanes	from Sagewood St to Disk Dr / I-90	\$33,700
B-95	Cambell St Service Road	Shared Lanes	from Fairmont Blvd to Richland Dr (street just north of Minnesota St)	\$2,900
B-96	Cathedral Dr / Fairmont Blvd	Shared Lanes	from US 16 (Mt Rushmore Rd) to Creek Dr	\$92,100
B-97	City Springs Rd Extension / St Martins Dr	Shared Lanes	from SD 231 (Sturgis Rd) to Galena Dr	\$61,600
B-98	Commerce Rd / Lien St	Shared Lanes	from railRd to Rand Rd	\$33,000
B-99	Copperfield Dr	Shared Lanes	from end of existing street to SD 44	\$4,800
B-100	Covington St	Shared Lanes	from Twilight Dr to SD 44	\$34,900
B-101	Creek Dr	Shared Lanes	from E Saint Patrick St to Fairmont Blvd	\$39,600
B-102	Degeest Dr	Shared Lanes	from Homestead St to Twilight Dr	\$25,500
B-103	Dunsmore Rd	Shared Lanes	from Sheridan Lake Rd to Moon Meadows Dr	\$5,500
B-104	E Centennial St / Locust St	Shared Lanes	from Parkview Dr to E Fairmont Blvd	\$32,200
B-105	E Fairlane Dr	Shared Lanes	from Maple to Robbinsdale Park	\$1,900
B-106	E Kansas City St	Shared Lanes	from East Blvd to SD School of Mines & Tech	\$23,500
B-107	E New York St / N Maple Ave / E Philadelphia St	Shared Lanes	from East Blvd to Cambell St	\$39,200
B-108	E Oakland St	Shared Lanes	from Hawthorne Ave to Cambell St	\$6,700
B-109	East Blvd	Shared Lanes	from E Quincy St to Signal Dr	\$17,700

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-110	Flormann St / Meade St	Shared Lanes	from West Blvd to 5th St	\$49,700
B-111	Franklin Ave / Belleview Dr / E St Andrew St	Shared Lanes	from West Blvd to 5th St	\$21,600
B-112	Hawthorne Ave	Shared Lanes	from E Meade St to E Oakland St	\$2,700
B-113	Hillsview Dr / W St Patrick St / Red Dale Dr	Shared Lanes	Canyon Lake Rd loop	\$18,000
B-114	Jolly Ln	Shared Lanes	from SD 44 to Daly Circuit	\$35,300
B-115	Meade St / E Indiana St	Shared Lanes	from 5th St to Hawthorne Ave	\$9,300
B-116	Milwaukee St	Shared Lanes	from Crestwood Dr to E New York St	\$39,200
B-117	Minuteman Dr / Lindbergh Ave	Shared Lanes	from Haines Ave to Anamosa St	\$4,600
B-118	Moon Meadows Dr	Shared Lanes	from Dunsmore Rd to US 16	\$89,000
B-119	N 40th St	Shared Lanes	from Fish & Game site to SD 231 (W Chicago St)	\$9,800
B-120	N Maple Ave	Shared Lanes	from Disk Dr to Anamosa St	\$22,300
B-121	N Spruce St	Shared Lanes	from Meadowlark Rd to E Philadelphia St	\$3,900
B-122	Nordby Ln	Shared Lanes	from W Saint Louis St to W Main St	\$1,400
B-123	Oak Ave	Shared Lanes	from E Indiana St to Colorado St	\$4,800
B-124	Parkview Dr	Shared Lanes	from E Centennial St to E Minnesota St	\$1,100
B-125	Prairie Ave	Shared Lanes	from St Patrick St to E Indiana St	\$2,700
B-126a	Quincy St	Shared Lanes	from 5th St to East Blvd	\$47,100
B-126b	Quincy St	Shared Lanes	from US 16 (Mt Rushmore Rd) to West St	\$47,100
B-127	Raider Rd	Shared Lanes	from 44th St to Hillsview Dr	\$21,600
B-128	Red Cloud St	Shared Lanes	from Northridge Dr to Mall Dr	\$24,600
B-129	Reservoir Rd / Longview Rd	Shared Lanes	from Twilight Dr to SD 44	\$58,000
B-130	S Canyon Rd	Shared Lanes	from Berry Blvd to N 44th St	\$15,700
B-131	Sagewood St / Northridge Dr	Shared Lanes	from Bunker Dr to Haines Ave	\$4,300

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-132	San Marco Blvd	Shared Lanes	from City Springs Rd to S Canyon Rd	\$2,800
B-133	San Marco Blvd	Shared Lanes	from S Canyon Rd to W Chicago St	\$2,400
B-134	W Chicago St	Shared Lanes	from San Marco Blvd to S Canyon	\$2,700
B-135	Silver St / Philadelphia St	Shared Lanes	from N 11th St to Boegel St	\$4,800
B-136	Soo San Rd	Shared Lanes	from Brookside Dr to SD 44 (Jackson Blvd)	\$7,700
B-137	Triple Crown Dr	Shared Lanes	from E Minnesota St to US 16B (Catron Blvd)	\$20,800
B-138	Van Buren St	Shared Lanes	from Allen Ave to Milwaukee St	\$7,600
B-139	W Flormann St	Shared Lanes	from Argyle St to Mountain View Rd	\$4,900
B-140	W South St	Shared Lanes	from Soo San Rd to Mary Hill Park	\$900
B-141	West Blvd	Shared Lanes	from St Joseph St to Flormann St	\$9,100
B-142	Airport Rd	Signed Shoulder Bikeway	from the Airport to SD 44	\$15,800
B-143	Country Rd	Signed Shoulder Bikeway	from Elk Vale Rd to Airport Rd	\$23,200
B-144	Country Rd	Signed Shoulder Bikeway	from Haines Ave to N Elk Vale Rd	\$42,900
B-145	N Elk Vale Rd	Signed Shoulder Bikeway	from Country Rd to E Mall Dr	\$17,500
B-146	Neck Yoke Rd	Signed Shoulder Bikeway	from US 16 to Rockerville Rd	\$56,000
B-147	Nemo Rd	Signed Shoulder Bikeway	from Berry Blvd to MPO boundary	\$53,800
B-148	Old Folsom Rd	Signed Shoulder Bikeway	from Leonard "Swanny" Swanson Mem Path to MPO boundary	\$48,100
B-149	Radar Hill Rd	Signed Shoulder Bikeway	from 229th St to SD 44	\$27,400
B-150	Rockerville Rd	Signed Shoulder Bikeway	from US 16 to MPO boundary	\$9,100

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
B-151	Sheridan Lake Rd	Signed Shoulder Bikeway	from Stonecrest Dr to MPO boundary	\$46,100
B-152	Sheridan Lake Rd	Signed Shoulder Bikeway	from Wildwood Dr to Muirfield Dr	\$12,000
B-153	Spring Creek Rd	Signed Shoulder Bikeway	from Neck Yoke Rd to MPO boundary	\$41,300
B-154	SD 79	Signed Shoulder Bikeway	from US 16B (Elk Vale Rd/Catron Blvd) to 3 mile limits	\$53,300
B-155	Jackson Blvd	Bike Lanes	From Mountain View Rd to W Main St	\$97,000
B-156	143 rd Ave	Off-Street Path	Seger Dr to Country Rd	\$578,000
B-157	Dyess Ave and Seger Dr	Off-Street Path	From Country Rd south along Dyess Ave, east to Elk Vale Rd along Seger Dr	\$1,167,000
B-158	Dyess Ave and Seger Dr	Off-Street Path	From Mall Dr north along Dyess Ave, west to Haines Ave along Seger Dr	\$1,491,000

B-159 through B-163 are TIP projects included as “Bicycle Needs” elements because they have yet to be built. Showing them illustrates the planned connectivity they will provide. These projects are:

- **B-159:** Bike lanes along 7th St from SD 44 (Omaha St) to Columbus St
- **B-160:** Bike lanes along SD 231 (W Chicago St) from SD 231 (Sturgis Rd) to Sheffer St
- **B-161:** Off-street path along Anamosa St from Midway St to Milwaukee St
- **B-162:** Off-street path on the east side of Cambell St from the end of the existing path south of Rocker Dr north to the rail banked line south of Centre St, then southeast on the rail bed to Kennel Dr, north on the west side of Kennel Dr to Centre St, and east on the north side of Centre St to a private property connection to the intersection of SD 44 and Mickelson Dr
- **B-163:** Off-street path on the east side of I-190 to SD 44 (Omaha St), and then along the north side of SD 44 (Omaha St) to US 16 (Mt Rushmore Rd)

B. Pedestrian

Pedestrian needs identified within the Needs Plan have been depicted in **Figure 8** and itemized in **Table 12**. All pedestrian needs are sidewalk additions. For shared use paths that accommodate both bicyclists and pedestrians, see “Off-Street Path” bicycle elements in **Table 11**.

Figure 8. Pedestrian Needs Plan

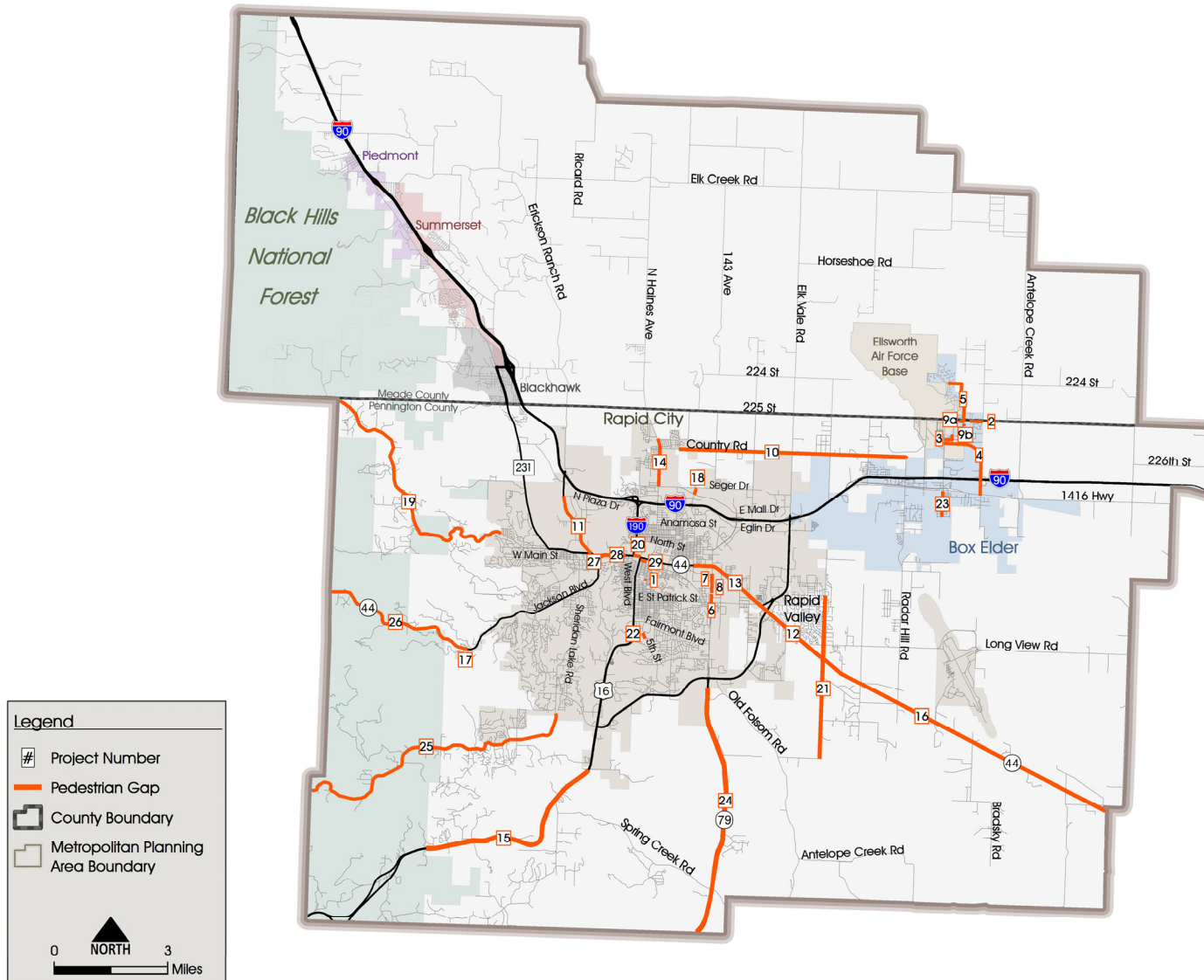


Table 12. Pedestrian Needs Plan

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
P-1	5th St	Sidewalk	from South St to Clark St (west side)	\$42,000
P-2	225th St	Sidewalk	Along north side from Radial Ln to 150 Pl	\$25,500
P-3	Villa Dr / Briggs St	Sidewalk	from Ellsworth Rd to Briggs & Patriot	\$25,500
P-4	Liberty Blvd	Sidewalk	West and south sides from Ellsworth to County Hwy 1416	\$159,000
P-5	Tower Rd	Sidewalk	Along west side from 224th St to 225th St	\$74,300
P-6	Cambell St	Sidewalk	from 280' n/o E St Charles St to E St Patrick St (east side)	\$151,000
P-7	Cambell St	Sidewalk	from Centre St to Rocker Dr (both side)	\$387,000
P-8	Cambell St	Sidewalk	from Rocker Dr to 560' s/o Saint James St (east side)	\$218,000
P-9a	Douglas Middle School	Sidewalk	Complete link along 225th St	\$9,400
P-9b	Douglas Middle School	Sidewalk	Complete link along Tower Dr	\$5,700
P-10	Country Rd	Sidewalk	from City Limits to 3 mile limit (both sides)	\$5,613,000
P-11	SD 445 (Deadwood Ave)	Sidewalk	from N Plaza Dr to SD 231 (W Chicago St) (both sides)	\$2,891,000
P-12	SD 44	Sidewalk	from City Limits to Jolly Lane (both sides)	\$874,000
P-13	SD 44 (Omaha St) / SD 44	Sidewalk	from La Crosse St to City Limits (both sides)	\$4,218,000
P-14	Haines Ave	Sidewalk	from City Limits to Mall Dr (east side)	\$1,118,000
P-15	US 16	Sidewalk	from City Limits to 3 mile limit (both sides)	\$8,252,000
P-16	SD 44	Sidewalk	from Jolly Lane to 3 mile limit (both sides)	\$12,520,000
P-17	SD 44	Sidewalk	from Dark Canyon Pl to City Limits (both sides)	\$2,571,000
P-18	N La Crosse St	Sidewalk	from Seger Dr to E Mall Dr (both sides)	\$319,000
P-19	Nemo Rd	Sidewalk	from 3 mile limit to City Limits (both sides)	\$9,714,000
P-20	SD 44 (Omaha St)	Sidewalk	from West Blvd to US 16 (Mt Rushmore Rd) (north side)	\$168,000
P-21	Reservoir Rd	Sidewalk	from Ave A to Lamb Rd (both sides)	\$7,226,000
P-22	5th St	Sidewalk	from 57' s/o 3rd St to 95' n/o Elk St (west side)	\$126,000
P-23	S Ellsworth Rd	Sidewalk	from County Hwy 1416 to neighborhood	\$32,900
P-24	SD 79	Sidewalk	from City Limits to 3 mile limits (both sides)	\$7,932,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
P-25	Sheridan Lake Rd	Sidewalk	from City Limits to 3 mile limits (both sides)	\$9,680,000
P-26	SD 44	Sidewalk	from City Limits to 3 mile limits (both sides)	\$6,168,000
P-27	SD 44 (Omaha St)	Sidewalk	from Mountain View Rd to Oshkosh St (both sides)	\$857,000
P-28	SD 44 (Omaha St)	Sidewalk	from Oshkosh St to Founders Park Dr (north side)	\$353,000
P-29	Apolda St	Sidewalk	From 6 th St to Mt Rushmore Rd	\$218,000

C. Roadway

Roadway needs identified within the Needs Plan have been depicted in **Figure 9** and itemized in **Table 13**. Roadway needs have been categorized as one of the following:

- Corridor Improvements (paving, medians, striping, etc.)
- Intersection / Interchange (signalization, sightline improvements, reconstruction, etc)
- New Roadway
- Capacity Improvements (adding lanes to increase capacity and reduce congestion)

Figure 9. Roadway Needs Plan

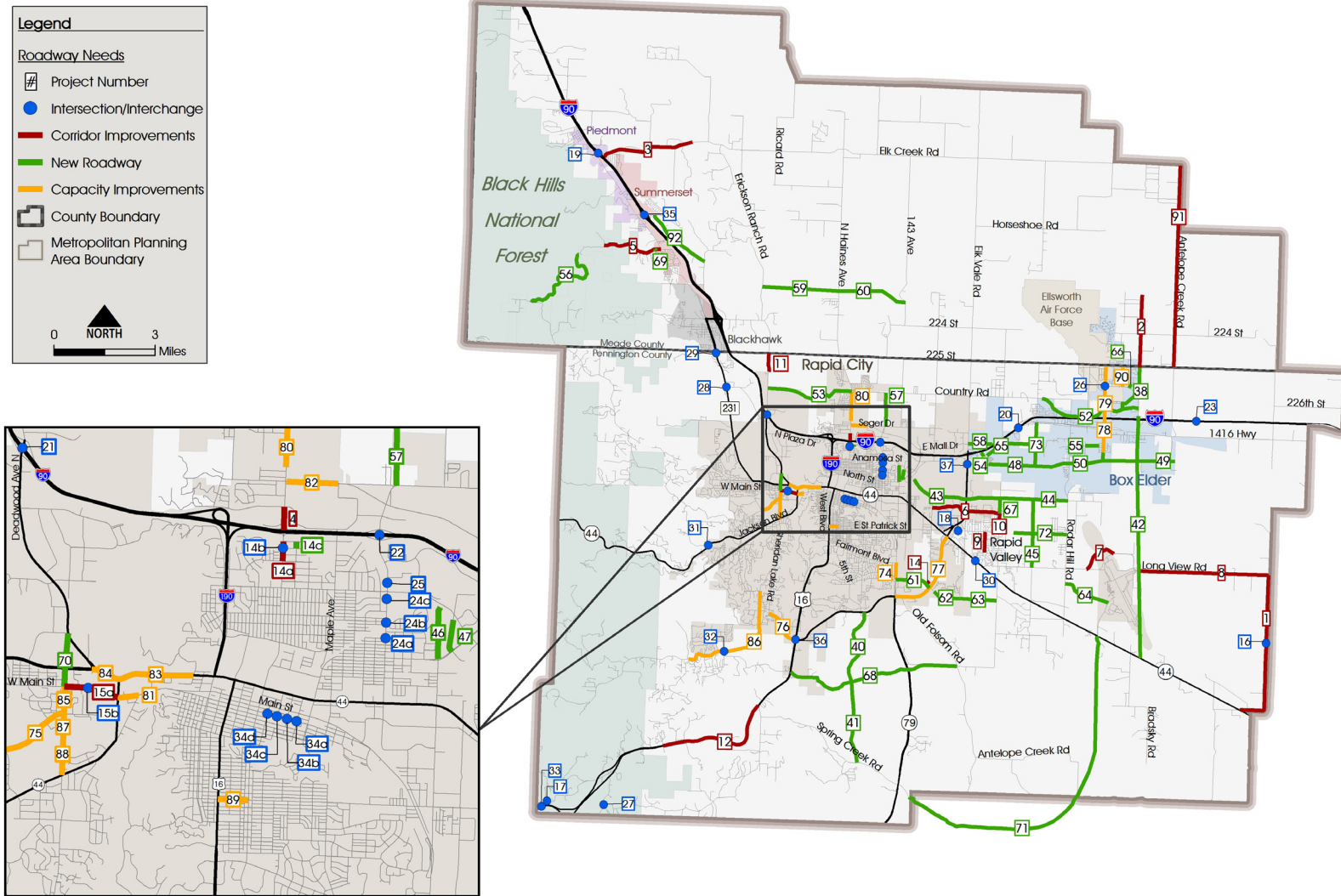


Table 13. Roadway Needs Plan

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-1	154th Ave	Corridor Improvements	from Long View Rd to SD 44	\$8,987,000
R-2	150th Ave	Corridor Improvements	Asphalt paving as minor arterial from the county line north	\$1,526,000
R-3	Elk Creek Rd	Corridor Improvements	Realignment e/o I-90	\$4,109,000
R-4	Haines Ave	Corridor Improvements	Raised median from I-90 to Disk Dr	\$525,000
R-5	High Meadows Rd Improvements	Corridor Improvements	To existing roadway, RAP surface	\$295,000
R-6	Homestead St	Corridor Improvements	Upgrade to 2 lane collector from Valley Dr to Reservoir Rd	\$2,040,000
R-7	Long View Rd	Corridor Improvements	Realignment of existing roadway through airport grounds around new RPZ	\$2,759,000
R-8	Long View Rd	Corridor Improvements	from Rapid City Regional Airport to 154th Ave	\$8,018,000
R-9	Plateau Ln	Corridor Improvements	from Twilight Dr to Williams St	\$2,112,000
R-10	Reservoir Rd	Corridor Improvements	from Twilight Dr to Meadow Ridge Dr	\$2,112,000
R-11	Deadwood Ave	Corridor Improvements	from Calamity Rd to Meade County Line	\$1,206,000
R-12	US 16 NB	Corridor Improvements	NB, rumble strips and safety edge with resurfacing project along entire segment, wildlife fencing and signs along curve, and accel/decel lanes for paved median cuts between and including Busted 5 Ct and Sitting Bull Rd. (Neck Yoke to Busted 5 Ct)	\$1,547,000
R-13	Valley Dr / E 27th St	Corridor Improvements	Upgrade to 2 lane collector with intersection improvements from s/o Fairmont Blvd to US 16B (Elk Vale Rd) / SE Connector	\$1,637,000
R-14a	Haines Ave	Corridor Improvements	Implement raised median (Knollwood Dr to Lindbergh Ave)	\$57,600
R-14b	Haines Ave & Wright St	Intersection / Interchange	Install signal at Wright St if warranted	\$480,000
R-14c	Wood Ave	New Roadway	Extend Wood Ave from Wright St to Knollwood Dr.	\$1,300,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-15a	W Main St	Corridor Improvements	Implement raised median (Sheridan Lake Rd to Mountain View R) and construct bike lanes	\$8,883,000
R-15b	W Main St & Dakota Dr	Intersection / Interchange	Install traffic signal at Dakota Dr intersection if warranted	\$857,000
R-16	154th Ave & 233rd St	Intersection / Interchange	154th Ave & 233rd St	\$302,000
R-17	Boulder Hill Rd & Silver Mountain Rd	Intersection / Interchange	Boulder Hill Rd & Silver Mountain Rd	\$188,000
R-18	Concourse Dr & Twilight Dr	Intersection / Interchange	Concourse Dr & Twilight Dr	\$10,000
R-19	I-90 Exit 46 (Elk Creek Rd)	Intersection / Interchange	Interchange improvements	\$17,254,000
R-20	I-90 Exit 63 (County Hwy 1416)	Intersection / Interchange	Interchange improvements or replacement of I-90 Exit 63 (County Hwy 1416) per the recommendations of the Interchange Options Study	\$31,855,000
R-21	I-90 Exit 55 (SD 445 (Deadwood Ave))	Intersection / Interchange	Interchange Improvements	\$3,255,000
R-22	I-90 Exit 59 (N Lacrosse St)	Intersection / Interchange	Diverging diamond interchange	\$14,762,000
R-23	New I-90 Exit e/o Exit 67 (Liberty Blvd) for Transload development	Intersection / Interchange	New interchange plus local access on I-90 when development warrants	\$17,254,000
R-24a	La Crosse St & Monroe St	Intersection / Interchange	Install traffic signal for Monroe St intersection if warranted and relocate utility pole on SW corner of Monroe St intersection	\$481,000
R-24b	La Crosse St & RR Crossing	Intersection / Interchange	Automatic crossing gates at the railroad crossing	\$721,000
R-24c	La Crosse St & Sam's Club Access	Intersection / Interchange	Convert old Sam's Club access into right-in/right-out	\$276,000
R-25	N La Crosse St & Walmart Access	Intersection / Interchange	Convert Walmart access into right-in/right-out	\$42,000
R-26	Liberty Blvd & Ellsworth Rd	Intersection / Interchange	Replace existing all-way stop traffic control with signalized control when warranted	\$372,000
R-27	South Rockerville Rd & Neck Yoke Rd	Intersection / Interchange	South Rockerville Rd & Neck Yoke Rd	\$39,800

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-28	SD 231 (Sturgis Rd) & Universal Dr	Intersection / Interchange	SD 231 (Sturgis Rd) & Universal Dr Intersection	\$248,000
R-29	SD 231 (Sturgis Rd) & Merritt Rd	Intersection / Interchange	SD 231 (Sturgis Rd) & Merritt Rd Intersection	\$799,000
R-30	SD 44 & Covington St	Intersection / Interchange	SD 44 & Covington St Intersection	\$248,000
R-31	SD 44 (Jackson Blvd) & Cleghorn Canyon Rd	Intersection / Interchange	Intersection warning sign and advisory speed plaque for westbound approach, and removal of sight obstructions at SD 44 (Jackson Blvd) and Cleghorn Canyon Rd	\$8,800
R-32	Sheridan Lake Rd & Dunsmore Rd	Intersection / Interchange	Dunsmore Rd & Sheridan Lake Rd	\$248,000
R-33	US 16 & Silver Mountain Rd	Intersection / Interchange	US 16 & Silver Mountain Rd Intersection	\$29,800
R-34a	St Joseph St & 1st St	Intersection / Interchange	Install lane use markings	\$7,900
R-34b	St Joseph St & 2nd St	Intersection / Interchange	Install lane use markings	\$7,900
R-34c	St Joseph St & 3rd St	Intersection / Interchange	Install lane use markings	\$7,900
R-34d	St Joseph St & 4th St	Intersection / Interchange	Removal of on-street parking between 4th & 5th Streets, install traffic signal if warranted, and install lane use markings	\$436,000
R-35	I-90 Exit 48 (Stage Stop Rd)	Intersection / Interchange	Interchange improvements	\$17,254,000
R-36	US 16 & US 16B (Catron Blvd) Intersection	Intersection / Interchange	Intersection improvements	\$17,254,000
R-37	US 16B & Cheyenne Blvd Intersection	Intersection / Interchange	Intersection improvements/adjustments once Cheyenne is built out to the east	\$306,000
R-38	150th Ave	New Roadway	Construct new arterial extension from 225th to Liberty Blvd	\$2,017,000
R-39	150th Ave	New Roadway	Construct new collector from Liberty Blvd to Cimarron Dr	\$2,655,000
R-40	5th St Extension	New Roadway	Construct new 4 lane principal arterial from US 16B (Catron Blvd) to Sammis Trail	\$12,113,000
R-41	5th St Extension	New Roadway	Construct new 4 lane principal arterial from Lamb Rd to Spring Creek Rd	\$12,629,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-42	Liberty Rd Extension	New Roadway	Construct new 2 lane minor arterial from I-90 to SD 44	\$17,913,000
R-43	Anamosa St Extension	New Roadway	Construct new 4 lane minor arterial from US 16B (Elk Vale Rd) to Creek Dr	\$6,117,000
R-44	E Anamosa Extension	New Roadway	Construct new 2 lane principal arterial from Radar Hill Rd to US 16B (Elk Vale Rd)	\$9,513,000
R-45	Anderson Rd Extension	New Roadway	Construct new 2 lane minor arterial from Anamosa St Extension to Long View Rd	\$5,033,000
R-46	Cambell St Extension	New Roadway	Construct new 2 lane minor arterial from Anamosa St Extension to North St	\$1,246,000
R-47	Century Rd	New Roadway	Construct new 2 lane minor arterial from Anamosa St Extension to North St	\$772,000
R-48	Cheyenne Blvd	New Roadway	Extend new arterial from existing Cheyenne Blvd east to Radar Hill Rd	\$12,742,000
R-49	Cheyenne Blvd	New Roadway	Construct new arterial from Ellsworth Rd to 151 Ave	\$16,352,000
R-50	Cheyenne Blvd & Ellsworth Rd	New Roadway	Construct new arterial from Radar Hill Rd to a new Ellsworth arterial extension south from existing neighborhood	\$6,477,000
R-51	Cimarron Dr	New Roadway	Extend new arterial from Ellsworth Rd to Liberty Blvd	\$4,672,000
R-52	Cimarron Dr	New Roadway	Construct new arterial from West Gate Rd east to Cimarron Dr intersection with Ellsworth Rd	\$17,945,000
R-53	Country Rd Extension	New Roadway	Construct new 2 lane minor arterial from existing Country Rd to Deadwood Ave	\$6,752,000
R-54	Degeest Dr	New Roadway	Extend new collector from the end of Degeest Dr north across railroad tracks and connect to I-90 Service Road	\$903,000
R-55	Freude Lane	New Roadway	Construct new collector from Freude Lane west to Creekside Dr to connect existing neighborhoods and to provide a second point of access.	\$1,062,000
R-56	High Meadows Area Secondary Access Route	New Roadway	Option 3 - 3.2 mile extension of High Meadows Rd to Rolling Hills Rd along USFS Trail 777's alignment.	\$1,124,000
R-57	La Crosse St Extension	New Roadway	Construct new 2 lane minor arterial from Country Rd to Seger Dr	\$2,541,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-58	Mall Dr	New Roadway	Extend new arterial from Elk Vale to Service Road	\$2,655,000
R-59	Mill Rd Extension	New Roadway	Construct new 2 lane minor arterial from Haines Ave to Deadwood Ave	\$5,630,000
R-60	Mill Rd Extension	New Roadway	Construct new 2 lane minor arterial from Nike Rd to Haines Ave	\$3,887,000
R-61	Minnesota St Extension	New Roadway	Construct new 2 lane minor arterial from US 16B (Elk Vale Rd) to Cambell St	\$2,716,000
R-62	Minnesota St Extension	New Roadway	Construct new 2 lane minor arterial from Jolly Ln to e/o US 16B (Elk Vale Rd)	\$1,844,000
R-63	Minnesota St Extension	New Roadway	Construct new 2 lane minor arterial from Reservoir Rd to Jolly Ln	\$2,740,000
R-64	New road w/o Airport	New Roadway	Construct new 2 lane collector from Airport Rd to Radar Hill Rd	\$2,930,000
R-65	Northern Lights Blvd	New Roadway	Extend new collector from Northern Lights Blvd east to the future extension of West Gate Rd	\$7,114,000
R-66	Prairie Rd	New Roadway	Construct new local road to allow access location on Liberty Blvd	\$287,000
R-67	Reservoir St Extension	New Roadway	Construct new 2 lane principal arterial from Anamosa St Ext to Meadow Ridge Dr	\$1,323,000
R-68	Sammis Trail	New Roadway	Construct new 2 lane principal arterial from Old Folsom Rd / Lamb Rd to US 16	\$16,695,000
R-69	Secondary Summerset Access	New Roadway	Option A - New connection from Castlewood Dr to High Meadows	\$104,000
R-70	Sheridan Lake Rd Extension	New Roadway	Construct new 4 lane minor arterial from SD 445 (Deadwood Ave) to Main St	\$24,724,000
R-71	Spring Creek Rd Extension	New Roadway	Construct new 2 lane principal arterial from SD 44 to SD 79	\$33,075,000
R-72	Twilight Dr Extension	New Roadway	Construct new 4 lane minor arterial from Radar Hill Rd to Reservoir Rd	\$5,429,000
R-73	West Gate Rd	New Roadway	Construct new arterial from the West Gate / County Hwy 1416 intersection south to the future Cheyenne Blvd extension	\$7,645,000
R-74	Cambell St	Capacity Improvements	Widen to 6 lanes from Minnesota St to Fairmont Blvd	\$2,358,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-75	Canyon Lake Dr	Capacity Improvements	Widen to 4 lane minor arterial from Sheridan Lake Rd to Soo San Dr	\$1,976,000
R-76	Catron Blvd	Capacity Improvements	Widen to 3 lane principal arterial from US 16 to Nugget Gulch Rd	\$3,849,000
R-77	US 16B (Elk Vale Rd)	Capacity Improvements	Widen to 6 lanes from SD 44 to SD 79	\$13,015,000
R-78	Ellsworth Rd	Capacity Improvements	Widen existing roadway from existing neighborhood to County Hwy 1416 to provide curb and gutter and left turn lane according to the arterial typical section	\$881,000
R-79	Ellsworth Rd	Capacity Improvements	Widen existing roadway from County Hwy 1416 north to 225th to provide curb and gutter and a left turn lane according to the arterial typical section standard	\$5,628,000
R-80	Haines Ave	Capacity Improvements	Widen to 4 lane principal arterial from Country Rd to n/o Sitting Bull St where 4-lane cross section ends	\$3,488,000
R-81	W Main St	Capacity Improvements	Widen to 6 lane principal arterial from SD 44 (Jackson Blvd) to Mountain View Rd	\$943,000
R-82	Mall Dr	Capacity Improvements	Widen to 4 lanes from Haines Ave to Maple Ave	\$1,926,000
R-83	SD 44 (Omaha St)	Capacity Improvements	Widen to 6 lane principal arterial from Mountain View Rd to Near 12th St	\$3,464,000
R-84	SD 231 (Deadwood Ave)	Capacity Improvements	Widen to 6 lane principal arterial from Sheffer St to Mountain View Rd	\$1,347,000
R-85	Sheridan Lake Rd	Capacity Improvements	Widen to 3 lane minor arterial from Main St to Canyon Lake Rd	\$285,000
R-86	Sheridan Lake Rd	Capacity Improvements	Widen to 4 lane principal arterial from Corral Dr to Clarkson Rd	\$12,123,000
R-87	Sheridan Lake Rd	Capacity Improvements	Upgrade to 5-lane cross section from W Main St to SD 44 (Jackson Blvd)	\$3,896,000
R-88	Sheridan Lake Rd	Capacity Improvements	Widen to 3 lane minor arterial from Judy Ave to Rapid Creek	\$142,000
R-89	St Patrick St	Capacity Improvements	Widen to 4 lanes from US 16 (Mt Rushmore Rd) to 5th St	\$1,140,000
R-90	Tower Rd	Capacity Improvements	Widen existing roadway to provide curb and gutter and left turn lane according to the collector typical section standard	\$743,000

2040 Plan ID	Name	Category	Location / Description	Cost (2016)
R-91	Antelope Creek Rd	Corridor Improvement	Pave from Meade County Line to Elk Creek Rd	\$5,956,000
R-92	Quaal Rd	New Roadway	Construct new 2 lane collector from Stagesop Rd to Elk Creek Rd	\$4,106,000

D. Transit

Figure 10 depicts the existing transit network, while **Table 14** itemizes the transit needs identified in the Needs Plan. Transit needs have been categorized as one of the following:

- Capital Improvements
- Continued Service
- Expanded Service
- New Service
- Operation Improvements

The continued operation and maintenance of the Rapid Transit System is planned and included in this process. This requires the identification of operating and capital expense revenue to support the system. Operations dollars include funds necessary to operate and maintain vehicles, employ personnel, and manage the general operations of the organization. Capital dollars include funds necessary to purchase and upgrade vehicles, maintain stops and stations, and maintain and expand transit facilities.



Figure 10. Existing Transit Services

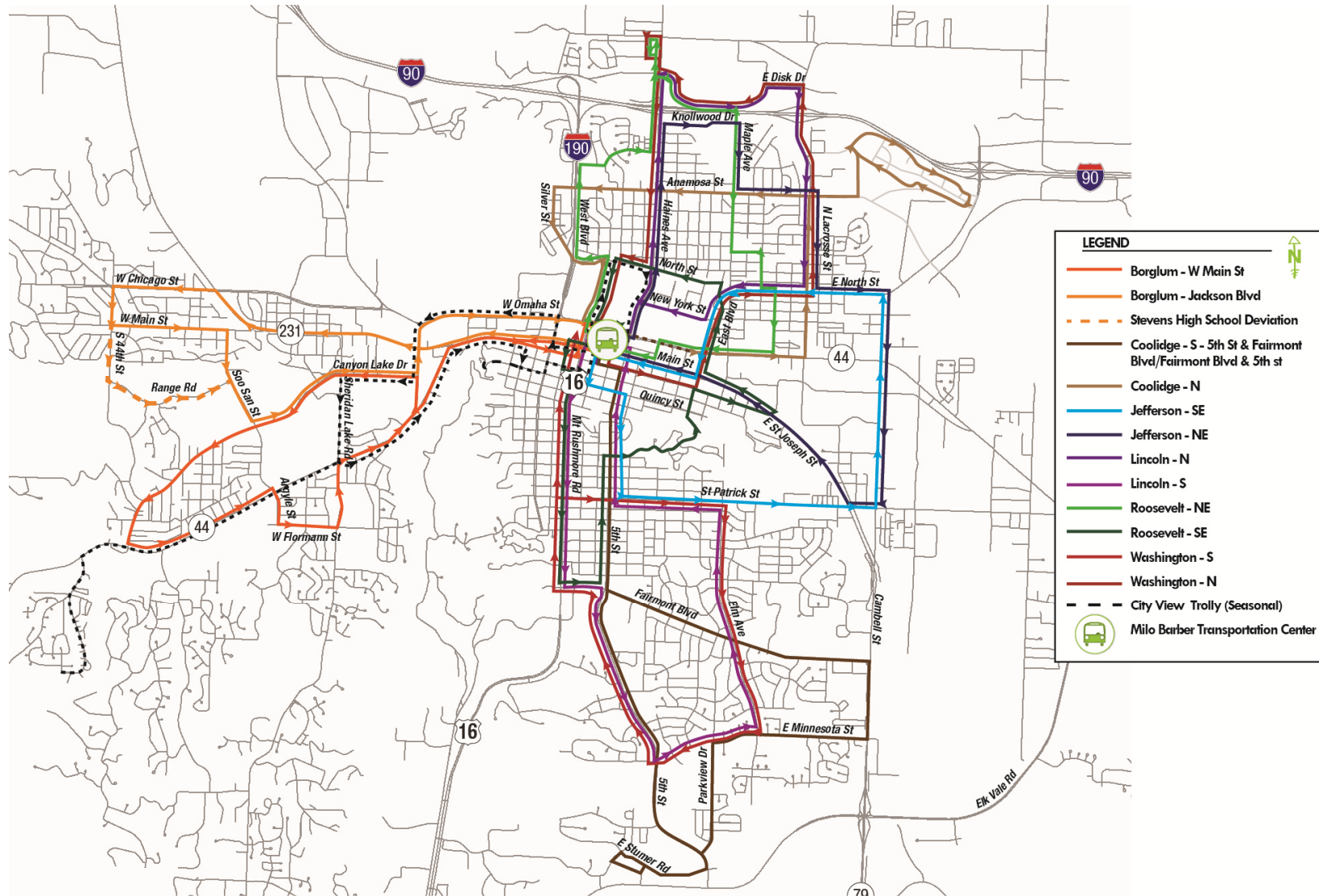


Table 14. Transit Needs Plan

2040 Plan ID	Name	Category	Location / Description
T-1	MBTC bus bays modifications	Capital Improvements	Modify bus bays at MBTC to eliminate pull-in/back-out maneuver to improve safety and speed up operations
T-2	MBTC canopies/shelters	Capital Improvements	Establish eastside and south side stops and canopies/shelters at MBTC for run through routes
T-3	Continue Existing Service	Continued Service	Existing fixed-route transit service continued through 2040
T-4	Extend service hours by 30 minutes	Expanded Service	Extend fixed route to be 6:30 am to 10:00 pm
T-5	Expand Service to Maintain Service Levels	Expanded Service	Expanded transit service to maintain current transit population/employment service levels
T-6	Increase Frequency	Expanded Service	Increase service frequency from 1 hour to 30 minutes
T-7	Expand Service Hours	Expanded Service	Extend service hours from 12 to 15 hours per day
T-8	Add Sunday Service	Expanded Service	Provide service on Sundays
T-9	Downtown shuttle	New Service	Potential trial period from 11:00 a.m. to 1:00 p.m., Monday through Friday along main downtown corridors such as Main Street and St. Joe
T-10	Long-distance service connection to Ellsworth Air Force Base or Rapid Valley Call Centers	New Service	Implement long-distance service connection to Ellsworth Air Force Base or Rapid Valley Call Centers on a trial basis to provide connections to Rapid City
T-11	Service to Western Dakota Tech	New Service	Add route or re-route existing route to serve Western Dakota Tech
T-12	New Service to Airport	New Service	Rapid City to Airport
T-13	New Service to Box Elder/Ellsworth AFB	New Service	Rapid City to Box Elder/Ellsworth AFB (include cost sharing strategies)
T-14	New Service to Summerset/Piedmont	New Service	Rapid City to Summerset/Piedmont (include cost sharing strategies)
T-15	New Services in Other Areas within the Rapid City Region	New Service	Provide transit service in Box Elder, Rapid Valley, Ellsworth Air Force Base, and other areas outside of Rapid City
T-16	Add 1.5 FTE for maintenance	Operation Improvements	If pilot program to use City staff for light vehicle maintenance is successful, hire more staff
T-17	Add 1.0 FTE for cleaning	Operation Improvements	Add employee or contract out for cleaning
T-18	Hire Mobility Manager	Operation Improvements	Hire a Mobility Manager for the region

2040 Plan ID	Name	Category	Location / Description
T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies
T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility
T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service
T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service

E. Intermodal Transportation

The interaction between travel modes has a significant impact on the economic viability of the region. The region's ability to facilitate the efficient movement of people and goods across and within its boundaries provides significant economic opportunities.

The Rapid City Area provides an important link to the regional, statewide, and national transportation system. This section discusses three critical intermodal transportation modes: air, railroad, and commercial truck.

i. Aviation

The Rapid City Regional Airport provides both commercial and general aviation service for the region, and is located approximately 10 miles southeast of downtown Rapid City along SD 44. According to the Federal Aviation Administration (FAA), the airport is the second busiest airport in South Dakota with 266,623



enplanements in 2014, a roughly 4 percent increase over 2013. Four airlines currently serve the airport, providing direct service to 10 US cities.

- Allegiant Air – to/from Las Vegas and Phoenix
- American Airlines/American Eagle – to/from Chicago and Dallas
- Delta Airlines/Delta Connection/SkyWest – to/from Atlanta, Minneapolis, and Salt Lake City
- United Airlines/United Express/SkyWest – to/from Chicago, Denver, and Houston

The airport provides paid short- and long-term parking options, including up to 20 minutes of free parking. Five rental car agencies (Avis, Budget, Enterprise, Hertz, and National/Alamo) serve the airport with rental desks located within the terminal and cars parked just outside the terminal. Local shuttle and taxi companies also provide transportation to/from the airport.

The Airport Master Plan Update, begun in 2014 for the Rapid City Regional Airport, identifies future development necessary to accommodate aviation demand. This study addresses the airport's current and forecast safety, capacity, and compatibility needs. Many projects have been completed and new planning considerations have arisen since the previous Master Plan study in 2008.

The scope of the study was developed to identify specific needs and objectives. The scope includes tasks to document existing conditions, forecast future aviation activity levels, identify future facility requirements, formulate and evaluate airfield alternatives, and prepare an implementation plan. Recommendations will be made for improvements that are triggered by safety requirements or demand thresholds.

In addition, the specific objectives for this Airport Master Plan Update are identified as follows:

- General Aviation Development – Functionality and expansion alternatives
- Cargo Needs – Functionality and optimal location for aircraft and vehicles
- Evaluate non-aeronautical development on airport property
- Runway Length and Alternatives when Primary Runway is out of service
- Passenger Terminal Building Needs
 - Inline baggage screening
 - Review Terminal Apron Size
 - Deicing Facility Implications
- Public Automobile Parking Needs
- US Forest Service Aerial Firefighting Base – Functionality and expansion alternatives
- Relocation of Airport Road in General Aviation Area
- Evaluate Snow Removal Equipment and Maintenance Facilities
- Siting options for Air Traffic Control Tower
- Update Land Use Compatibility
- Coordinate Master Plan with City and City Comprehensive Plan

The Airport Master Plan Update is expected to be completed in fall 2015 with a technical report, Capital Improvement Plan, and Airport Layout Plan. The recommendations from the Master Plan Update are incorporated into this plan by reference.

ii. Railroads

Rapid City is the headquarters of the Rapid City, Pierre & Eastern Railroad (RCPE) – a Class II railroad owned by Genesee & Wyoming. The RCPE was previously known as the Dakota, Minnesota and Eastern Railroad (DME) and owned by Class I railroad Canadian Pacific (CP) until it was sold to Genesee & Wyoming in 2014. No passenger rail serves the RCAMPO area.

The RCPE operates 670 miles of tracks in three directions out of Rapid City, interchanging with CP, BNSF Railway, Union Pacific Railroad, and Nebraska Northwestern Railroad. It is the only active railroad in the RCAMPO area. RCPE's tracks connect to the following areas:

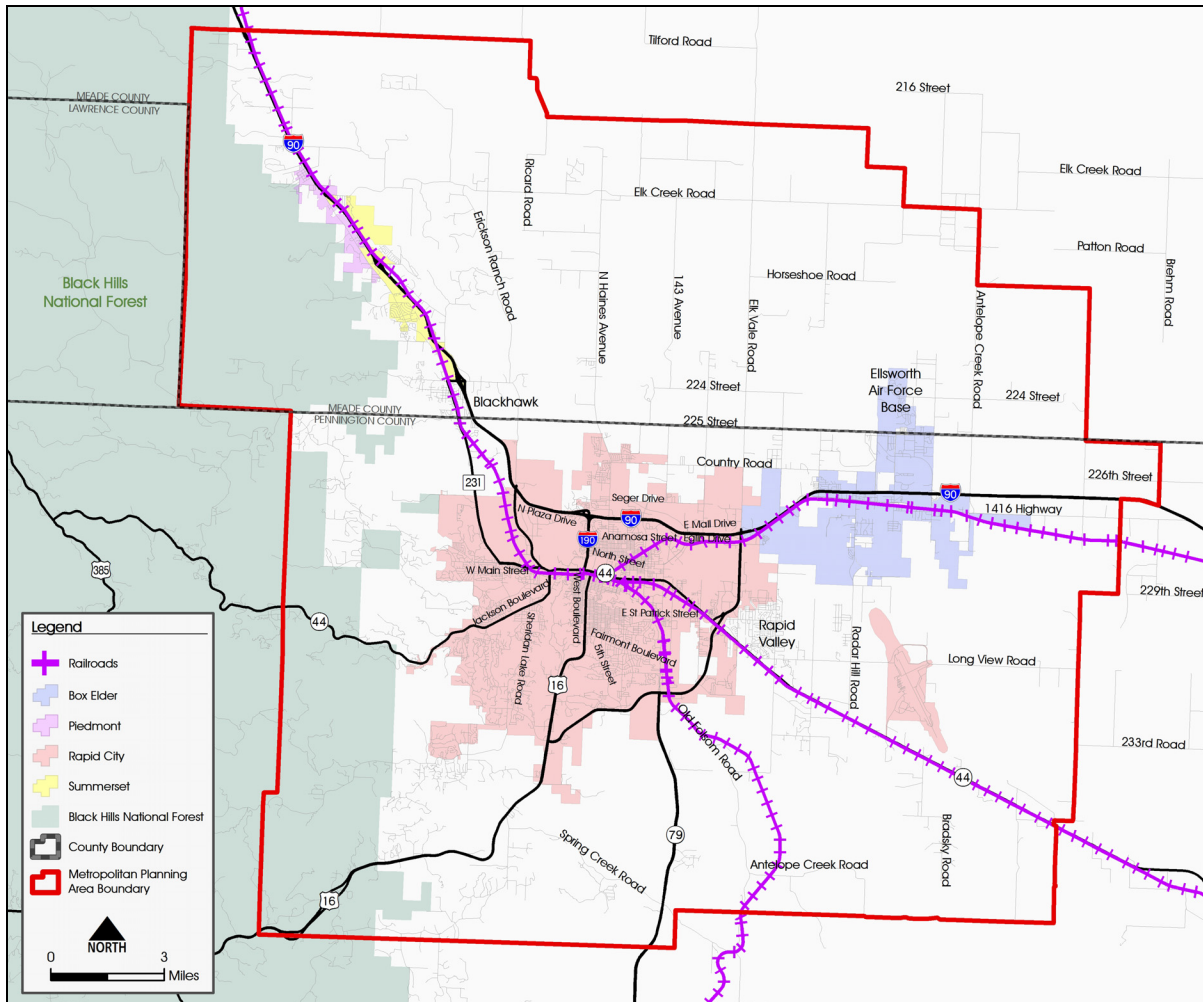
- East through South Dakota to Tracy, Minnesota, starting from the east side of downtown heading east through Box Elder primarily along I-90
- South to Crawford, Nebraska, from downtown, generally along Cambell St and then SD 79
- Northwest to Colony, Wyoming, from downtown to along SD 445 and SD 231, and then along I-90 through Black Hawk, Summerset, and Piedmont

According to Genesee & Wyoming, customers ship grain, bentonite clay, ethanol, fertilizer, and other products on the RCPE. The Federal Railroad Administration (FRA) reports that an average of two trains per day currently run on the tracks to Colony and on the tracks to Crawford, and an average of four trains per day currently run on the tracks heading east along I-90 toward eastern South Dakota.

A rail-banked 98.5-mile rail corridor owned by the State of South Dakota traverses through the RCAMPO area from downtown Rapid City to Kadoka, South Dakota, along SD 44. Pieces of this corridor are being converted into a shared use trail, with additional conversion pieces proposed in the Needs Plan.

Figure 11 depicts the railroad system within the planning area.

Figure 11. Railroads

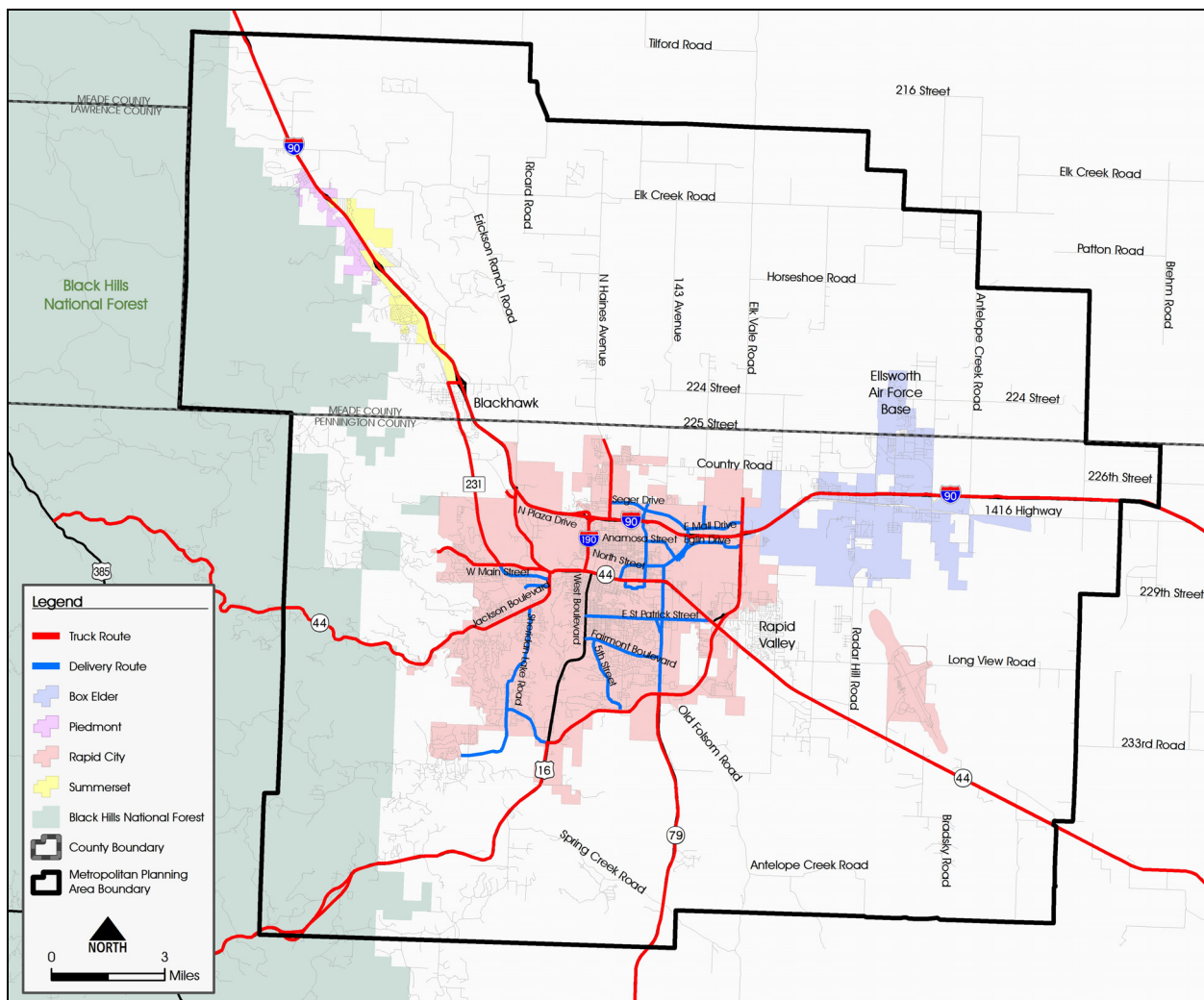


iii. Freight and Truck Routes

Freight movements provide a critical service for planning regions, with potential impacts to the quality of life of residents and visitors. To manage the impacts that freight movements can have within the region, while ensuring the efficient movement of goods and services, the City Council of Rapid City has established Truck and Delivery Routes within the city limits. Large trucks of more than three tons must use the approved Truck Routes when traveling within Rapid City and Delivery Routes can be used only when trucks are making local deliveries and cannot be used as through routes. This plan should be updated by the local agencies as desired.

Figure 12 depicts the designated Truck and Delivery Routes within the planning area.

Figure 12. Truck and Delivery Routes



F. Plans, Studies, and Policy Approaches

The plans referenced to create the Needs Plan also identified the need to study the feasibility of some of the needs elements, update or produce a variety of plans, and implement policy approaches. Some of these proposed plans also received public support to improve particular modes, such as transit.

Table 15 lists these plans and studies, the particular need(s) for the plan/study, and the champion agency.

Table 15. Proposed Plans and Studies

Plan / Study / Policy Approach	Need / Description	Champion(s)
Airport		
Airport Layout Plan Update	Regular update identified in the Rapid City Regional Airport Master Plan Update	Rapid City Regional Airport
Airport Master Plan Update	Regular update identified in the Rapid City Regional Airport Master Plan Update	Rapid City Regional Airport
Bicycle		
Promote bicycle infrastructure as part of public projects	Add bicycle improvements into existing road and transit infrastructure upgrades, including design for facilities such as showers, bike racks, and bike lockers within public buildings	RCAMPO Rapid City Box Elder
Bicycle Network Map	Grade, map, and publish existing bicycle routes according to user types	RCAMPO
Freight		
Quiet Zones Study	Evaluate potential implementation of quiet zones at high rail traffic locations through populated areas	RCAMPO
Regional Intermodal Freight Plan	Develop a freight plan to document current freight conditions, identify future freight issues and improvements, and coordinate the preservation of important freight facilities and corridors	RCAMPO SDDOT
New I-90 / Airport Connection Feasibility Study	Assess feasibility of a new north-south connection between the airport and I-90, including both roadway and rail to enhance efficiency of freight transfers	RCAMPO Box Elder Pennington County
Multimodal		
Bicycle and Pedestrian Master Plan Update	Complete an update to the Bicycle and Pedestrian Master Plan; include a focus on bicycle travel through downtown Rapid City	RCAMPO Rapid City
Complete Streets Guide	Assemble a complete streets guide that provides guidance for considering the needs of pedestrians and bicyclists in new development, redevelopment and street reconstruction	RCAMPO
Multimodal marketing	Coordinate and develop marketing campaigns to promote the use of alternative modes, both individually and together	RCAMPO

Plan / Study / Policy Approach	Need / Description	Champion(s)
Transportation Management Organization	Commission an organization dedicated to developing and implementing Travel Demand Management (TDM) strategies in the MPO area and acquiring data to support these efforts	RCAMPO SDDOT
Pedestrian		
Sidewalk Condition Study	Create sidewalk condition performance measures and implement an ongoing sidewalk conditions documentation process that builds off the Rapid City Community Walk Audit effort	RCAMPO
Sidewalk connection prioritization	Implement important sidewalk improvements as a priority within the CIP using the City's Bicycle and Pedestrian Master Plan and the sidewalk conditions analysis process	Rapid City
Roadway		
Access Management	Identify highways and high-use roadways that are in need of an access management plan, and revise design criteria to incorporate access spacing requirements specific to different facility types	Rapid City Box Elder Pennington County Meade County SDDOT
Asset Management	Identified in the Rapid City Comprehensive Plan	Rapid City
Right-of-way preservation	Preserve right-of-way along alignments of future major regional roadway connections and beltway routes	Rapid City Box Elder Pennington County Meade County
Entryway Improvements Plan	Define visions for the various City gateways and entry corridors, identify priority projects, and establish guidelines to guide future development in these areas	Rapid City
I-90 Exit 63 (County Hwy 1416) Interchange Study	Study interchange replacement options	SDDOT RCAMPO Box Elder
Haines Ave Access Management and Signal Warrant Study	Develop access management plan (Anamosa St to Mall Dr) and conduct a traffic signal warrant study for the Wright St intersection	Rapid City
La Crosse St Access Management and Signal Warrant Study	Develop access management plan (E North St to Mall Dr) and conduct a traffic signal warrant study for the Monroe St intersection	Rapid City
Main St Access Management and Signal Warrant Study	Develop access management plan (Sheridan Lake Rd to Mountain View Rd)) and conduct a traffic signal warrant study for the Dakota Dr intersection	Rapid City
St Joseph St / 4 th St Signal Warrant Study	Conduct a traffic signal warrant study	Rapid City
Outer South Loop Rd Study	Study need and feasibility for a new 2-lane minor arterial from Sheridan Lake Rd to Airport Rd	RCAMPO Rapid City Pennington County
West Loop Connector Study	Study need and feasibility for a new 2-lane principal arterial from Sheridan Lake Rd to SD 231 (Sturgis Rd)	RCAMPO Rapid City Pennington County

Plan / Study / Policy Approach	Need / Description	Champion(s)
West Outer Loop Study	Study need and feasibility for a new 2-lane minor arterial from Sheridan Lake Rd to Canyon Rd / Nemo Rd	RCAMPO Rapid City Pennington County
West Anamosa St Extension Study	Study need and feasibility for two extensions of Anamosa St as a 2-lane minor arterial: one from I-190 to the proposed Plaza Dr extension and the second from the proposed Plaza Dr extension to SD 231 (Sturgis Rd)	RCAMPO Rapid City
Plaza Dr Extension Study	Study need and feasibility for two extensions of Plaza Dr as a 2-lane minor arterial: one from the proposed Anamosa St extension to SD 231 (Sturgis Rd) and the second from SD 231 (Sturgis Rd) to Nemo Rd	Rapid City Pennington County
I-90 Crossing Study	Study the need and feasibility of a new I-90 crossing east of the I-90 / I-190 interchange connecting to Disk Dr	Rapid City SDDOT
Transit		
Rapid City Area Transit Plan	<p>The planning horizon for the most recent transit plan, the 2008 Rapid City Transit Development Plan, expired in 2013. Outstanding issues/ideas identified in this plan, the 2013 Coordinated Public Transit-Human Services Transportation Plan Update, and input received during public meetings conducted for RapidTRIP 2040 demonstrates a substantial need for an updated transit plan that not only looks at service within Rapid City, but the feasibility of regional service.</p> <p>Based on the previous plan and public input as part of this plan, issues/ideas that should be addressed include:</p> <ul style="list-style-type: none"> • Providing bus shelters, benches, and lighting at each stop and creating a prioritized implementation plan • Improving ADA access to stops, including ramps and sidewalk improvements • Implementation of automatic vehicle location (AVL) technology on buses and providing real-time next bus information to users • Bus surveillance cameras • Pass options, including a day pass and magnetic cards to replace punch cards • Explore fare assistance programs including Medicaid/Medicare reimbursement, free/low-cost fares for low income children, employer payment program, and a TANF Recipients Education Program 	Rapid City Rapid Transit RCAMPO

Plan / Study / Policy Approach	Need / Description	Champion(s)
Rapid City Area Transit Plan (Continued)	<ul style="list-style-type: none"> • Perform a Transit Level of Service analysis of the existing system • Service expansion analysis including routes to regional destinations, stops that better serve major employment centers and social services, additional Dial-a-Ride service area, earlier service hours, later service hours for service industry employees and give patrons a safe ride home option, and Sunday service • Park and Ride facilities • Improving transit system usability by simplifying the route system and providing more extensive rider information online • Senior rideshare program • Comprehensive review of standard and unique funding sources • Planning level costs • Develop performance measures Needs listed in Table 14 should also be included	Rapid City Rapid Transit RCAMPO
Transit Asset Management Plan	MAP-21 requires that transit agencies prepare transit asset management plans to promote accountability and to increase transit system efficiency. The goal of improved transit asset management is to implement a strategic approach for assessing needs and prioritizing investments for bringing the nation's public transit systems into a state of good repair.	Rapid City Rapid Transit RCAMPO
Transit Safety Plan	MAP-21 established a Public Transportation Safety Program authorizing FTA to establish and enforce a new comprehensive framework to oversee the safety of public transportation throughout the United States. The program creates an overall framework for FTA to monitor, oversee and enforce safety in the public transit industry and is based on the principles and practices of Safety Management Systems (SMS). It is required that all FTA grantees develop comprehensive agency safety plans that, at a minimum, include methods for identifying and evaluating safety risks, strategies to minimize exposure to hazards and unsafe conditions, a staff safety training program, and performance targets for safety performance criteria and state of good repair standards.	Rapid City Rapid Transit RCAMPO

Plan / Study / Policy Approach	Need / Description	Champion(s)
Coordinated Public-Human Services Transportation Plan	Coordinated public transit human services transportation plans, as required under MAP-21, are to be developed locally, and the plan must identify the needs of individuals with disabilities, older adults, and people with low-income and be developed through a process that includes representatives of public, private and nonprofit transportation and human services providers and participation by the public. All requests for 5310 funds through the FTA must be in alignment with the findings, goals, and objectives identified in the local plans. This plan is Federally mandated to be updated every 5 years.	RCAMPO Rapid City Rapid Transit
Regional Transit Service Feasibility Study	Study to evaluate the feasibility of regional transit service	RCAMPO Rapid City Rapid Transit
Transit information availability	Provide route schedule and map information at all bus stops, upload and maintain transit data on Google Maps, make transit information available via the Helpline Center 211, use social media to promote transit use, and provide riders service delay/disruption alerts, and advertise "Free Ride Friday" for seniors	Rapid City Rapid Transit
Rider and provider inventory	Create an inventory of people who need transportation to areas outside Rapid Transit System's service area and those who are already receiving rides in those areas to coordinate rides between these groups	RCAMPO Rapid City Rapid Transit
Local Agency Transit Education Program	Provide transit education for local agencies, especially those that serve older adults and persons with disabilities, to explain how to ride the bus, read the bus schedule and who to contact if they have questions	RCAMPO Rapid City Rapid Transit
Annual Performance Report	Produce an annual report documenting service levels of the past year, transit levels of service, and a performance measures assessment	Rapid City Rapid Transit
Volunteer database	Database of volunteers to provide rides to those not served by existing transit services	RCAMPO Rapid City Rapid Transit

VI. ENVIRONMENTAL REVIEW



An environmental screening process has been completed for all projects identified in the Fiscally Constrained Plan, consistent with requirements from MAP-21. As this plan represents an early stage in the overall transportation planning process, the environmental review has been structured to provide preliminary insight (presence or absence) about the environmental resources potentially impacted by each need. Impacts have not been critically examined or quantified at this stage to determine the level of impacts to each identified resource. Contained

within the following sections are descriptions of potential mitigation strategies should individual resources be impacted by future projects. All environmental screening has been completed using currently available geospatial databases without any field verification of resources and a planning-level of conceptual design for each need and as a result, there may be situations where environmental resources have not been identified during this screening process. Further evaluation of each need as the implementation moves forward will require individual environmental clearance and permitting processes.

A. Environmental Resources

The environmental resources screened were selected based on the characteristics of the study area, as well as input received from area resource agencies. The resources considered are generally consistent with the National Environmental Policy Act (NEPA), its implementing regulations, and Federal Highway Administration (FHWA) guidelines. The following sections summarize resources that are considered red flag environmental resources with separate regulatory drivers, such as the Endangered Species Act (ESA) or Clean Water Act (CWA), or are typically resources of concern for the general public, such as prairie dog colonies.

The following sections describe each resource category, along with the data sources used for the screening process.

i. Parks and Recreational Resources

Parks and recreational resources within the study area include parks, open space, greenbelts, parkways, conservation areas and trails. These resources are regulated under Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) stipulates that FHWA and other United States Department of Transportation (DOT) agencies cannot approve the use of land from publicly owned parks, recreational facilities, wildlife and waterfowl refuges, or public and private historic sites unless there is no feasible and prudent alternative to the use of the land and unless the action includes all possible planning to minimize harm to the property resulting from use.

Some park and recreational resources are also regulated under the Land and Water Conservation Fund (LWCF) Act of 1965. The LWCF established a federal funding program to assist states in developing outdoor recreation sites. Section 6(f) of the act prohibits converting property acquired or developed with these funds to a non-recreational purpose without the approval of the National Park Service (NPS).

The park properties present within the study area are publicly owned. Existing park and recreational resources within the study area included 38 parcels within the City of Rapid City and 12 parcels within the City of Box Elder. The evaluation also identified 35 Section 6(f) sites.

Next Steps/Mitigation Strategies

If, during further project-level planning processes, parks, trails, or open space are impacted, the next steps of the Section 4(f) and Section 6(f) process require evaluations of publicly-owned parks, trails, and open space lands to be conducted to determine if there are any properties that qualify for protection under Section 4(f) and/or are Section 6(f) assisted properties.

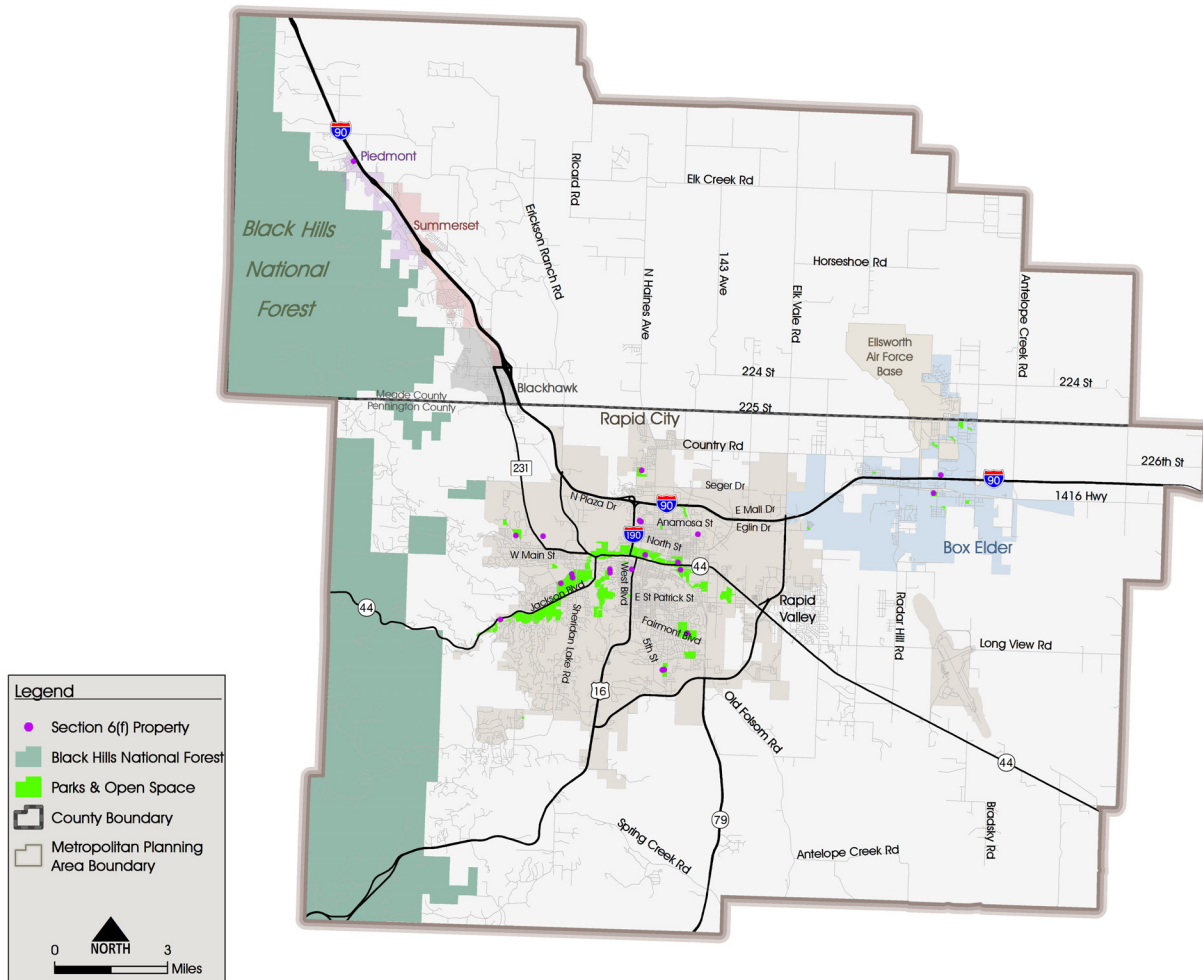
The law says that FHWA (and other DOT agencies) cannot approve the use of land from publicly-owned parks, recreation areas, wildlife refuges, or historic sites unless there is no feasible and prudent alternative to the use and the action includes all possible planning to minimize harm to the property. The substantive provisions of Section 4(f) apply only to agencies within the USDOT. A Section 4(f) evaluation would be required for the conversion of any publicly-owned parks, trails, or open space lands for transportation improvements.

Section 6(f) assisted properties require coordination with the affected local agency, as well as approval from the NPS to convert Section 6(f) assisted land for transportation improvements.

These next steps are not comprehensive and may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

Figure 13 provides the location of parks and recreation resources.

Figure 13. Parks and Recreation Resources



Source: South Dakota GIS Parks and Open Space (<http://arcgis.sd.gov/server/sdgis/Data.aspx>)
 Land & Water Conservation Fund (<http://www.invw.org/data/lwcf/grants-sd.html>)

ii. Cultural Resources

This section covers the historic built environment of the study area. The term “historic” is generally used to refer to buildings, structures, sites, or objects that have been determined eligible for listing in the National Register of Historic Places (NRHP). Passed in 1966, the National Historic Preservation Act established the framework for historic preservation in the U.S., creating the NRHP, National Historic Landmarks determination process, and State Historic Preservation Officer (SHPO).

Section 106 of the Act produced a regulatory framework, mandating review of federally funded and permitted projects to determine any potentially adverse impacts to historic resources. The Act requires projects to avoid impacts to NRHP and potentially eligible properties, and, if impacts cannot be avoided, to minimize and mitigate impacts.

Section 4(f) of the Department of Transportation Act of 1966 provided additional oversight for historic resources. It stated that the FHWA and other DOT agencies cannot approve the use of land from public or private historical sites unless there is no feasible and prudent alternative to the use of the land and unless the project includes planning to minimize negative impacts to the property whenever possible.

To be listed on the NRHP or potentially eligible, properties must be historically significant and retain sufficient integrity to be able to convey their significance. Four criteria are used to determine significance:

- Criteria A – Resources may be listed due to their association with events that have made a significant contribution to history.
- Criteria B – Resources may be listed due to their connection with persons significant in history.
- Criterion C – Design value includes buildings that are important for their aesthetic qualities; for demonstrating the distinctive characteristics of a building type, era, or method of construction; or for representing the work of a notable architect.
- Criterion D – Properties that have yielded or may be likely to yield information important in history or prehistory may be listed.

Properties generally are not evaluated for potential significance until they are at least 50 years old. Properties less than 50 years old must have exceptional importance to be eligible for listing on the NRHP.

The screening process identified 28 historical properties that are concentrated in Downtown Rapid City and 1,000 historic structures that are located in central Rapid City.

Next Steps/Mitigation Strategies

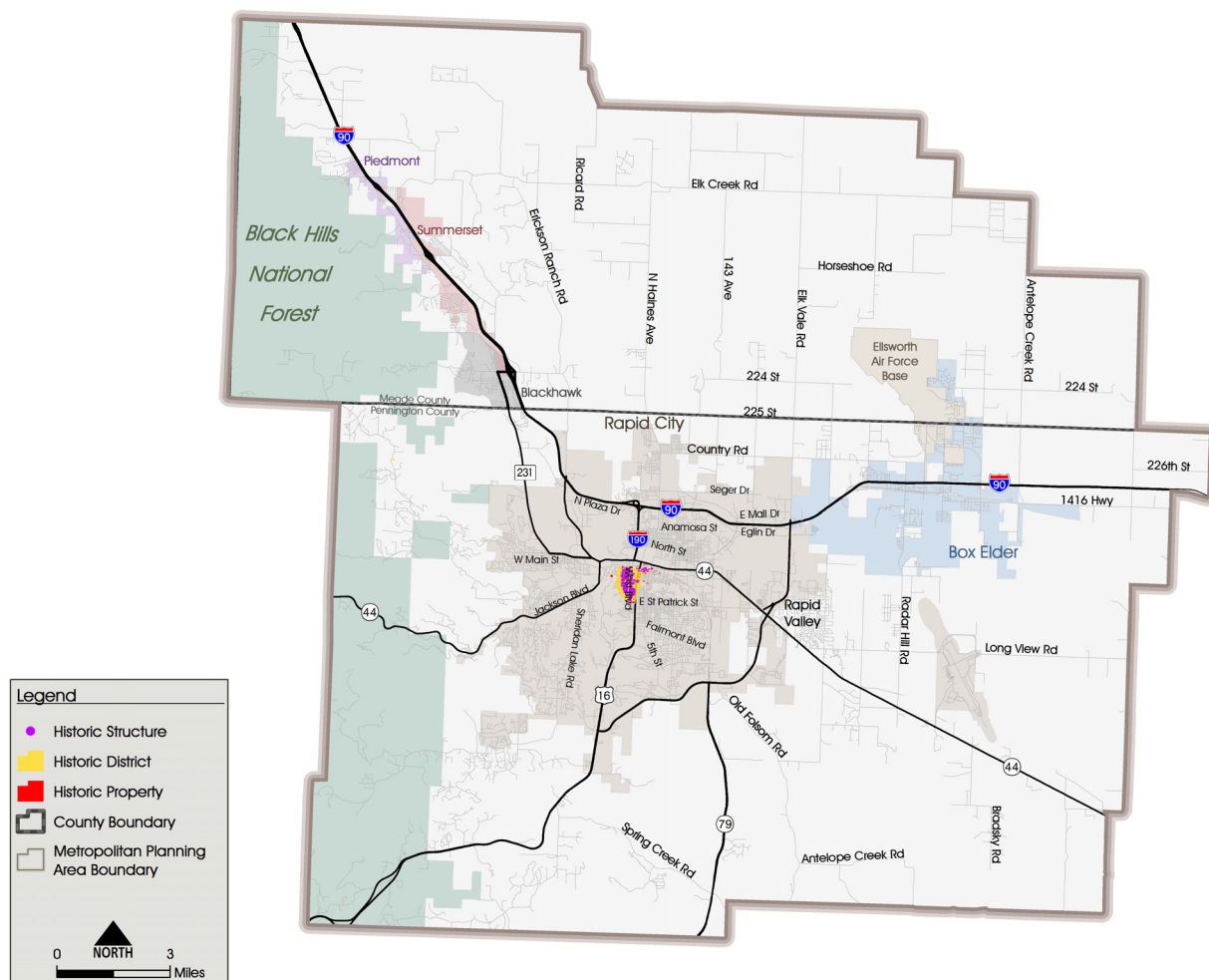
Further project-level planning processes may identify transportation improvements that have the potential to affect currently unidentified and unevaluated cultural resources in unsurveyed areas. The next step will be to conduct an additional intensive-level inventory to adequately assess these potential impacts. An intensive survey of cultural resources would be conducted, including

preparation of a Cultural Resources Inventory Report, to facilitate official evaluations of NRHP-eligibility and assess specific project impacts as required for National Historic Preservation Act Section 106 review.

These next steps are not comprehensive and may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

Figure 14 provides the location of cultural resources.

Figure 14. Cultural Resources



Source: National Park Service Historic Properties/Districts (http://www.nps.gov/gis/data_info/)

iii. Floodways, 100-year Floodplains and Water Quality

Floodplains are the lands on either side of a watercourse that are inundated when a channel exceeds its capacity. The National Flood Insurance Program (NFIP) encourages state and local governments to adopt sound floodplain management programs. To provide a national standard without regional discrimination, the Federal Emergency Management Agency (FEMA) adopted the 100-year flood as the base flood for floodplain management and flood insurance purposes.

A 100-year flood is calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average; thus, it has a 1 percent chance of being equaled or exceeded in any single year. Changes in the floodplain, such as adding fill material, constructing buildings or bridges, or limiting the natural conveyance of floodwaters, can cause a rise in the 100-year water surface and can subsequently have an impact on properties not previously anticipated to be affected by a 100-year storm event.

A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (FEMA, 2014a). Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations. For streams and other watercourses where FEMA has provided Base Flood Elevations, but no floodway has been designated, the community must either review floodplain development case by case to ensure that increases in water surface elevations do not occur, or identify the need to adopt a floodway if adequate information is available (FEMA, 2014a).

The following regulatory requirements apply to floodplains:

- **Executive Order (EO) 11988, Floodplain Management (1977)**, directs federal agencies to "provide leadership and take action to reduce the risk of flood loss, to minimize the impacts of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains." This EO assists in furthering the NEPA, the National Flood Insurance Act of 1968 (amended), and the Flood Disaster Protection Act of 1973.
- **CFR, Title 23 – Highways, Chapter I – FHWA, U.S. DOT, Part 650 – Bridges, Structures, and Hydraulics**, prescribes the policies and procedures that FHWA is directed to implement in the "location and hydraulic design of highway encroachments on floodplains."
- **CFR, Title 44 – Emergency Management and Assistance, Chapter I – FEMA -** contains the basic FEMA policies and procedures to regulate floodplain management and to analyze, identify, and map floodplains for flood insurance purposes.

Local governments usually enforce these regulations. For projects within the floodplains, local jurisdictions typically require floodplain development permits. Local governments are responsible for administering floodplain lands within their jurisdictions as part of the land use planning process.

The main floodways and floodplains within the study area are those associated with Rapid Creek, Box Elder Creek, Spring Creek, and Elk Creek and their tributaries.

Next Steps/Mitigation Strategies

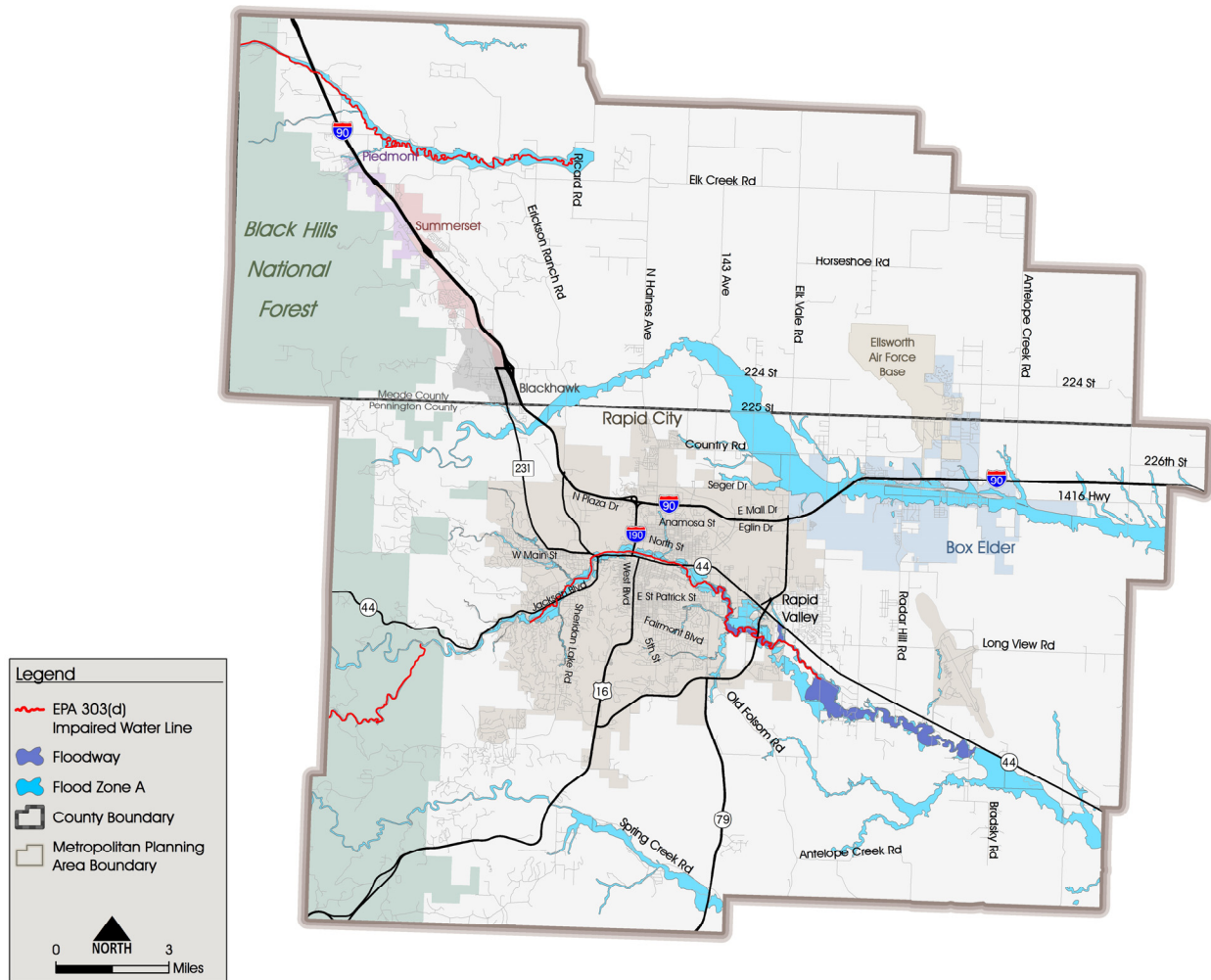
If, during further project-level planning processes, mitigation of impacts to floodplains becomes necessary, Rapid Creek, Box Elder Creek, Spring Creek, and Elk Creek floodplains and their tributaries would be the most sensitive to any changes in the floodplain. These areas would require a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) from FEMA. Floodplain modeling would be required to assess significant changes. Some relatively small changes may be incorporated in the floodplain without triggering the CLOMR/LOMR process. Floodplain modeling would be required to assess significant changes.

Engineering design should take into account the floodplain and floodway issues, as well as the location of bridges and bridge piers within the floodplain and floodway. Piers located within the floodway would require a specialized hydrologic assessment and approval by FEMA. The placement of piers within the active channel of Rapid Creek, Box Elder Creek, Spring Creek, and Elk Creek and their tributaries will be avoided or placed in a position to reduce impacts on the stream channel, stream habitat, and biota.

These mitigation strategies are not exhaustive and all listed strategies may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

Figure 15 provides the location of floodways, floodplains, and water quality resources.

Figure 15. Floodways, Floodplains, and Water Quality Resources



Sources: FEMA Flood Zones, South Dakota GIS (<http://arcgis.sd.gov/server/sdgis/Data.aspx>)
 EPA 303(d) Impaired Water Lines (<https://edg.epa.gov/metadata/catalog/main/home.page>)

iv. Wetlands and Waters of the US

Waters of the U.S., including wetlands, are protected under Section 404 of the CWA and Executive Order 11990 Protection of Wetlands. The SDDOT requires avoidance of all wetland impacts or, where avoidance is not practical, minimization to the greatest extent possible. Special emphasis is placed on avoiding impacts to high-quality wetlands, including those wetlands known for potential endangered species support functions. When the objectives of a transportation project cannot be met without adverse impacts to wetlands, wetland mitigation involves the preparation of a wetland mitigation plan detailing how lost wetland functions will be compensated.

The screening process identified approximately 2,000 sites throughout the planning area.

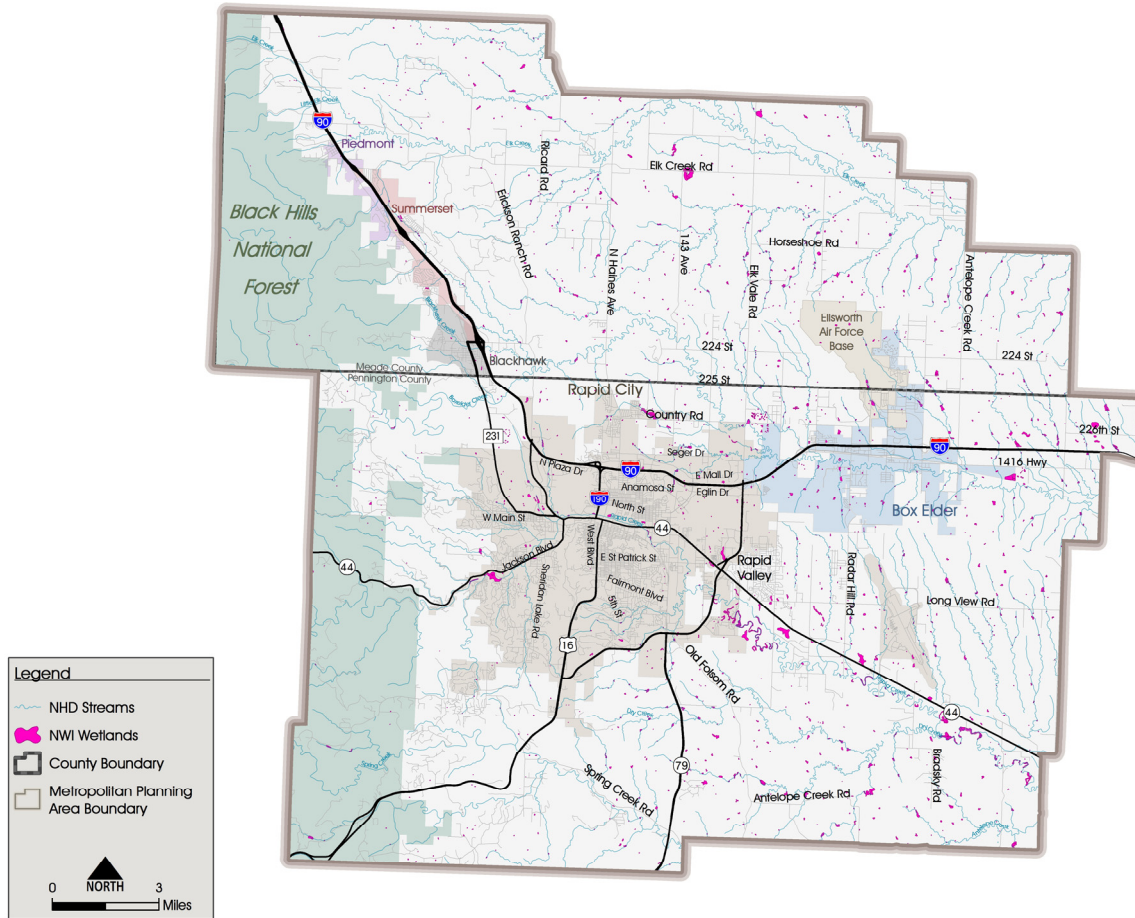
Next Steps/Mitigation Strategies

During further project-level planning processes, it may become necessary to mitigate impacts to wetlands and other Waters of the U.S. The next step for projects that may affect wetlands and other waters of the U.S. is to prepare of a Wetland Delineation Report for submittal to the USACE for concurrence. Wetland mitigation is typically done on a one-to-one basis; however, a CWA Section 404 permit (Individual or Nationwide), which the USACE will issue, may require higher ratios if unique or high-quality wetlands are affected.

These mitigation strategies are not exhaustive and all listed strategies may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

Figure 16 provides the location of wetland resources.

Figure 16. Wetland Resources



Source: NWI Wetlands, South Dakota GIS (<http://arcgis.sd.gov/server/sdgis/Data.aspx>)

v. Wildlife/Threatened and Endangered Species

Various federal laws have been established to protect wildlife, including: the ESA; the Migratory Bird Treaty Act (MBTA); and the Bald and Golden Eagle Protection Act (BGPA). The planning area does not contain any critical habitat for threatened or endangered species.

Within the planning area, there are locations with prairie dog colonies and migratory birds. Due to prairie dog colonies relationship as the habitat for Black Footed Ferret, screening has been completed to identify needs that may affect prairie dog colonies. Approximately 130 prairie dog colonies were identified with a majority occurring in the southeast quadrant of the planning area. Additionally, the Long Eared Bat is a federally listed threatened species with a range including South Dakota; future environmental processes should include the impacts to Long Eared Bats as projects in this plan are studied further.

Next Steps/Mitigation Strategies

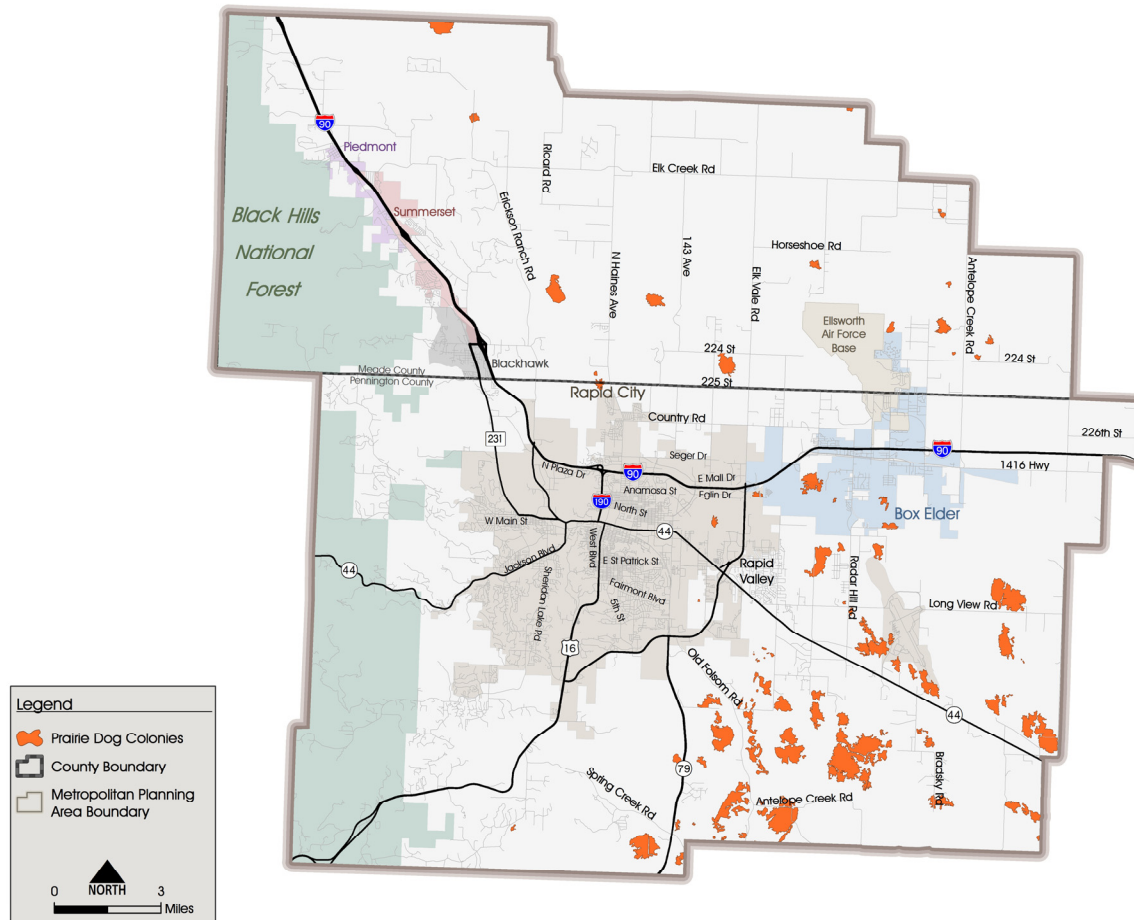
During further project-level planning processes, it may become necessary to mitigate impacts to wildlife/threatened and endangered species. The next step is to conduct a biological survey of threatened and endangered species, including aquatic species. Coordination with the USFWS would be necessary to mitigate potential impacts on special status species habitat.

If proposed construction is planned to occur during the primary nesting season for migratory birds, a qualified biologist should resurvey the project area to verify if any active nests are present. If no active nests are present, trees can be removed. However, if active migratory bird nests are identified and cannot be avoided by proposed construction activities, the USFWS field office should be contacted to help determine the appropriate mitigation action, which may include removing nests before egg laying begins or ceasing construction until all nestlings have fledged.

These mitigation strategies are not exhaustive and all listed strategies may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

Figure 17 provides the location of wildlife and threatened and endangered resources.

Figure 17. Wildlife and Threatened and Endangered Resources



Source: South Dakota DOT

vi. Hazardous Materials

Hazardous materials include substances or materials that EPA has determined to be capable of posing an unreasonable risk to health, safety, or property. Hazardous materials may exist within the study area at facilities that generate, store, or dispose of these substances, or at locations of past releases of these substances. Examples of hazardous materials include asbestos, lead-based paint, heavy metals, dry-cleaning solvents, and petroleum hydrocarbons (for example, gasoline and diesel fuels), all of which could be harmful to human health and the environment.

Hazardous materials are evaluated and handled according to various state and federal regulations. NEPA, as amended (42 USC §4321 et seq., Public Law 91-190, 83 Stat. 852), mandates that decisions involving federal funds and approvals consider environmental effects from hazardous materials. Other applicable regulations include the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC §9601 et seq.), which provides federal authority for the identification, investigation, and cleanup of sites throughout the US that are contaminated with hazardous substances (as specifically designated in the Act) and the Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC §321 et seq.), which establishes a framework for the management of both solid and hazardous waste. The federal Hazardous and Solid Waste Amendments of 1984 established a comprehensive regulatory program for underground storage tanks (UST) containing petroleum products and hazardous chemicals regulated under CERCLA.

The screening process identified approximately 500 hazardous materials sites throughout the planning area.

Next Steps/Mitigation Strategies

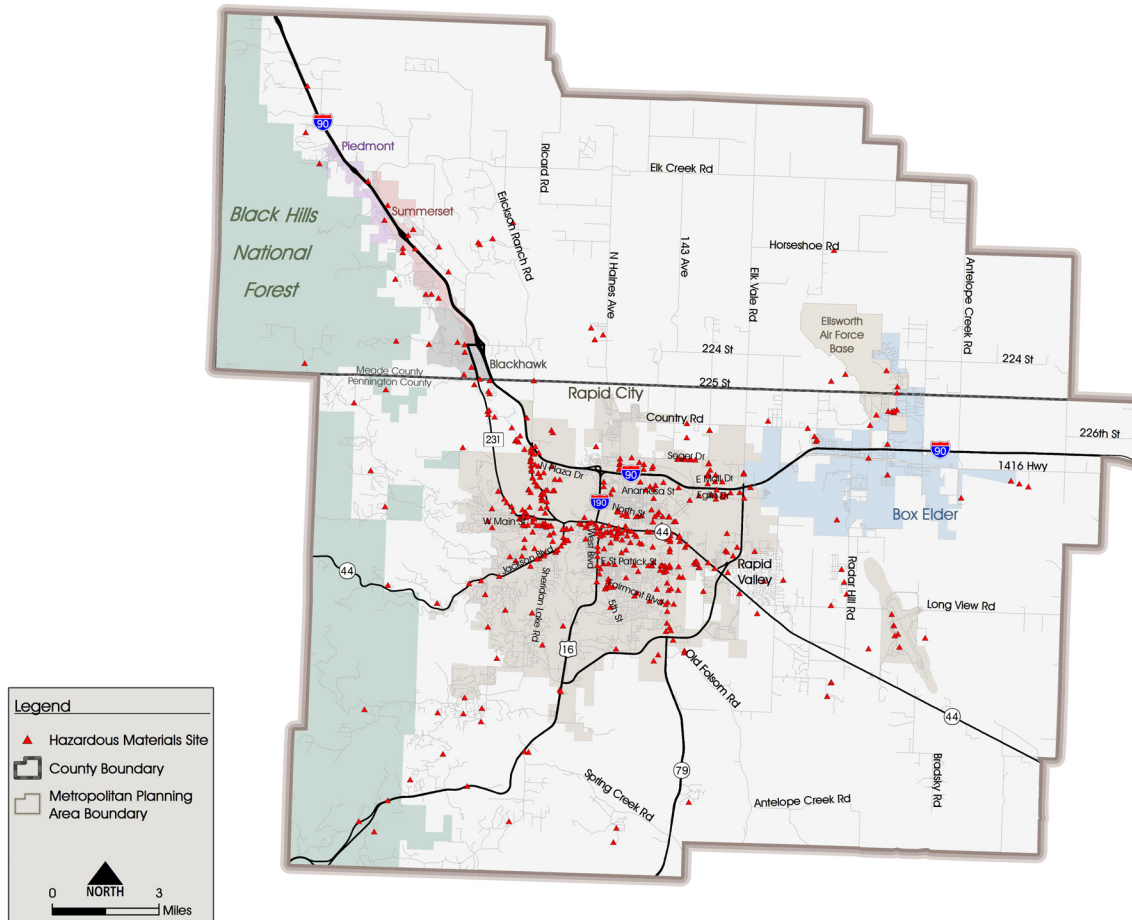
During further project-level planning processes, it may become necessary to mitigate impacts due to hazardous materials. The next step is to conduct a site-specific Phase I Environmental Site Assessment with an updated search of environmental databases as part of the acquisition of property for right-of-way.

Contamination from hazardous materials is most likely to be encountered during ground-disturbing activities in areas near properties with potential or recognized environmental conditions (hazardous materials). During the design process, the information concerning these properties can be used to identify avoidance options, if possible, and to assist with the development of materials management and worker health and safety plans. An asbestos-containing materials survey is required for all structures to be demolished as part of any project. Additionally, a lead-based paint survey and regulated materials clearance survey are recommended for all structures to be demolished by projects identified in this plan.

These mitigation strategies are not exhaustive and all listed strategies may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts to this resource.

Figure 18 provides the location of hazardous materials.

Figure 18. Hazardous Materials



Source: EPA Hazmat Sites (<https://edg.epa.gov/metadata/catalog/main/home.page>)

vii. Environmental Justice

Environmental justice for this screening exercise focused on needs that may disproportionately impact minority and low income populations. The data for this evaluation is based on 2010 U.S. Census data (tract/block group level) and American Community Survey (2008–2012).

Figure 19 represents minority populations by percentage throughout the planning area.

Figure 19. Minority Persons

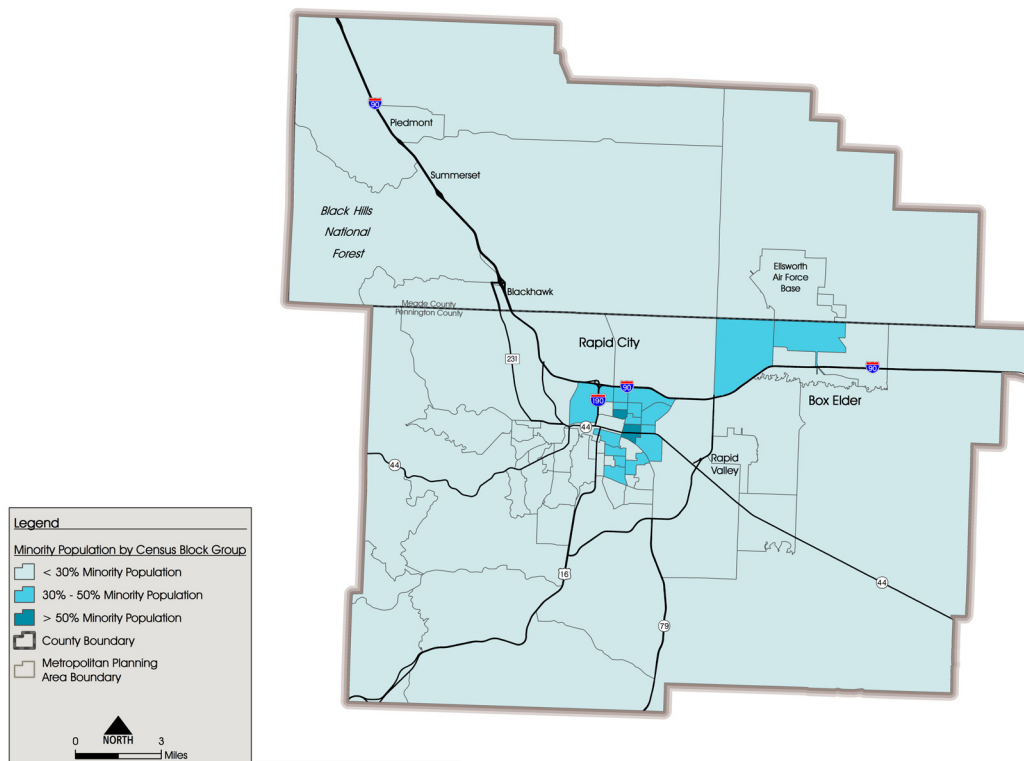
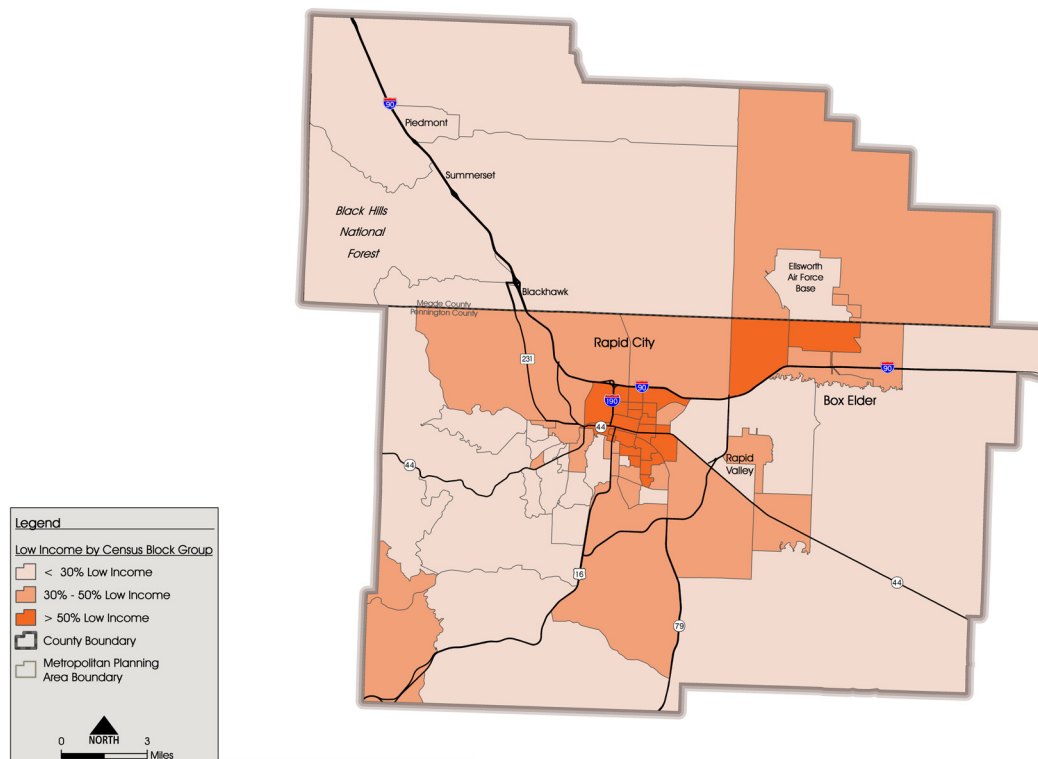


Figure 20 represents low-income populations by percentage throughout the planning area. Low-income populations were identified using the EPA EJScreen resource, which bases the low-income population on the “percent of a block group’s population in households where the household income is less than or equal to twice the federal ‘poverty level.’”

Figure 20. Low-Income Persons



Source: EPA EJScreen (<http://www2.epa.gov/ejscreen>)

Next Steps/Mitigation Strategies

If, during further project-level planning processes, mitigation of impacts to minority or low-income persons becomes necessary, the following strategies may be appropriate:

- Identify and avoid or minimize impacts to specific minority or low-income communities
- Document benefits
- Identify and avoid or minimize impacts to community facilities and resources
- Provide focused public outreach to refine impacts and potential mitigation strategies

This list of mitigation strategies is not exhaustive and all listed strategies may not be appropriate for each project; further environmental study should be completed to identify specific courses of action to mitigate impacts.

B. Environmental Screening Results

During the environmental screening process, individual resource agencies were specifically invited to participate in this Plan. Through a series of notification letters sent to announce the Draft Fiscally Constrained Plan and Draft Long Range Transportation Plan, each agency was invited to review the Plan progress and to provide input and comment about the process or results. No environmental agency provided formal response to this planning effort.

Table 16 summarizes the results of the environmental screening process. Each need has been listed, along with each environmental resource screened. Needs that are within 0.1 mile of an identified environmental resource have been flagged for future NEPA consideration. Transit needs have been excluded from this analysis process due to the non-impact nature of the improvements recommended in the plan to natural resources in the planning area.

Overall, this table is intended to serve as a baseline reference tool for future planning efforts. The screened environmental resources provide an indication of presence or absence of impacts. These resources, along with other environmental concerns, including, but not limited to, air quality, traffic noise, and acquisition of property for right-of-way, should be evaluated with environmental processes as project development moves forward.

Table 16. Environmental Screening Results

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-1	Anamosa St	from Valley Dr to US 16B (Elk Vale Rd)							X		X		
B-2	Anamosa St	from US 16B (Elk Vale Rd) to N Reservoir Rd							X				X
B-3	Anamosa St	from E North St to Mickelson Dr							X				X
B-4	Anamosa St	from Mickelson Dr to Valley Dr							X				
B-5	Canyon Lake Dr	from Sheridan Lake Rd to Soo San Dr	X		X		X		X		X		X
B-6	US 16B (Catron Blvd) / Catron Blvd	from 5th St to Sheridan Lake Rd							X		X		X
B-7	City Springs Rd / N 44th St	from Galena Dr to W Chicago St	X		X		X		X		X		X
B-8	Copperfield Dr	from E Anamosa St to existing street							X	X	X		
B-9	Fairmont Blvd	from Creek Dr to S Valley Dr					X	X	X	X	X		X
B-10	Harmony Heights Lane	from Plaza Blvd to Anamosa St	X		X						X	X	X
B-11	US 16 Service Road	from Skyline Dr / Tower Rd to Catron Blvd	X								X		X
B-12	W Main St	from Soo San Rd to West Blvd	X			X	X	X			X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-13	W Main St	from 44th St to Soo San Dr	X				X				X		X
B-14	Maple Ave	from Mall Dr to Disk Dr							X		X		X
B-15	Mickelson Dr	from E Anamosa St to SD 44	X						X		X		X
B-16	Minnesota St	from Cambell St to Jolly Ln					X		X		X		X
B-17	North St	from West Blvd N to N 1st St	X			X	X				X		X
B-18	N Plaza Dr / Plaza Blvd	from SD 445 (Deadwood Ave) to Harmony Heights Ln									X		X
B-19	SD 231 (W Chicago St)	from Sheffer St to SD 445 (Deadwood Ave)	X				X	X	X				X
B-20	W Chicago St	from N 44th St to SD 231 (Sturgis Rd)					X				X		X
B-21	Soo San Rd	from W Main St to Brookside Rd	X				X				X		X
B-22	St Joseph St	from W Main St to West Blvd	X			X	X				X	X	X
B-23	St Patrick St	from 5th St to Elm Ave									X	X	X
B-24	Steele Ave	from Brennan Ave to railroad	X		X		X	X	X		X	X	X
B-25	US 16 (Mt Rushmore Rd)	from North St to SD 44 (Omaha St)	X		X	X	X	X	X		X		X
B-26	US 16B (Elk Vale Rd / Catron Blvd)	from SD 44 to 5th St					X	X	X		X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-27	US 16B (Elk Vale Rd)	from Mall Dr to SD 44					X		X		X	X	X
B-28	Valley Dr	from Anamosa St to Fairmont St					X	X	X	X	X		X
B-29	West Blvd NW	from Anamosa St to Boegel St	X									X	X
B-30	Sheridan Lake Rd	Grade-separated trail crossing of trail along Rapid Creek	X				X	X					X
B-31	225th St	on south side from 150 Pl to existing connection	X										X
B-32	5th St	from E Minnesota St to US 16B (Catron Blvd)	X						X				X
B-33	5th St	from Cleveland St to Texas St					X		X		X	X	X
B-34	Anamosa St	from Century Rd to E North St							X			X	X
B-35	Anamosa St	from Silver St to Haines Ave	X		X		X				X	X	X
B-36	Argyle St	from SD 44 (Jackson Blvd) to W Flormann St	X				X	X	X		X		
B-37	SD 79 (Cambell St) / Cambell St	from Richland Dr (street just north of Minnesota St) to US 16B (Elk Vale Dr)					X		X		X		X
B-38	Cambell St	from E Oakland St to Fairmont Blvd							X		X		X
B-39	Cheyenne Blvd	from US 16B (Elk Vale Rd) to Spruce Dr	X						X	X	X		

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-40	Cimarron alignment	from Ellsworth Rd to Liberty Blvd			X		X		X		X	X	X
B-41	Cimarron alignment	from Liberty Blvd to new shared use path					X		X				X
B-42	Concourse Dr	from US 16B (Elk Vale Rd) to Twilight Dr					X		X		X		
B-43	Connection to Rapid City path system	near County Hwy 1416 (from West Gate to Rapid City)					X		X	X	X		X
B-44	County Hwy 1416	from Westgate Rd to Ellsworth Rd	X		X		X		X		X		X
B-45	SD 445 (Deadwood Ave)	from N Plaza Dr to SD 231 (Omaha St)	X				X	X	X		X		X
B-46	Disk Dr	from Haines Ave to N La Crosse St	X						X		X		X
B-47	E Minnesota St	from Parkview Dr to Odde Dr	X				X		X				X
B-48	Minnesota St	from Minnesota St Park to Cambell St	X				X				X		X
B-49	E North St	from Mall Dr to Anamosa St							X		X	X	X
B-50	Ellsworth Rd	from Liberty Blvd to County Hwy 1416	X		X		X				X	X	X
B-51	Ellsworth Rd	from Liberty Blvd to 225th St	X								X	X	X
B-52	Elm Ave	from E Oakland St to Field View Dr	X				X				X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-53	Elm Ave	from E St Patrick St to Meade St									X	X	X
B-54	Elm Ave	from Field View Dr to US 16B (Catron Blvd)							X				X
B-55	I-190 / Drainageway	from Wesrt Blvd N to Silver St	X									X	X
B-56	Leonard "Swanny" Swanson Memorial Pathway Extension	from St Patrick St to E St Charles St	X				X	X			X		X
B-57	Leonard "Swanny" Swanson Memorial Pathway Extension	south of Fairmont Blvd to Minnesota St									X		X
B-58	Leonard "Swanny" Swanson Memorial Pathway Extension	from Minnesota St to US 16					X		X		X		X
B-59	Leonard "Swanny" Swanson Memorial Pathway Extension	from E St Patrick St to Fairmont Blvd	X				X	X	X		X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-60	Liberty Blvd	Along north side from Tower Rd to Ellsworth Rd	X						X		X	X	X
B-61	Liberty Blvd	On east and north sides between County Hwy 1416 and Tower Rd	X				X		X				X
B-62	Mall Dr	from Haines Ave to N Elk Vale Rd							X		X		X
B-63	N Plaza Dr	from SD 231 (Sturgis Rd) to SD 445 (Deadwood Ave)									X		X
B-64	New Shared Use Path	from Prairie Rd to County Hwy 1416	X				X		X				X
B-65	Parkview Dr	from Parkview Park to 5 th St	X						X				X
B-66	Piedmont Valley Shared Use Path	Along I-90		X		X			X		X		
B-67	Radar Hill Rd	from County Hwy 1416 to 229th St					X		X				X
B-68	Rapid Creek	from Leonard "Swanny" Swanson Memorial Pathway Extension to Cambell St					X				X		X
B-69	Rapid Creek / Wally Byam	from Valley Dr to Jolly Ln					X	X	X		X		X
B-70	Rapid St / 3rd St	from 5th St to SD 44 (Omaha St)	X		X	X	X	X			X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-71	Rapid Valley Drainage	from Twilight Dr to Covington St							X				X
B-72	S Valley Dr	from E Fairmont St to E Minnesota St							X				X
B-73	San Francisco St	from La Crosse St to Cherry Ave	X				X	X	X		X	X	X
B-74	SD 231 (Sturgis Rd) / Universal Dr	from Merritt Rd to Lien St					X		X		X		X
B-75	SD 44	from Long View Rd to MPO boundary					X		X				X
B-76	SD 44	from Mickelson Dr to St Patrick St	X				X		X		X		X
B-77	SD 44	from Twilight to Long View					X		X		X		X
B-78	SD 44 / E St Patrick St	from existing side path to Twilight Dr	X				X	X	X		X		X
B-79	SD 44 (Jackson Blvd)	from Cleghorn Canyon Rd to Cliffside Park	X		X		X		X		X		
B-80	SD 44 (Jackson Blvd)	from Cliffside Park to existing trail	X		X		X		X		X		
B-81	Stumer Rd	from Enchantment Rd to 5th St							X		X		X
B-82	Tower Rd	from Liberty Blvd to Patriot Dr	X						X				X
B-83	Tower Rd	Along east side from 224 th St to 225 th St	X						X				X
B-84	US 16 (Mt Rushmore Rd)	from SD 44 (Omaha St) to Main St	X		X	X	X	X	X		X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-85	West Blvd	from Leonard "Swanny" Swanson Memorial Pathway to St Joseph St	X		X	X	X	X	X		X		X
B-86	44th St	from W Chicago St to Raider Rd					X				X		X
B-87	5th St	from Columbus St to SD 44 (Omaha St)	X		X	X	X	X	X		X	X	X
B-88	9th St	from Quincy St to Flormann St	X		X	X					X		X
B-89	Allen Ave	from Anamosa St to North St	X		X						X		X
B-90	Alta Vista Dr / Anaconda Rd	from east of City View Dr to E Fairmont Blvd					X		X		X		X
B-91	Anamosa St	from Commerce Rd to Silver St	X								X	X	X
B-92	Apolda St (Rapid St)	from US 16 (Mt Rushmore Rd) to 6th St	X			X	X	X	X		X		X
B-93	Black Hills Blvd	from E Stumer Rd to US 16B (Catron Blvd)									X		X
B-94	Bunker Dr	from Sagewood St to Disk Dr / I-90	X		X				X				X
B-95	Cambell St Service Road	from Fairmont Blvd to Richland Dr (street just north of Minnesota St)					X				X		X
B-96	Cathedral Dr / Fairmont Blvd	from US 16 (Mt Rushmore Rd) to Creek Dr	X		X		X				X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-97	City Springs Rd Extension / St Martins Dr	from SD 231 (Sturgis Rd) to Galena Dr	X		X		X		X				X
B-98	Commerce Rd / Lien St	from railRd to Rand Rd							X		X		X
B-99	Copperfield Dr	from end of existing street to SD 44					X		X		X		X
B-100	Covington St	from Twilight Dr to SD 44							X				X
B-101	Creek Dr	from E Saint Patrick St to Fairmont Blvd	X				X	X			X	X	X
B-102	Degeest Dr	from Homestead St to Twilight Dr							X		X		X
B-103	Dunsmore Rd	from Sheridan Lake Rd to Moon Meadows Dr											
B-104	E Centennial St / Locust St	from Parkview Dr to E Fairmont Blvd	X		X		X				X		X
B-105	E Fairlane Dr	from Maple to Robbinsdale Park	X		X		X				X	X	X
B-106	E Kansas City St	from East Blvd to SD School of Mines & Tech	X			X					X		X
B-107	E New York St / N Maple Ave / E Philadelphia St	from East Blvd to Cambell St	X		X	X	X	X	X		X	X	X
B-108	E Oakland St	from Hawthorne Ave to Cambell St	X		X		X		X		X	X	X
B-109	East Blvd	from E Quincy St to Signal Dr				X					X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-110	Flormann St / Meade St	from West Blvd to 5th St				X			X		X	X	X
B-111	Franklin Ave / Belleview Dr / E St Andrew St	from West Blvd to 5th St	X			X					X	X	X
B-112	Hawthorne Ave	from E Meade St to E Oakland St	X		X		X					X	X
B-113	Hillsview Dr / W St Patrick St / Red Dale Dr	Canyon Lake Rd loop				X							X
B-114	Jolly Ln	from SD 44 to Daly Circuit					X	X	X		X		X
B-115	Meade St / E Indiana St	from 5th St to Hawthorne Ave	X		X		X				X	X	X
B-116	Milwaukee St	from Crestwood Dr to E New York St	X		X	X	X		X		X	X	X
B-117	Minuteman Dr / Lindbergh Ave	from Haines Ave to Anamosa St	X		X		X				X	X	X
B-118	Moon Meadows Dr	from Dunsmore Rd to US 16							X				
B-119	N 40th St	from Fish & Game site to SD 231 (W Chicago St)					X		X				X
B-120	N Maple Ave	from Disk Dr to Anamosa St	X						X		X	X	X
B-121	N Spruce St	from Meadowlark Rd to E Philadelphia St	X		X						X	X	X
B-122	Nordby Ln	from W Saint Louis St to W Main St					X						X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-123	Oak Ave	from E Indiana St to Colorado St									X		X
B-124	Parkview Dr	from E Centennial St to E Minnesota St	X				X		X				X
B-125	Prairie Ave	from St Patrick St to E Indiana St									X	X	X
B-126a	Quincy St	from 5th St to East Blvd				X					X	X	X
B-126b	Quincy St	from US 16 (Mt Rushmore Rd) to West St	X		X	X					X		X
B-127	Raider Rd	from 44th St to Hillsview Dr											
B-128	Red Cloud St	from Northridge Dr to Mall Dr	X		X				X				X
B-129	Reservoir Rd / Longview Rd	from Twilight Dr to SD 44					X	X	X				X
B-130	S Canyon Rd	from Berry Blvd to N 44th St	X				X				X		X
B-131	Sagewood St / Northridge Dr	from Bunker Dr to Haines Ave	X		X								X
B-132	San Marco Blvd	from City Springs Rd to S Canyon Rd	X		X		X						X
B-133	San Marco Blvd	from S Canyon Rd to W Chicago St					X						X
B-134	W Chicago St	from San Marco Blvd to S Canyon					X				X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-135	Silver St / Philadelphia St	from N 11th St to Boegel St	X		X		X	X	X			X	X
B-136	Soo San Rd	from Brookside Dr to SD 44 (Jackson Blvd)	X		X		X	X	X		X		X
B-137	Triple Crown Dr	from E Minnesota St to US 16B (Catron Blvd)	X				X		X		X		X
B-138	Van Buren St	from Allen Ave to Milwaukee St	X									X	X
B-139	W Flormann St	from Argyle St to Mountain View Rd	X				X	X	X		X		X
B-140	W South St	from Soo San Rd to Mary Hill Park	X				X				X		X
B-141	West Blvd	from St Joseph St to Flormann St	X			X					X	X	X
B-142	Airport Rd	from the Airport to SD 44					X		X	X	X		
B-143	Country Rd	from Elk Vale Rd to Airport Rd					X		X		X	X	X
B-144	Country Rd	from Haines Ave to N Elk Vale Rd					X		X		X		X
B-145	N Elk Vale Rd	from Country Rd to E Mall Dr					X		X		X	X	X
B-146	Neck Yoke Rd	from US 16 to Rockerville Rd		X			X		X	X	X		X
B-147	Nemo Rd	from Berry Blvd to MPO boundary		X		X	X		X		X		X
B-148	Old Folsom Rd	from Leonard "Swanny" Swanson Mem Path to MPO boundary					X		X	X	X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
B-149	Radar Hill Rd	from 229th St to SD 44							X	X	X		X
B-150	Rockerville Rd	from US 16 to MPO boundary		X									X
B-151	Sheridan Lake Rd	from Stonecrest Dr to MPO boundary		X			X		X		X		X
B-152	Sheridan Lake Rd	from Wildwood Dr to Muirfield Dr							X				
B-153	Spring Creek Rd	from Neck Yoke Rd to MPO boundary	X				X		X	X			X
B-154	SD 79	from US 16B (Elk Vale Rd/Catron Blvd) to 3 mile limits					X		X	X			X
B-155	Jackson Blvd	From Mountain View Rd to W Main St									X		X
B-156	143 rd Ave	Seger Dr to Country Rd					X		X				X
B-157	Dyess Ave and Seger Dr	From Country Rd south along Dyess Ave, east to Elk Vale Rd along Seger Dr					X				X		X
B-158	Dyess Ave and Seger Dr	From Mall Dr north along Dyess Ave, west to Haines Ave along Seger Dr							X		X		X
P-1	5th St	from South St to Clark St (west side)				X					X	X	X
P-2	225th St	Along north side from Radial Ln to 150 Pl	X										X
P-3	Villa Dr / Briggs St	from Ellsworth Rd to Briggs & Patriot	X						X		X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
P-4	Liberty Blvd	West and south sides from Ellsworth to County Hwy 1416	X				X		X		X	X	X
P-5	Tower Rd	Along west side from 224th St to 225th St	X						X			X	X
P-6	Cambell St	from 280' n/o E St Charles St to E St Patrick St (east side)	X				X	X			X	X	X
P-7	Cambell St	from Centre St to Rocker Dr (both side)	X				X	X			X	X	X
P-8	Cambell St	from Rocker Dr to 560' s/o Saint James St (east side)	X				X	X			X	X	X
P-9a	Douglas Middle School	Complete link along 225th St	X						X			X	X
P-9b	Douglas Middle School	Complete link along Tower Dr	X						X			X	X
P-10	Country Rd	from City Limits to 3 mile limit (both sides)					X		X		X	X	X
P-11	SD 445 (Deadwood Ave)	from N Plaza Dr to SD 231 (W Chicago St) (both sides)	X	X			X	X	X		X		X
P-12	SD 44	from City Limits to Jolly Lane (both sides)					X		X		X		X
P-13	SD 44 (Omaha St) / SD 44	from La Crosse St to City Limits (both sides)	X		X		X		X		X	X	X
P-14	Haines Ave	from City Limits to Mall Dr (east side)							X		X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
P-15	US 16	from City Limits to 3 mile limit (both sides)		X			X		X		X		X
P-16	SD 44	from Jolly Lane to 3 mile limit (both sides)					X	X	X	X	X		X
P-17	SD 44	from Dark Canyon Pl to City Limits (both sides)					X				X		
P-18	N La Crosse St	from Seger Dr to E Mall Dr (both sides)							X		X		X
P-19	Nemo Rd	from 3 mile limit to City Limits (both sides)		X		X	X		X		X		X
P-20	SD 44 (Omaha St)	from West Blvd to US 16 (Mt Rushmore Rd) (north side)	X		X	X	X	X			X		X
P-21	Reservoir Rd	from Ave A to Lamb Rd (both sides)					X	X	X	X			X
P-22	5th St	from 57' s/o 3rd St to 95' n/o Elk St (west side)							X		X		X
P-23	S Ellsworth Rd	from County Hwy 1416 to neighborhood	X		X		X				X		X
P-24	SD 79	from City Limits to 3 mile limits (both sides)					X		X	X			X
P-25	Sheridan Lake Rd	from City Limits to 3 mile limits (both sides)		X			X		X		X		X
P-26	SD 44	from City Limits to 3 mile limits (both sides)		X			X				X		

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
P-27	SD 44 (Omaha St)	from Mountain View Rd to Oshkosh St (both sides)	X			X	X	X	X		X		X
P-28	SD 44 (Omaha St)	from Oshkosh St to Founders Park Dr (north side)	X			X	X	X	X		X		X
P-29	Apolda St	From 6 th St to Mt Rushmore Rd				X					X		X
R-1	154th Ave	from Long View Rd to SD 44					X		X	X			
R-2	150th Ave	Paving	X						X	X			X
R-3	Elk Creek Rd	Realignment e/o I-90					X	X					
R-4	Haines Ave	Raised median from I-90 to Disk Dr									X	X	X
R-5	High Meadows Rd Improvements	To existing roadway, RAP surface											
R-6	Homestead St	Upgrade to 2 lane collector from Valley Dr to Reservoir Rd							X		X		X
R-7	Long View Rd	Realignment of existing roadway through airport grounds around new RPZ							X				
R-8	Long View Rd	from Rapid City Regional Airport to 154th Ave							X	X			
R-9	Plateau Ln	from Twilight Dr to Williams St									X		

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-10	Reservoir Rd	from Twilight Dr to Meadow Ridge Dr											X
R-11	Deadwood Ave	from Calamity Rd to Meade County Line					X		X		X		X
R-12	US 16 NB	NB, rumble strips and safety edge with resurfacing project along entire segment, wildlife fencing and signs along curve, and accel/decel lanes for paved median cuts between and including Busted 5 Ct and Sitting Bull Rd. (Neck Yoke to Busted 5 Ct)					X		X		X		
R-13	Valley Dr / E 27th St	Upgrade to 2 lane collector with intersection improvements from s/o Fairmont Blvd to US 16B (Elk Vale Rd) / SE Connector											X
R-14a	Haines Ave	Implement raised median (Knollwood Dr to Lindbergh Ave)					X					X	X
R-14b	Haines Ave & Wright St	Install signal at Wright St if warranted					X					X	X
R-14c	Wood Ave	Extend Wood Ave from Wright St to Knollwood Dr.					X					X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-15a	W Main St	Implement raised median (Sheridan Lake Rd to Mountain View R) and construct bike lanes	X				X	X			X		X
R-15b	W Main St & Dakota Dr	Install traffic signal at Dakota Dr intersection if warranted	X				X	X			X		X
R-16	154th Ave & 233rd St	154th Ave & 233rd St											
R-17	Boulder Hill Rd & Silver Mountain Rd	Boulder Hill Rd & Silver Mountain Rd		X									
R-18	Concourse Dr & Twilight Dr	Concourse Dr & Twilight Dr					X				X		
R-19	I-90 Exit 46 (Elk Creek Rd)	Interchange improvements				X							
R-20	I-90 Exit 63 (County Hwy 1416)	Interchange improvements or replacement of I-90 Exit 63 (County Hwy 1416) per the recommendations of the Interchange Options Study					X					X	X
R-21	I-90 Exit 55 (SD 445 (Deadwood Ave))	Interchange Improvements and Closed Access									X		X
R-22	I-90 Exit 59 (N Lacrosse St)	Diverging diamond interchange	X								X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-23	New I-90 Exit e/o Exit 67 (Liberty Blvd) for Transload development	New interchange plus local access on I-90 when development warrants											
R-24a	La Crosse St & Monroe St	Install traffic signal for Monroe St intersection if warranted and relocate utility pole on SW corner of Monroe St intersection									X	X	X
R-24b	La Crosse St & RR Crossing	Automatic crossing gates at the railroad crossing	X									X	X
R-24c	La Crosse St & Sam's Club Access	Convert old Sam's Club access into right-in/right-out									X	X	X
R-25	N La Crosse St & Walmart Access	Convert Walmart access into right-in/right-out	X								X	X	X
R-26	Liberty Blvd & Ellsworth Rd	Replace existing all-way stop traffic control with signalized control when warranted	X								X	X	X
R-27	South Rockerville Rd & Neck Yoke Rd	South Rockerville Rd & Neck Yoke Rd		X									
R-28	SD 231 (Sturgis Rd) & Universal Dr	SD 231 (Sturgis Rd) & Universal Dr									X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-29	SD 231 (Sturgis Rd) & Merritt Rd	SD 231 (Sturgis Rd) & Merritt Rd					X				X		X
R-30	SD 44 & Covington St	SD 44 & Covington St							X				
R-31	SD 44 (Jackson Blvd) & Cleghorn Canyon Rd	Intersection warning sign and advisory speed plaque for westbound approach, and removal of sight obstructions at SD 44 (Jackson Blvd) and Cleghorn Canyon Rd	X		X		X		X		X		
R-32	Sheridan Lake Rd & Dunsmore Rd	Dunsmore Rd & Sheridan Lake Rd											X
R-33	US 16 & Silver Mountain Rd	US 16 & Silver Mountain Rd		X									
R-34a	St Joseph St & 1st St	Install lane use markings				X					X	X	X
R-34b	St Joseph St & 2nd St	Install lane use markings				X					X	X	X
R-34c	St Joseph St & 3rd St	Install lane use markings				X					X	X	X
R-34d	St Joseph St & 4th St	Removal of on-street parking between 4th & 5th Streets, install traffic signal if warranted, and install lane use markings				X					X	X	X
R-35	I-90 Exit 48 (Stage Stop Rd)	Interchange improvements							X		X		

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-36	US 16 & US 16B (Catron Blvd) Intersection	New interchange w/ US 16									X		X
R-37	US 16B & Cheyenne Blvd Intersection	Intersection improvements/adjustments once Cheyenne is built out to the east									X		
R-38	150th Ave	Construct new arterial extension from 225th to Liberty Blvd	X						X				X
R-39	150th Ave	Construct new collector from Liberty Blvd to Cimarron Dr					X		X				X
R-40	5th St Extension	Construct new 4 lane principal arterial from US 16B (Catron Blvd) to Sammis Trail							X		X		X
R-41	5th St Extension	Construct new 4 lane principal arterial from Lamb Rd to Spring Creek Rd					X		X				X
R-42	Liberty Rd Extension	Construct new 2 lane minor arterial from I-90 to SD 44	X				X		X	X	X		X
R-43	Anamosa St Extension	Construct new 4 lane minor arterial from US 16B (Elk Vale Rd) to Creek Dr							X	X	X		

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-44	E Anamosa Extension	Construct new 2 lane principal arterial from Radar Hill Rd to US 16B (Elk Vale Rd)							X	X			X
R-45	Anderson Rd Extension	Construct new 2 lane minor arterial from Anamosa St Extension to Long View Rd							X	X			
R-46	Cambell St Extension	Construct new 2 lane minor arterial from Anamosa St Extension to North St	X						X		X	X	X
R-47	Century Rd	Construct new 2 lane minor arterial from Anamosa St Extension to North St							X		X	X	X
R-48	Cheyenne Blvd	Extend new arterial from existing Cheyenne Blvd east to Radar Hill Rd	X						X	X			
R-49	Cheyenne Blvd	Construct new arterial from Ellsworth Rd to 151 Ave							X		X		
R-50	Cheyenne Blvd & Ellsworth Rd	Construct new arterial from Radar Hill Rd to a new Ellsworth arterial extension south from existing neighborhood							X	X			
R-51	Cimarron Dr	Extend new arterial from Ellsworth Rd to Liberty Blvd			X		X		X		X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-52	Cimarron Dr	Construct new arterial from West Gate Rd east to Cimarron Dr intersection with Ellsworth Rd	X		X		X		X		X	X	X
R-53	Country Rd Extension	Construct new 2 lane minor arterial from existing Country Rd to Deadwood Ave							X		X		X
R-54	Degeest Dr	Extend new collector from the end of Degeest Dr north across railroad tracks and connect to I-90 Service Road	X				X		X	X	X		
R-55	Freude Lane	Construct new collector from Freude Lane west to Creekside Dr to connect existing neighborhoods and to provide a second point of access	X				X		X		X		
R-56	High Meadows Area Secondary Access Route	Option 3 - 3.2 mile extension of High Meadows Rd to Rolling Hills Rd along USFS Trail 777's alignment		X					X				
R-57	La Crosse St Extension	Construct new 2 lane minor arterial from Country Rd to Seger Dr					X		X				X
R-58	Mall Dr	Extend new arterial from Elk Vale to Service Road					X		X		X	X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-59	Mill Rd Extension	Construct new 2 lane minor arterial from Haines Ave to Deadwood Ave					X		X				
R-60	Mill Rd Extension	Construct new 2 lane minor arterial from Nike Rd to Haines Ave					X						
R-61	Minnesota St Extension	Construct new 2 lane minor arterial from US 16B (Elk Vale Rd) to Cambell St					X				X		X
R-62	Minnesota St Extension	Construct new 2 lane minor arterial from Jolly Ln to e/o US 16B (Elk Vale Rd)							X				X
R-63	Minnesota St Extension	Construct new 2 lane minor arterial from Reservoir Rd to Jolly Ln					X	X	X				
R-64	New road w/o Airport	Construct new 2 lane collector from Airport Rd to Radar Hill Rd					X		X	X			
R-65	Northern Lights Blvd	Extend new collector from Northern Lights Blvd east to the future extension of West Gate Rd	X				X		X	X			
R-66	Prairie Rd	Construct new local road to allow access location on Liberty Blvd											X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-67	Reservoir St Extension	Construct new 2 lane principal arterial from Anamosa St Ext to Meadow Ridge Dr							X				
R-68	Sammis Trail	Construct new 2 lane principal arterial from Old Folsom Rd / Lamb Rd to US 16					X		X	X			X
R-69	Secondary Summerset Access	Option A - New connection from Castlewood Dr to High Meadows											
R-70	Sheridan Lake Rd Extension	Construct new 4 lane minor arterial from SD 445 (Deadwood Ave) to Main St							X		X		X
R-71	Spring Creek Rd Extension	Construct new 2 lane principal arterial from SD 44 to SD 79					X		X	X			
R-72	Twilight Dr Extension	Construct new 4 lane minor arterial from Radar Hill Rd to Reservoir Rd							X	X	X		
R-73	West Gate Rd	Construct new arterial from the West Gate / County Hwy 1416 intersection south to the future Cheyenne Blvd extension					X		X	X			X
R-74	Cambell St	Widen to 6 lanes from Minnesota St to Fairmont Blvd	X				X				X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-75	Canyon Lake Dr	Widen to 4 lane minor arterial from Sheridan Lake Rd to Soo San Dr	X		X		X	X	X		X		X
R-76	Catron Blvd	Widen to 3 lane principal arterial from US 16 to Nugget Gulch Rd							X		X		X
R-77	US 16B (Elk Vale Rd)	Widen to 6 lanes from SD 44 to SD 79					X	X	X		X		X
R-78	Ellsworth Rd	Widen existing roadway from existing neighborhood to County Hwy 1416 to provide curb and gutter and left turn lane according to the arterial typical section	X		X		X				X		X
R-79	Ellsworth Rd	Widen existing roadway from County Hwy 1416 north to 225th to provide curb and gutter and a left turn lane according to the arterial typical section standard	X		X		X				X	X	X
R-80	Haines Ave	Widen to 4 lane principal arterial from Country Rd to n/o Sitting Bull St where 4-lane cross section ends	X						X		X		X
R-81	W Main St	Widen to 6 lane principal arterial from SD 44 (Jackson Blvd) to Mountain View Rd	X				X	X			X		X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-82	Mall Dr	Widen to 4 lanes from Haines Ave to Maple Ave							X		X		X
R-83	SD 44 (Omaha St)	Widen to 6 lane principal arterial from Mountain View Rd to 12th St	X			X	X	X	X		X		X
R-84	SD 231 (Omaha St)	Widen to 6 lane principal arterial from Mountain View Rd to SD 445 (Deadwood Ave)	X				X	X	X				X
R-85	Sheridan Lake Rd	Widen to 3 lane minor arterial from Main St to Canyon Lake Rd	X				X				X		
R-86	Sheridan Lake Rd	Widen to 4 lane principal arterial from Corral Dr to Clarkson Rd					X		X		X		
R-87	Sheridan Lake Rd	Upgrade to 5-lane cross section from W Main St to SD 44 (Jackson Blvd)	X		X		X	X			X		X
R-88	Sheridan Lake Rd	Widen to 3 lane minor arterial from Judy Ave to Rapid Creek	X				X	X			X		
R-89	St Patrick St	Widen to 4 lanes from US 16 (Mt Rushmore Rd) to 5th St	X			X					X		X
R-90	Tower Rd	Widen existing roadway to provide curb and gutter and left turn lane according to the collector typical section standard	X						X			X	X

2040 Plan ID	Name	Location / Description	Parks	National Forest	6(f) Property	Historic Property / Districts	Floodway / Floodzone	Water Quality	Wetlands	Prairie Dogs	Hazmat Sites	Minority Population	Low Income Population
R-91	Antelope Creek Rd	Pave from Meade County Line to Elk Creek Rd							X				X
R-92	Quaal Rd	Construct new 2 lane collector from Stagesop Rd to Elk Creek Rd									X		

VII. PERFORMANCE-BASED PLANNING

Performance-based planning is a strategic approach to transportation planning that analyzes data to determine how effectively transportation investments are working toward achieving the identified transportation goals. MAP-21 is the current federal transportation funding and policy bill which emphasizes performance-based planning and identifies seven national goals that states and MPOs are to work toward. Agencies seeking federal funds will demonstrate their progress toward achieving local goals and the national goals included in MAP-21.

This section includes information about performance-based planning, why it is important to the RCAMPO, and subsequent goals and priorities identified by Rapid City, and how those goals will be measured to help move transportation initiatives forward in the region.

A. Performance Measures and Community Values

The performance-based framework for the RCAMPO includes a range of performance measures that reflect the expressed community values of the region, while honoring national and state standards. This planning process required prioritizing limited funding dollars to maintain and upgrade the transportation system. Performance-based planning affords a structure for the region to ensure that scarce resources are used effectively and equitably. The community values of transportation are woven into the goals, objectives, performance measures, and evaluation criteria used to identify high priority transportation projects.

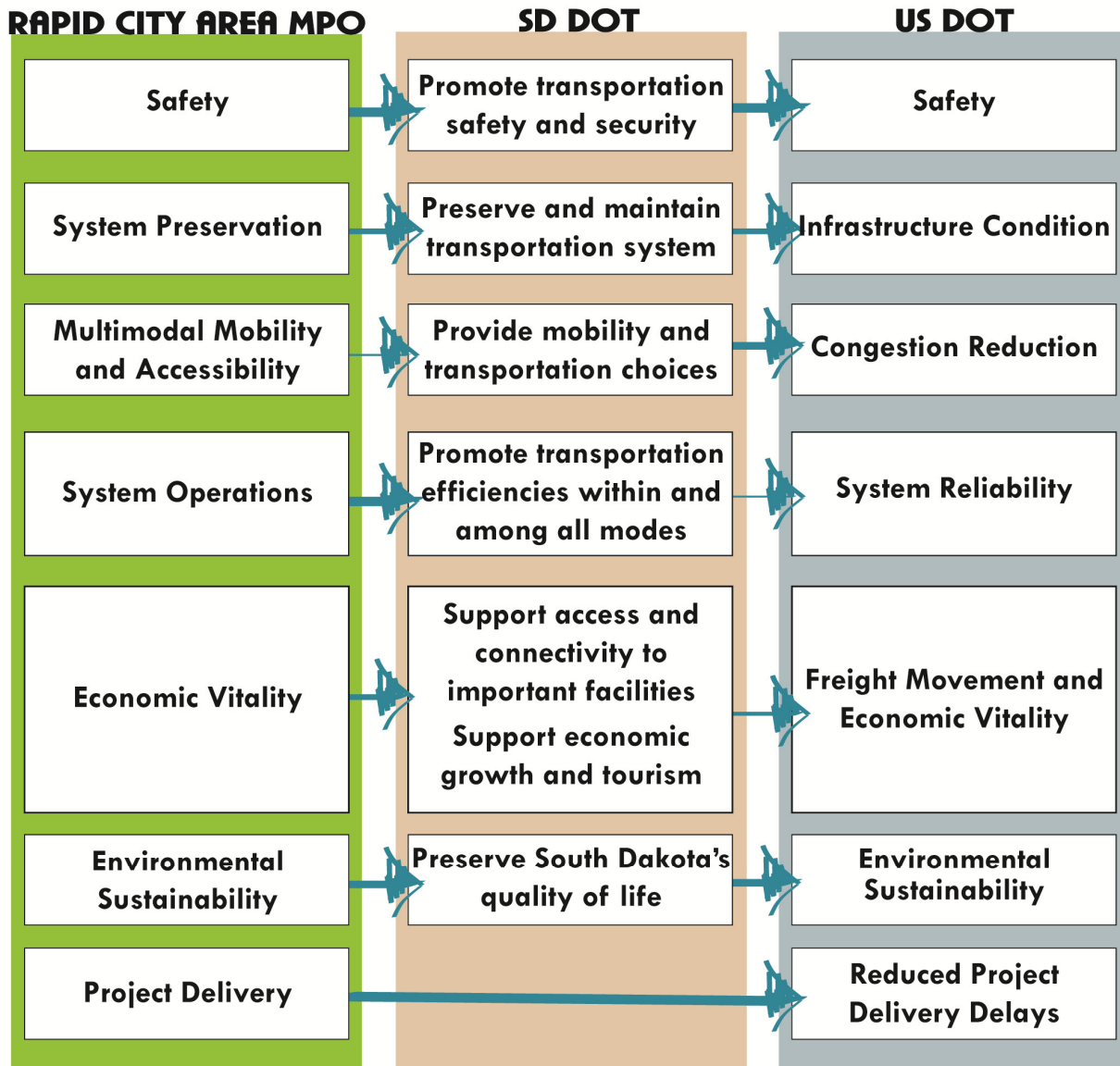


B. RCAMPO Goals

The RCAMPO has detailed a set of goals intended to implement the transportation network vision and support the mobility and accessibility needs of the region. The MPO goals are in alignment with the USDOT goals outlined in MAP-21 as well as the goals of the SDDOT.


Figure 21 defines each RCAMPO goal as it correlates to the state and federal goals.

Figure 21. RCAMPO Goal Alignment with Federal and State Goals



C. Performance Measure Goal Areas

The following section includes information about the seven performance categories to be monitored by the MPO. Each performance category includes the associated goal, objective, performance measure(s), baseline data, desired trend, and identified regional implementation strategies for the MPO.



SAFETY
GOAL: A safe transportation system for motorized and non-motorized users.
Objective: Reduce fatal and injury crash rates for all modes.

Performance Measure 1

Performance Measure 2

Change in severe crashes per 100 million vehicle miles traveled (VMT)



Desired Trend

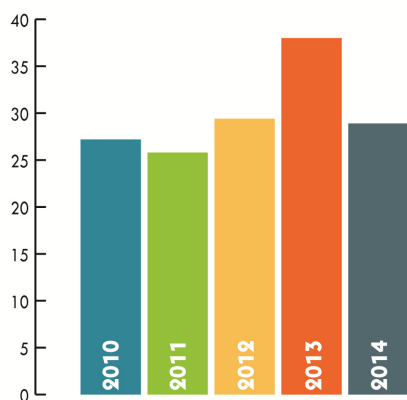
Change in all crashes per 100 million vehicle miles traveled (VMT)



Desired Trend

Baseline Data

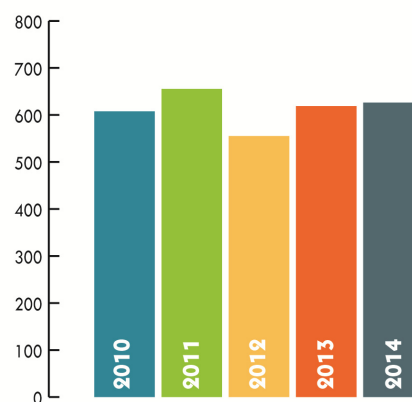
Severe Crashes Per 100 Million VMT (RCAMPO)



Data Source: SDDOT Crash Database, 2010-2014

Baseline Data

All Crashes Per 100 Million VMT (RCAMPO)



Data Source: SDDOT Crash Database, 2010-2014

Implementation Strategies (Safety)



- Minimize motor vehicle, rail, bicycle, and pedestrian conflicts
- Identify high crash locations within the MPO and assist member agencies in identifying improvements and funding sources; including bicycle/vehicle and pedestrian/vehicle collisions
- Conduct safety education and outreach activities with the general public
- Implement transit safety measures



SYSTEM PRESERVATION

GOAL: A well maintained transportation system.

Objective: Maintain the existing transportation system in a high quality and effective manner.

Performance Measure 1	Performance Measure 2
<p>Percent roadway pavement in good condition</p> <div style="text-align: center; margin-top: 20px;">  <p><i>Desired Trend</i></p> </div>	<p>Percent roadway pavement in poor condition</p> <div style="text-align: center; margin-top: 20px;">  <p><i>Desired Trend</i></p> </div>
<p>Baseline Data</p> <p style="text-align: center;">Percent of Roadways in Good Condition</p> <p style="text-align: center;">66% – Rapid City Roads</p> <p style="text-align: center;">70% – SDDOT Roads</p> <p style="font-size: small; margin-top: 10px;"><i>Data Source: Rapid City Pavement Condition Index Database; 2015 SDDOT Needs Book and South Dakota Statewide Long Range Transportation Plan</i></p>	<p>Baseline Data</p> <p style="text-align: center;">Percent of Roadways in Poor Condition</p> <p style="text-align: center;">8% – Rapid City Roads</p> <p style="text-align: center;">18% – SDDOT Roads</p> <p style="font-size: small; margin-top: 10px;"><i>Data Source: 2015 Rapid City Pavement Condition Index Database; 2015 SDDOT Needs Book and South Dakota Statewide Long Range Transportation Plan</i></p>

Implementation Strategies




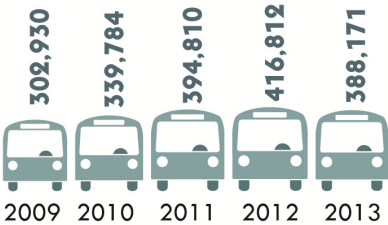
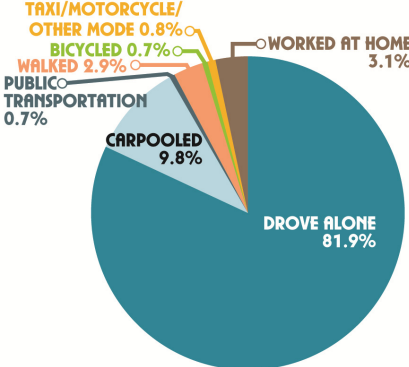
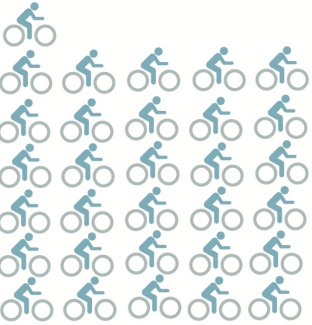
- Maintain and upgrade existing facilities at the Rapid City Regional Airport
- Consolidate various agency measurements into single pavement quality database for tracking condition
- Support development of a transit asset management plan to extend the life of fleet and facilities
- Include system preservation and maintenance in the budgeting process



MULTI MODAL MOBILITY AND ACCESSIBILITY

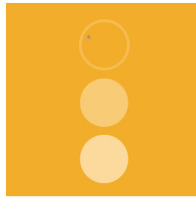
GOAL: A multimodal transportation system that provides access for all.

Objective: Improve the availability and quality of transportation options.

Performance Measure 1	Performance Measure 2	Performance Measure 3																												
<p>Annual transit ridership</p>  <p><i>Desired Trend</i></p>	<p>Mode split</p>  <p><i>Desired Trend</i></p>	<p>Miles of bicycle and pedestrian facilities</p>  <p><i>Desired Trend</i></p>																												
<p>Baseline Data</p> <p>Rapid Ride Transit Ridership</p>  <table border="1"> <tr> <th>Year</th> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> </tr> <tr> <td>Trips</td> <td>302,930</td> <td>339,784</td> <td>394,810</td> <td>416,812</td> <td>388,171</td> </tr> </table> <p><i>Data Source: National Transit Database (NTD) – Rapid Ride Annual Unlinked Trips</i></p>	Year	2009	2010	2011	2012	2013	Trips	302,930	339,784	394,810	416,812	388,171	<p>Baseline Data</p>  <table border="1"> <tr> <th>Mode</th> <th>Percentage</th> </tr> <tr> <td>Drove Alone</td> <td>81.9%</td> </tr> <tr> <td>Carpooled</td> <td>9.8%</td> </tr> <tr> <td>Walked</td> <td>2.9%</td> </tr> <tr> <td>Public Transportation</td> <td>0.7%</td> </tr> <tr> <td>Bicycled</td> <td>0.7%</td> </tr> <tr> <td>Other Mode</td> <td>0.8%</td> </tr> <tr> <td>Worked at Home</td> <td>3.1%</td> </tr> </table> <p><i>Data Source: American Community Survey 5-Year Estimates - Rapid City Data - Table S0801</i></p>	Mode	Percentage	Drove Alone	81.9%	Carpooled	9.8%	Walked	2.9%	Public Transportation	0.7%	Bicycled	0.7%	Other Mode	0.8%	Worked at Home	3.1%	<p>Baseline Data</p> <p>2010 MILES OF BIKEWAYS (31 MILES)</p>  <p>🚲 = 1 Mile</p> <p><i>Data Source: 2010 Rapid City Bicycle and Pedestrian Master Plan</i></p>
Year	2009	2010	2011	2012	2013																									
Trips	302,930	339,784	394,810	416,812	388,171																									
Mode	Percentage																													
Drove Alone	81.9%																													
Carpooled	9.8%																													
Walked	2.9%																													
Public Transportation	0.7%																													
Bicycled	0.7%																													
Other Mode	0.8%																													
Worked at Home	3.1%																													

Implementation Strategies

- To encourage bike use, encourage development of wider roadway shoulders in less developed areas within the Metropolitan Planning Area
- Provide an effective transit, bicycle, and pedestrian transportation system linking communities within the Metropolitan Planning Area with each other
- Target gaps in the non-motorized travel network for priority improvements
- Use infill development to promote the cohesiveness of the community by improving equitable accessibility to employment, health, educational, and shopping facilities in the community



SYSTEM OPERATIONS

GOAL: An efficient and reliable transportation system.

Objective: Minimize travel times, travel costs, and congestion.

Performance Measure 1

Vehicle delay per capita



Desired Trend

Baseline Data

2013 Daily Vehicle Delay/Capita
0.39 minutes

Data Source: 2013 RCAMPO Travel Demand Model
 2013 Population – 162,292
 2013 Daily Vehicle Hours of Delay – 1,062

Performance Measure 2

Vehicle miles traveled
 (VMT) per capita



Desired Trend

Baseline Data

2013 Daily VMT/Capita
14.7 miles

Data Source: 2013 RCAMPO Travel Demand Model
 2013 Daily Vehicle Miles of Travel – 2,388,669
 2013 Population – 162,292

Implementation Strategies

- Reduce congestion by improving traffic signal coordination
- Maintain mobility on key roadways through effective access and parking management
- Identify and preserve rights-of-way for anticipated future transportation needs



ECONOMIC VITALITY

GOAL: An accessible and integrated transportation system that supports economic vitality.

Objective: Provide adequate transportation facilities to support economic development.

Performance Measure

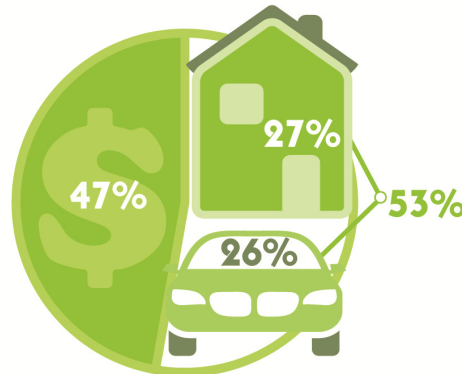
Housing and transportation costs



Desired Trend

Baseline Data

2013 Housing + Transportation Costs



Data Source: H + T Affordability Index (2009-2013 American Community Survey 5-year Estimates), Subarea - Rapid City Area MPO - www.htaindex.org

Implementation Strategies

- Coordinate transportation and land use planning efforts
- Provide efficient movement of freight modes
- Encourage projects that enhance movement for tourists visiting the area
- Improve mobility to primary employment and activity centers in the Metropolitan Planning Area
- Implement policies to protect key freight corridors and facilities from encroachment of incompatible land uses



ENVIRONMENTAL SUSTAINABILITY

GOAL: A transportation system that preserves the environmental, social, and cultural resources of the community.

Objective: Minimize impact on the environment.

Performance Measure

Vehicle miles traveled (VMT) per capita



Desired Trend

Baseline Data

2013 Daily VMT/Capita
14.7 miles

Data Source: 2013 RCAMPO Travel Demand Model
 2013 Daily Vehicle Miles of Travel – 2,388,669
 2013 Population – 162,292

Implementation Strategies

- Minimize neighborhood disruption by transportation facilities
- Conserve natural resources
- Encourage car pooling and other ridesharing programs
- Work closely with state and local air quality agencies to ensure an integrated transportation/air quality planning effort
- Strengthen efforts to implement hard surfacing of unpaved streets, alleys, and parking lots to reduce particulates and dust
- Incorporate environmental and aesthetic considerations in the design process
- Minimize impacts to natural and historic resources
- Preserve open space
- Protect prime agricultural land
- Avoid/mitigate impacts to underrepresented populations



PROJECT DELIVERY

GOAL: Regional collaboration in transportation planning.

Objective: Facilitate coordination between regional projects to reduce project delay.

Performance Measure

Number of project delays in previous planning period due to deficient agency coordination



Desired Trend

Baseline Data

No data are currently available for this performance measure. The MPO has committed to start collecting these data and will have baseline data no later than 2017.

Implementation Strategies

- Maintain and enhance the transportation planning process in accordance with recognized planning practices
- Coordinate the development of the street system of the community with all state and local governments, both within and surrounding the planning area
- Seek early start for right-of-way and environmental clearance processes

D. Project Prioritization

All projects included in the project prioritization within this plan were screened to ensure that they align with the goals and objectives identified by the community and the MPO. The performance measures identified in this plan will be tracked and monitored over the next five years to determine how effectively transportation investments are meeting the goals of the region.

It is suggested that the MPO continue to track the development of performance-based planning requirements identified in MAP-21 (and future transportation legislation) to ensure that the MPO remains in compliance. Additionally, when RapidTRIP is updated in 2020, the MPO should reassess the goals, objectives, and performance measures identified in this plan to determine what needs to be modified and/or updated to further meet the goals of the region.

VIII. 2040 FISCALLY CONSTRAINED PLAN

The 2040 Fiscally Constrained Plan itemizes Needs Plan elements to develop a multimodal plan for improving the transportation system based on the financial analysis contained within **Chapter IV**. The project selection process relied on a qualitative assessment of the project benefits, coordination with the local agencies, and used the goals, objectives, and performance metrics development process to determine projects in alignment with the region's goals. The following specific Needs Plan elements characteristics were used to prioritize projects and develop the Fiscally Constrained Plan:



- High priority in another plan or study
- Need evaluated during a project-specific evaluation
- Enhanced mobility for more than one travel mode
- Completes an existing gap in facilities between jurisdictions
- Improved existing or forecasted congested facility
- Regional nature of project, when need would be funded by more than one agency
- Improved safety
- Ability to positively impact the Plan's performance measures

While the financial process for the RCAMPO requires separation of the funding sources among agencies, this plan identifies opportunities to coordinate funding to provide regional connections. This process has been reflected in each agency's Constrained Plan through the identification of cost sharing opportunities and by co-staging these strategies for implementation during the same period. To provide a regional perspective of the transportation improvements recommended in this plan, **Figure 22, Figure 23, and Figure 24** depict the Bicycle, Pedestrian, and Roadway Fiscally Constrained Plans.

The following Fiscally Constrained Plan provides each project cost in year of expenditure; this project value has been calculated assuming a 2 percent per year growth rate. All fiscally constrained projects have been prioritized to remain within financial constraint. If future funding becomes available, reprioritization of the overall Fiscally Constrained Plan should be completed.

Figure 22. Bicycle Fiscally Constrained Plan

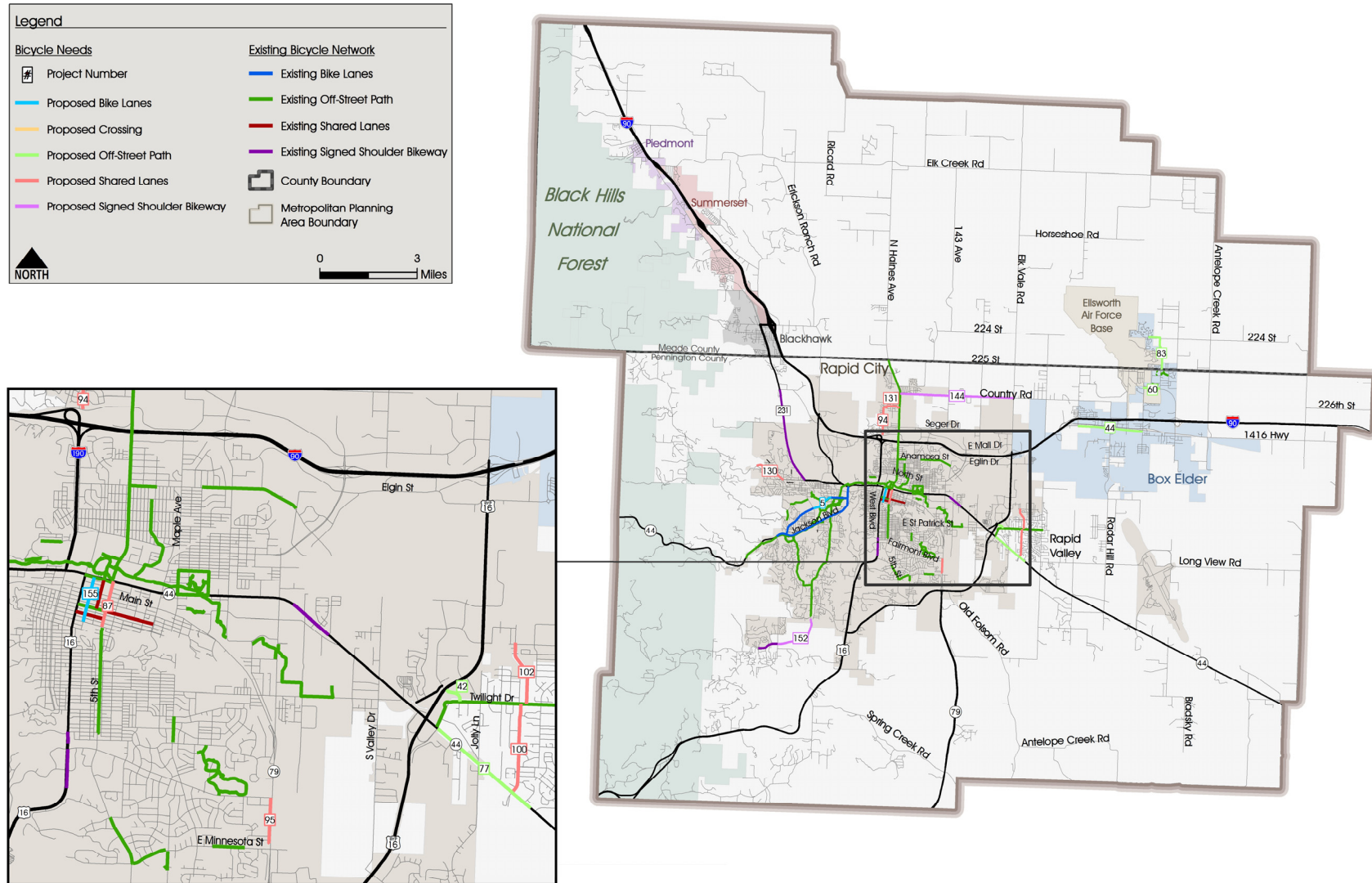


Figure 23. Pedestrian Fiscally Constrained Plan

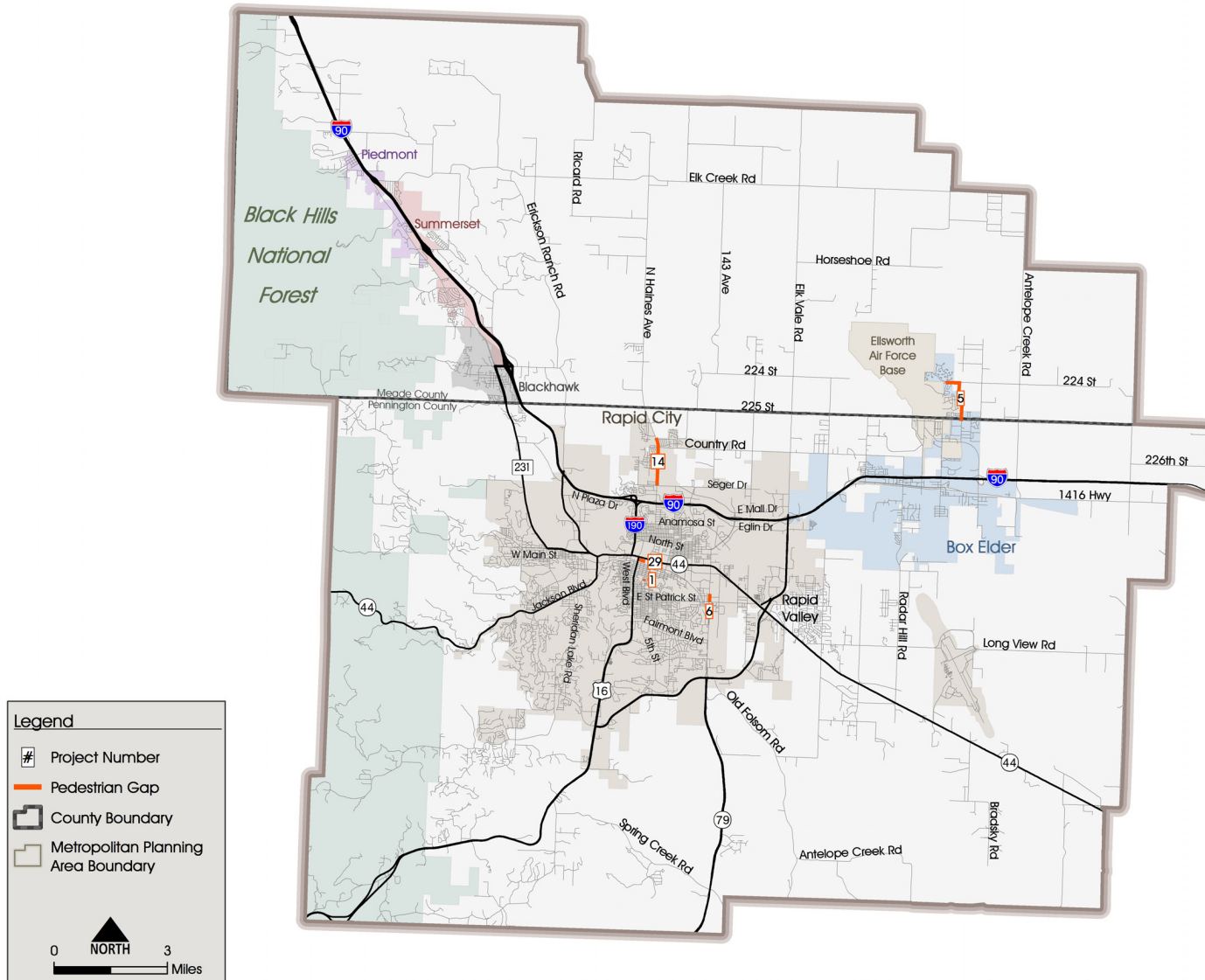
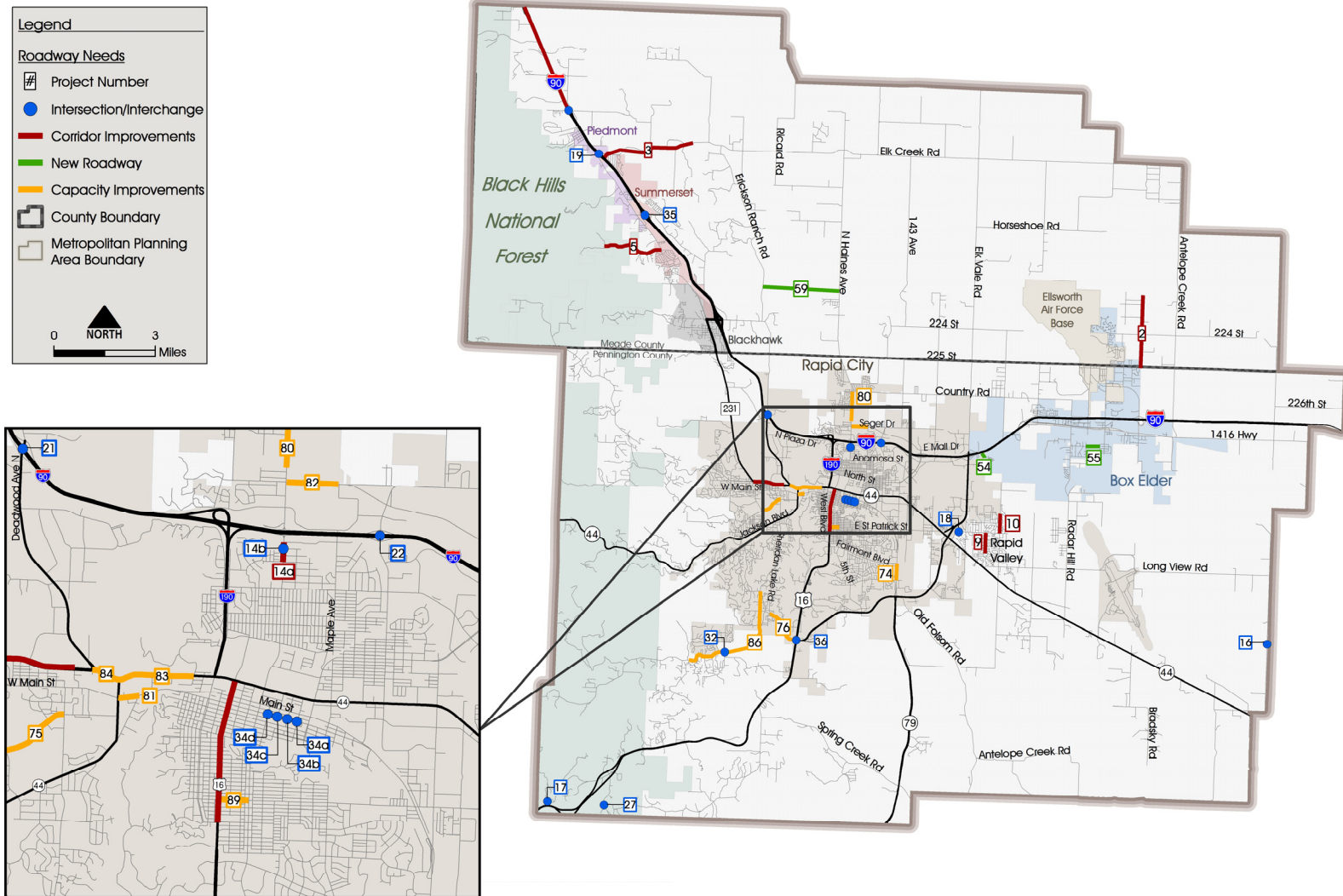


Figure 24. Roadway Fiscally Constrained Plan



A. TIP Project Listing

The RCAMPO maintains a Transportation Improvement Plan (TIP), which documents the programmed roadway improvements within the region. The current listing spans the planning years of 2016–2019 and identifies projects funded through federal, state, and local dollars. The TIP listings for SDDOT, City of Box Elder, City of Rapid City, Rapid Transit, Meade County, and Pennington County are provided in **Table 17, Table 18, Table 19, Table 20, Table 21, and Table 22.**

These listings include multimodal projects, with a focus on capital investment as well as maintenance and preservation needs. Specific maintenance and preservation projects for the remaining planning period between 2020 and 2040 have not been included in the Fiscally Constrained Plan but are an assumed expense, included in the financial analysis, and necessary to maintain the state of the transportation system through the planning horizon.

Based on the inclusion of capital projects in the TIP listings for the City of Rapid City, Rapid Transit, Meade County, and Pennington County, funding sources, including the entirety of the local STP dollars as identified in the financial analysis, have been designated for the four-year period of 2016–2019.

Table 17. 2016–2019 SDDOT TIP Listing

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
Interstate Maintenance Projects										
8.00	IM 0901(175)58	035J	Pennington	0.0	I90E I90W	I90 - Strs, Haines Ave Interchange; I90 WB On Ramp, 2.0 E of US16B Intch; I90 WB On Ramp, 2.9 W of Box Elder; Liberty Blvd, Exit 67; Over County Rd/Draw; 1.0 East of Exit 67; 2.1 E of Elk Vale Rd Exit Over a Creek	Diaphragm, Bent Cap, Approach Slab Repair, Epoxy Chip Seals & Joints, Approach Pavement	1.054	2016	\$1,158,000
10.00	IM 0901(182)23 IM 0902(160)67	02Q0 034L	Lawrence Pennington	1.3	I90E	I90 - Exit 67 (Liberty Blvd.); I90 – Exit 23 (Whitewood)	Partial Interchange Lighting	0.289	2016	\$321,000
21.00	IM 0190(12)1	05DX	Pennington	0.0	I190N I190S	I190 - Str. I 90 & I 190 Interchange (Exit 57)	Replace the Sign Brackets on the Sign(s) Attached to Structure at Exit 57.	0.023	2016	\$26,000
2016								1.3 Miles	\$1,505,000	
30.00	* IM 0901(38)40	5580	Meade	4.7	I90E I90W	I90 - EBL & WBL between Exits 40 (Tilford) and 44 (Piedmont) & Reconstruct Exit 44 (Piedmont) Interchange	Reconstruct With PCCP Surf & Str.s & Exit 44 Interchange	33.158	2017	\$38,228,000
2017								4.7 Miles	\$38,228,000	
39.00	IM 0902(165)53	04DL	Pennington	0.0	I90E I90W	I90 - Strs, Over Box Elder Crk, 0.6 SE of Meade Co Line; I90WF over I90, 2.3 E of Exit 61 (US16B), Exit 112 (US 14)	Deck Overlay, Epoxy Deck Seal Abutment Backwall Repair and Approach Slab Repair	0.896	2018	\$985,000
2018								0.0 Miles	\$985,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
State Highway System Urban Projects										
4.00	* NH 0016(79)68	027C	Pennington	0.8	US 16	US 16 - Fm St James St to Omaha St in Rapid City	Urban Grading, Storm Sewer, Curb & Gutter, Sidewalk, Lighting, Signals & PCC Surfacing Fm St James St. to Kansas City St; Minor Joint & Spall Repair Fm Kansas City St. to Omaha St.	5.287	2016	\$6,958,000
2016								0.8 Miles	\$6,958,000	
9.00	* NH 0016(84)67	049F	Pennington	0.6	US 16	US16 - Fm Flormann St to St James St. in Rapid City	Urban Grading, Storm Sewer, Curb & Gutter, Sidewalk, Lighting, Signals & PCC Surfacing	5.259	2017	\$6,958,000
2017								0.6 Miles	\$6,958,000	
18.00	P 0231(12)80	02R5	Pennington	1.1	SD231 SD231N SD231S	SD231, SD231 N&S - Fm Sheffer St. to Sturgis Road in Rapid City	Urban Grading, Roadway Lighting Storm Sewer, Curb & Gutter, Sidewalk, Traffic Signals, Pedestrian Crossing & PCC Surfacing	11.053	2019	\$14,142,000
2019								1.1 Miles	\$14,142,000	
Bridge Projects										
28.00	P 0040(227)	04UU	Regionwide	0.0		Regionwide	Rapid City Region Bridge Rehabilitation	0.256	2017	\$312,000
2017								0.0 Miles	\$312,000	
53.00	P 0040(00)	04UY	Regionwide	0.0		Regionwide	Rapid City Region Bridge Rehabilitation	0.000	2018	\$212,000
2018								0.0 Miles	\$212,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
Railroad Crossing Improvement Projects										
2.00	PS 0044(180)43	04CQ	Pennington	0.0	SD44	SD44 - Mt. View Rd in Rapid City, crossing 190277T, RCP&E	Rehabilitation of crossing surface	0.081	2016	\$90,000
7.60	PP 8052(70)	05JW	Pennington	0.0		6th Street in Rapid City, 190269B, RCP&E	Improve Railroad Signals, Crossing Surface, and PE	0.450	2016	\$500,000
7.770	PP 1701(14)	05JX	Pennington	0.0		West Boulevard in Rapid City, 190272J, RCP&E	Improve Signal System, Crossing Surface, and PE	0.369	2016	\$410,000
2016								0.0 Miles	\$1,000,000	
Railroad Safety Improvement										
3.00	PH 0040(225)	04YX	Regionwide			Rapid City Region	Intersection improvements	0.459	2016	\$510,000
13.00	PH 0040(19)	03B6	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.281	2016	\$281,000
14.00	PH 0040(20)	03B7	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.255	2016	\$255,000
21.00	PH 0040(216)	04H1	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.816	2016	\$816,000
2016								0.0 Miles	\$1,862,000	
41.00	PH 0040(25)	03UV	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.208	2017	\$208,000
42.00	PH 0040(24)	03UW	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.338	2017	\$338,000
49.00	PH 0040(217)	04H2	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.541	2017	\$541,000
2017								0.0 Miles	\$1,087,000	

Table 17. 2016–2019 SDDOT TIP Listing

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
Interstate Maintenance Projects										
8.00	IM 0901(175)58	035J	Pennington	0.0	I90E I90W	I90 - Strs, Haines Ave Interchange; I90 WB On Ramp, 2.0 E of US16B Intch; I90 WB On Ramp, 2.9 W of Box Elder; Liberty Blvd, Exit 67; Over County Rd/Draw; 1.0 East of Exit 67; 2.1 E of Elk Vale Rd Exit Over a Creek	Diaphragm, Bent Cap, Approach Slab Repair, Epoxy Chip Seals & Joints, Approach Pavement	1.054	2016	\$1,158,000
10.00	IM 0901(182)23 IM 0902(160)67	02Q0 034L	Lawrence Pennington	1.3	I90E	I90 - Exit 67 (Liberty Blvd.); I90 – Exit 23 (Whitewood)	Partial Interchange Lighting	0.289	2016	\$321,000
21.00	IM 0190(12)1	05DX	Pennington	0.0	I190N I190S	I190 - Str. I 90 & I 190 Interchange (Exit 57)	Replace the Sign Brackets on the Sign(s) Attached to Structure at Exit 57.	0.023	2016	\$26,000
2016								1.3 Miles	\$1,505,000	
30.00	* IM 0901(38)40	5580	Meade	4.7	I90E I90W	I90 - EBL & WBL between Exits 40 (Tilford) and 44 (Piedmont) & Reconstruct Exit 44 (Piedmont) Interchange	Reconstruct With PCCP Surf & Str.s & Exit 44 Interchange	33.158	2017	\$38,228,000
2017								4.7 Miles	\$38,228,000	
39.00	IM 0902(165)53	04DL	Pennington	0.0	I90E I90W	I90 - Strs, Over Box Elder Crk, 0.6 SE of Meade Co Line; I90WF over I90, 2.3 E of Exit 61 (US16B), Exit 112 (US 14)	Deck Overlay, Epoxy Deck Seal Abutment Backwall Repair and Approach Slab Repair	0.896	2018	\$985,000
2018								0.0 Miles	\$985,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
State Highway System Urban Projects										
4.00	* NH 0016(79)68	027C	Pennington	0.8	US 16	US 16 - Fm St James St to Omaha St in Rapid City	Urban Grading, Storm Sewer, Curb & Gutter, Sidewalk, Lighting, Signals & PCC Surfacing Fm St James St. to Kansas City St; Minor Joint & Spall Repair Fm Kansas City St. to Omaha St.	5.287	2016	\$6,958,000
2016								0.8 Miles	\$6,958,000	
9.00	* NH 0016(84)67	049F	Pennington	0.6	US 16	US16 - Fm Flormann St to St James St. in Rapid City	Urban Grading, Storm Sewer, Curb & Gutter, Sidewalk, Lighting, Signals & PCC Surfacing	5.259	2017	\$6,958,000
2017								0.6 Miles	\$6,958,000	
18.00	P 0231(12)80	02R5	Pennington	1.1	SD231 SD231N SD231S	SD231, SD231 N&S - Fm Sheffer St. to Sturgis Road in Rapid City	Urban Grading, Roadway Lighting Storm Sewer, Curb & Gutter, Sidewalk, Traffic Signals, Pedestrian Crossing & PCC Surfacing	11.053	2019	\$14,142,000
2019								1.1 Miles	\$14,142,000	
Bridge Projects										
28.00	P 0040(227)	04UU	Regionwide	0.0		Regionwide	Rapid City Region Bridge Rehabilitation	0.256	2017	\$312,000
2017								0.0 Miles	\$312,000	
53.00	P 0040(00)	04UY	Regionwide	0.0		Regionwide	Rapid City Region Bridge Rehabilitation	0.000	2018	\$212,000
2018								0.0 Miles	\$212,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost <small>Costs reflect anticipated inflations</small>
Railroad Crossing Improvement Projects										
2.00	PS 0044(180)43	04CQ	Pennington	0.0	SD44	SD44 - Mt. View Rd in Rapid City, crossing 190277T, RCP&E	Rehabilitation of crossing surface	0.081	2016	\$90,000
7.60	PP 8052(70)	05JW	Pennington	0.0		6th Street in Rapid City, 190269B, RCP&E	Improve Railroad Signals, Crossing Surface, and PE	0.450	2016	\$500,000
7.770	PP 1701(14)	05JX	Pennington	0.0		West Boulevard in Rapid City, 190272J, RCP&E	Improve Signal System, Crossing Surface, and PE	0.369	2016	\$410,000
								2016	0.0 Miles	\$1,000,000
Railroad Safety Improvement										
3.00	PH 0040(225)	04YX	Regionwide			Rapid City Region	Intersection improvements	0.459	2016	\$510,000
13.00	PH 0040(19)	03B6	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.281	2016	\$281,000
14.00	PH 0040(20)	03B7	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.255	2016	\$255,000
21.00	PH 0040(216)	04H1	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.816	2016	\$816,000
								2016	0.0 Miles	\$1,862,000
41.00	PH 0040(25)	03UV	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.208	2017	\$208,000
42.00	PH 0040(24)	03UW	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.338	2017	\$338,000
49.00	PH 0040(217)	04H2	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.541	2017	\$541,000
								2017	0.0 Miles	\$1,087,000

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
69.00	PH 3230(05)	01DJ	Pennington	3.0		Box Elder - Pennington Co Rd 14-16 - From Exit 63 East to the End of the Divided Section East of Ellsworth Road	Reconstruction - Convert divided section to a 3-lane section; PE, ROW	4.270	2018	\$4,270,000
73.00	PH 0040(218)	04H9	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.212	2018	\$212,000
74.00	PH 0040(219)	04HA	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.345	2018	\$345,000
82.00	PH 0040(229)	04Y1	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.981	2018	\$981,000
2018								3.0 Miles	\$5,808,000	
109.00	PH 8052(71)	04L4	Pennington	0.0		Various County, City, & Township Roads in Pennington County	Signing & Delineation, PE	1.582	2019	\$1,582,000
2019								0.0 Miles	\$1,582,000	
Pavement Preservation Projects										
37.00	NH-P 0041(151)	054G	Lawrence Pennington	15.6	SD44 SD44E SD44W US 85	Various Locations in the Rapid City Area	Rout and seal	0.069	2016	\$85,000
2016								15.6 Miles	\$85,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
69.00	PH 3230(05)	01DJ	Pennington	3.0		Box Elder - Pennington Co Rd 14-16 - From Exit 63 East to the End of the Divided Section East of Ellsworth Road	Reconstruction - Convert divided section to a 3-lane section; PE, ROW	4.270	2018	\$4,270,000
73.00	PH 0040(218)	04H9	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.212	2018	\$212,000
74.00	PH 0040(219)	04HA	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.345	2018	\$345,000
82.00	PH 0040(229)	04Y1	Regionwide	0.0		Rapid City Region	Corridor signing, PE	0.981	2018	\$981,000
2018								3.0 Miles	\$5,808,000	
109.00	PH 8052(71)	04L4	Pennington	0.0		Various County, City, & Township Roads in Pennington County	Signing & Delineation, PE	1.582	2019	\$1,582,000
2019								0.0 Miles	\$1,582,000	
Pavement Preservation Projects										
37.00	NH-P 0041(151)	054G	Lawrence Pennington	15.6	SD44 SD44E SD44W US 85	Various Locations in the Rapid City Area	Rout and seal	0.069	2016	\$85,000
2016								15.6 Miles	\$85,000	

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
County Secondary and Off System Projects										
3.0	P 6491(06) P 6446(04)	6358 6359	Meade	10.0		Elk Vale Road (FAS 6491) from 225 St at the South Co. Line, N 6 mi. to Elk Creek Road and Elk Creek Road (FAS 6446) from Elk Vale Road, W 4 mi. to N. Haines Ave	Grading, Interim Surfacing	2.056	2016	\$4,800,000
Total = \$4.8, STP/Match = \$2.509, Local Funds = \$2.291										
7.0	P 000S(00)010	03DG	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2016	\$156,000
\$0.156 - State funds at 60/40 (State - \$0.094, County - \$0.062)										
2016								10.0 Miles		\$4,956,000
2.0	* P 6480(04)	5777	Pennington	9.7		Sheridan Lake Road from Jct. of US 385 to Alberta Road	Grading, Base Course, Curb & Gutter, AC Surfacing	2.008	2017	\$8,500,000
Total = \$8.5; STP/Match = \$2.45; Local Funds = \$6.05										
25.00	P 000S(00)013	043A	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2017	\$156,000
\$0.156 - State funds at 60/40 (State - \$0.094, County - \$0.062)										
33.00	P 6491(07) P 6446(05)	0437 042V	Meade	10.0		Elk Vale Road (FAS 6491) from 225 St at the South Co. Line, N 6 mi. to Elk Creek Road and Elk Creek Road (FAS 6446) from Elk Vale Road, W 4mi. To N Haines Ave.	AC Surfacing	1.017	2017	\$2,200,000
Total = \$2.2; STP/Match = \$1.24; Local Funds = \$0.96										
2017								19.7 Miles		\$10,856,000
37.00	P 0040(00)215	04LM	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2018	\$156,000
\$0.156 - State funds at 60/40 (State - \$0.094, County - \$0.062)										
2018								0.0 Miles		\$156,000

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
Local Bridge Replacement Projects										
34.00	BRO 8052(61)	033L	Pennington	0.0		Structure 3.5W & 1.3N of Caputa over Rapid Creek (Bradsky Road) SN 52-500-347	Structure and Approach Grading	0.400	2016	\$500,000
2016								0.0 Miles		\$500,000
Special Projects										
999.00	EM 1648(06)	04P6	Pennington	0.7		East Anamosa Street Extension from LaCrosse Street to Century Road	PE, ROW, Landscaping, Midblock Ped. Crossing with Signals and Push Buttons, Median Island and ADA Ramps, Reconnection of Century Road to include Grading, C&G, PCCP, Asphalt Approach, Sidewalk	0.496	2016	\$605,000
2016								0.7 Miles		\$605,000
Transportation Alternative Projects										
2.00	P TAPU(15)	05CC	Pennington	0.5		Rapid City - Along I-190 and SD44/Omaha St, from approximately 850 feet North of the Rapid Creek Bridge along I190, to N. Mount Rushmore Rd.	Shared Use Path Construction	0.138	2016	\$169,000
Rapid City - Along I-190 and SD44 / Omaha St., from approximately 850 feet North of the Rapid Creek Bridge along I190, to N. Mount Rushmore Rd.										
999.00	* P TAPU(09)	04UA	Pennington	0.9		Rapid City - On the east side of Cambell St. from the end of the side path south of Rocker Dr., north to the rail banked line south of Centre St., southeast on the rail bed to Kennel Dr., north on the west side of Kennel Dr. to Centre St., east on the north side of Centre St. to a private property connection to the intersection of E. Omaha St./Hwy. 44 and Mickelson Dr.	Shared Use Path Construction	0.207	2016	\$573,000

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds	Fiscal Year	Total Cost Costs reflect anticipated inflations
999.00	P TAPU(05)	04U6	Meade	0.8		Black Hawk - On the south side of W. Elm St. from Short St. to Seeaire St., on the east side of Seeaire St. from W. Elm St. to Oak Ct. and a portion along Peaceful Pines Road from Seeaire St. west approximately 783 feet.	Sidewalk Construction	0.276	2016	\$337,000
2016								2.2 Miles	\$1,079,000	
Americans with Disabilities Act (ADA)										
6.0	* NH 0044(00)44 NH 0016(00)69	04TG 05JH	Pennington	1.9	SD44 SD44E SD44W US 16E US 16W	SD44/US16 (Omaha Street) - Fm 12th Street to LaCrosse St in Rapid City	Traffic Signal Upgrades, ADA Upgrades	0.000	2018	\$2,000,000
2018								1.9 Miles	\$2,000,000	

Table 18. 2016–2019 City of Box Elder TIP Listing

Year	Roadway	Distance (Miles)	Improvement Type	Anticipated Cost
2016-2019	None		None	\$0
			Total	\$0

Table 19. 2016–2019 City of Rapid City TIP Listing

Fund/Project Name	CIP #	2016	2017	2018	2019	2020	Fund Total
44th Street Phase 2 – W. Main to W. Chicago	50719			\$80,000		\$770,000	\$850,000
38th Street Reconstruction – Clifton to Range	50716	\$610,500	\$354,750				\$965,250
11th Street Outfall	50929	\$715,000					\$715,000
12th Street Outfall	50928	\$700,000					\$700,000
12th and Quinicy	50927		\$95,000		\$1,310,000		\$1,405,000
12th Street Utilities – Omaha to W Main	51089	\$55,000					\$55,000
ADA Compliance Project	50761	\$55,000	\$60,000	\$60,000	\$60,000	\$60,000	\$295,000
Anamosa St Reconstruction, Midway to Milwaukee	50559			\$500,000			\$500,000
Baldwin Street Reconstruction, Wentworth-Wedgewood	50822.1-1	\$1,230,000					\$1,230,000
Baldwin Street Reconstruction, Wedgewood to S Berry	50822.1-2		\$1,485,000				\$1,485,000
Bridge Inspections	50630	\$2,500	\$1,000	\$2,500	\$1,000	\$2,500	\$9,500
Bridge Maintenance	50752		\$160,000	\$170,000		\$180,000	\$510,000
Collector & Arterial Street Maintenance	50798	\$260,000	\$270,000	\$280,000	\$290,000	\$300,000	\$1,400,000
Contingency	8910cont	\$405,303	\$417,307	\$429,826	\$442,721	\$456,003	\$2,151,160
Dakota Dr Water Main Reconst	50399		\$250,000				\$250,000
East Boulevard Water Transmission Main	50463			\$180,000	\$1,370,000		\$1,550,000
E College Ave Reconst –Milwaukee to Racine	50918	\$307,750					\$307,750
E Custer Street Reconstruction – Milwaukee to Racine	50916	\$473,000					\$473,000
E Waterloo St Reconstruction – Milwaukee to Lacrosse	50919			\$44,000	\$484,000		\$528,000
East North St. Reconstruction, Rapid Creek to Herman	50866			\$6,150,000			\$6,150,000
Extension of 11th and 12th St Drainage Outfall	51043			\$50,000		\$500,000	\$550,000

Fund/Project Name	CIP #	2016	2017	2018	2019	2020	Fund Total
Fulton Street Sewer Reconstruction – 9th to Tompkins	50872	\$399,595	\$811,200				\$1,210,795
Geotechnical/Infrastructure QA Program	50637	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Idlewild Box Culvert	50715			\$50,000		\$400,000	\$450,000
Lindbergh Avenue Reconstruction	51088				\$92,000		\$92,000
Meade Channel, Birch St. Crossing Improvements	50378			\$15,000		\$150,000	\$165,000
Miscellaneous Improvement Projects (MIP)	50298	\$170,000	\$180,000	\$190,000	\$200,000	\$210,000	\$950,000
Mt. Rushmore Road Reconstr, Flormann – St James	50867		\$150,000				\$150,000
Mt. Rushmore Road Reconstr, St James – Kansas City	50950	\$175,000					\$175,000
Out-of-the-Dust, Various Locations	50297	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$300,000
Railroad Signals & Track Upgrades		\$125,000					\$125,000
Robbinsdale-Ivy, Fairlane, Willow, Nevada, E. Idaho	50421.3-1	\$225,000	\$1,435,000	\$1,635,000			\$3,295,000
Robbinsdale - Maple, Nevada	50421.3-2		\$650,000				\$650,000
Robbinsdale - Oakland	50390.5-2			\$195,000		\$2,400,000	\$2,595,000
Seger Drive Reconst – 143rd Ave to LaCrosse*	50277.1-4		\$1,975,000				\$1,975,000
Silverleaf Reconstruction	50837			\$96,000	\$840,000		\$936,000
Silver St. Interchange Utility Reconstruction	50940.0	\$250,000					\$250,000
Skyview Dr Water Main Replacement	51072					\$120,000	\$120,000
St Andrew & St Charles SS & Water Ext. & Reconstruction	50959	\$314,987					\$314,987
St. Cloud Street Reconstruction	50796	\$312,480					\$312,480
St. Cloud Street Reconstruction – 5th to Highland	51036		\$45,000	\$550,000			\$595,000
St. Patrick Street Reconstruction	50456		\$80,000	\$785,000			\$865,000

Fund/Project Name	CIP #	2016	2017	2018	2019	2020	Fund Total
Street Rehabilitation – Utility Support Fund	50844	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$7,500,000
Street Rehabilitation	50549	\$600,000	\$700,000	\$800,000	\$900,000	\$900,000	\$3,900,000
S Willdood Reconstruction – Phase 2	51003				\$80,000		\$80,000
Sunburst Drive Reconstruction	51004			\$60,000	\$405,000		\$465,000
Traffic Operations Upgrades	51047	\$160,000	\$170,000	\$180,000	\$190,000	\$200,000	\$900,000
Una Del Drive	50914			\$32,000		\$358,000	\$390,000
Woodlawn Dr. Sanitary Sewer Replacement	50623			\$25,000			\$25,000
W St Cloud Street and Utilities	50939	\$346,000					\$346,000
W Chicago St. Utilities Reconst	50448				\$50,000		\$50,000
W. Blvd NE Reconstr North to Anamosa	50879			\$60,000	\$745,000		\$805,000
Project Total		\$9,477,115	\$10,874,257	\$14,204,326	\$9,044,721	\$8,591,503	\$52,191,922
Inflation 4%		\$379,085	\$887,339	\$1,749,973	\$1,490,570	\$1,773,286	\$6,280,253
Budget		\$8,106,053	\$8,346,145	\$8,596,529	\$8,854,425	\$9,120,058	\$33,903,152
Budget Minus Project Total		(\$1,750,146)	(\$3,655,544)	(\$7,608,154)	(\$1,938,762)	(\$1,510,364)	(\$24,569,024)
Budget Totals – Streets, Drainage, MIP		\$8,106,053	\$8,346,145	\$8,596,529	\$8,854,425	\$9,120,058	\$33,903,152
Budget Totals – Streets & Drainage .16 Funds		\$1,500,000	\$3,475,000	\$1,500,000	\$1,500,000	\$1,500,000	\$9,475,000
SDDOT Reimbursement				\$6,000,000			\$6,000,000
Project Totals – Streets, Drainage, MIP		\$9,856,199	\$11,761,597	\$15,954,299	\$10,535,291	\$10,364,789	\$58,472,176
Budget Totals Minus Project Totals		(\$250,146)	\$59,548	\$142,230	(\$180,866)	\$255,269	(\$9,094,024)
Total Cumulative Balance		(\$240,722)	(\$181,174)	(\$38,944)	(\$219,810)	\$35,458	\$35,458

Table 20. 2016–2019 City of Rapid City Transit TIP Listing

Fiscal Year	Funding Category	County	Location	Type	FTA Funds	State Funds	Local Funds	Total
2016	FTA (Sec 5307)	Pennington	Rapid City Transit	Operating and Capital Assistance for Fixed Route and Dial-A-Ride service	\$1,204,820.00	\$28,425.00	\$802,757.00	\$2,036,002.00
2016	FTA (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	\$256,000.00	\$0.00	\$64,000.00	\$320,000.00
2016	FTA (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	\$133,460.00	\$0.00	\$33,365.00	\$166,825.00
2017	FTA (Sec 5307)	Pennington	Rapid City Transit	Operating and Capital Assistance for Fixed Route and Dial-A-Ride service	\$1,240,965.00	\$28,425.00	\$826,839.00	\$2,096,229.00
2017	FTA (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	\$128,000.00	\$0.00	\$32,000.00	\$160,000.00
2017	FTA (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	\$139,527.20	\$0.00	\$34,881.80	\$174,409.00
2018	FTA (Sec 5307)	Pennington	Rapid City Transit	Operating and Capital Assistance for Fixed Route and Dial-A-Ride service	\$1,321,153.00	\$28,425.00	\$871,896.00	\$2,221,474.00
2018	FTA (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	\$128,000.00	\$0.00	\$32,000.00	\$160,000.00
2018	FTA (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	\$145,592.80	\$0.00	\$36,398.20	\$181,991.00

Fiscal Year	Funding Category	County	Location	Type	FTA Funds	State Funds	Local Funds	Total
2019	FTA (Sec 5307)	Pennington	Rapid City Transit	Operating and Capital Assistance for Fixed Route and Dial-A-Ride service	\$1,393,192.00	\$28,425.00	\$904,668.00	\$2,326,285.00
2019	FTA (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	\$128,000.00	\$0.00	\$32,000.00	\$160,000.00
2019	FTA (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	\$151,659.20	\$0.00	\$37,914.80	\$189,574.00

Table 21. 2016–2019 Meade County TIP Listing

Year	Project	Length	Location	Type of Improvement	Estimated Cost	Federal Bridge Funds	STP Funds	Rd & Brdg	Total Funding
2016	Mnt. Shadows	0.8	Mnt. Shadows Rd off of 2 nd Street in Piedmont	Chip Seal	\$24,000			\$24,000	\$24,000
2016	Norman Ave	2.5	Norman Ave. from Peaceful pines North to end of County Asphalt	Chip Seal	\$75,000			\$75,000	\$75,000
2016	D AVE PPE	2.1	Peaceful Pines East of I-90 to Pennington Co line	Chip Seal	\$63,000			\$63,000	\$63,000
2016	P 6491(06) P 6446(04)	10	Elk Vale Rd from 225 St at South Co. line, N 6 mi. to Elk Creek Rd then West on Elk Creek Rd 4 mi. to N. Haines Ave	Grading, structure, Interim Surfacing	\$4,800,000		\$2,056,000	\$2,744,000	\$4,800,000
2016	BRO 8047(18)	0.2	7.5 E & 3.0 N of Bear Butte over Bear Butte Creek	Structure and Approach Grading	\$828,000	\$662,400		\$165,600	\$828,000
2016	New Und Cen	6.0	New Underwood Rd from the Belle River North 6 mi.	Asphalt Surfacing	\$750,000			\$750,000	\$750,000
2016	New Und So	7.5	From Elk Creek Rd South 7.5 mi to the Pennington Co. line	PE reconstruction	\$65,000			\$65,000	\$65,000
2016	Ft. Meade Way	2.78	From Ft Meade Way and Pleasant Valley Rd 2.78 mi North	New Construction	\$1,600,000			\$1,600,000	\$1,600,000
2017	Ft. Meade Way	2.78	From Ft Meade Way and Pleasant Valley Rd 2.78mi North	New Construction	\$1,500,000			\$1,500,000	\$1,500,000
2017	New Und So 3.5 miles	3.5	From the Pennington Co. line North 3.5 mi to Elk Creek Bridge	Reconstruct 3.5 mi	\$2,135,000			\$2,135,000	\$2,135,000
2017	New Und So	4.0	From Elk Creek Bridge N 4 mi. to Elk Creek Rd	PE Reconstruction	\$65,000			\$65,000	\$65,000
2018	Erick Ran Rd	3.5	From .5 mi N of Peaceful Pines Rd 3.5 mi. North	Asphalt Surfacing	\$475,000			\$475,000	\$475,000
2018	Haines Ave	6.0	From Pennington Co line North 6 miles to Elk Creek Rd	Chip Seal	\$175,000			\$175,000	\$175,000
2018	New Und Nor	8.5	From Hwy 34 South 8.5 miles	Chip Seal	\$272,000			\$272,000	\$272,000

Year	Project	Length	Location	Type of Improvement	Estimated Cost	Federal Bridge Funds	STP Funds	Rd &Brdg	Total Funding
2018	P6491(07) P6446(05)	10	Elk Vale Rd from 225 th St at South Co. line, N 6 mi. to Elk Creek Rd then West on Elk Creek Rd 4 mi. to N Haines Ave.	AC Surfacing	\$2,200,000		\$1,240,000	\$960,000	\$2,200,000
2019	New Und So	4.0	From Elk Creek Bridge N 4 mi. to Elk Creek Rd	Reconstruct 4 mi	\$2,520,000			\$2,520,000	\$2,520,000
Total					\$17,547,000	\$662,400	\$3,296,000	\$13,588,600	\$17,547,000

Note: The Elk Vale, Elk Creek project is paid with a SIB loan and the county paying \$300,000/year; the details are still being worked out.

Note: Fort Meade Way will be paid for in two years

Table 22. 2016–2019 Pennington County TIP Listing

Year	Project	PCEMS	Length	Location	Type of Improvement	Estimated Cost	Unorg Road Reserves	Rd & Brdg Unobligated Reserves	Federal Bridge Funds	Federal Priority or Safety Funds	STP Funds	Rd & Brdg	Total Funding
2016	PH 0041(148)	049T		Norris Peak Rd (from Hwy 44 to Nemo Rd), and Nemo Rd (from Norris Peak Rd to Pennington/Meade Co. line)	PE, Shoulder Grading, Signing upgrades, W-Beam guardrail Upgrades	\$432,000				\$345,600		\$86,000	\$431,600
2016	BRF 6403(09) SN 52-162-272	02JT	0.2	Structure 0.6W & 0.1S of Rochford over Rapid Creek SN 52-162-272	30' Concrete Bridge, 32' Deck (30' clear), 20° RHF Skew, Concrete Abuments, New Alignment	\$400,000			\$320,000			\$80,000	\$400,000
2016	BRO 8052 SN 52-316-316	03YD	0.1	Structure 0.8E & 1.6S of Johnson Siding over Rapid Creek SN 52-316-316	PE, Structure Replacement	\$400,000	\$34,000		\$136,000			\$230,000	\$400,000
2017	BRO 8052(61) SN 52-500-347	033L	0.2	3.5 W & 1.3 N of Caputa on Bradsky Rd SN 52-500-347	PE, Structure & Approach Grading	\$500,000			\$400,000			\$100,000	\$500,000
2017	P 6480(4)	5777	9.7	Sheridan Lake Road from Jct US 385 to Alberta Drive	PE, Grading, Base Course, C&G, AC Surfacing (Total = \$8.5; STP/State = \$3.0; Local Funds = \$5.5)	\$8,500,000		\$6,419,236			\$2,080,764		\$8,500,000

Year	Project	PCEMS	Length	Location	Type of Improvement	Estimated Cost	Unorg Road Reserves	Rd & Brdg Unobligated Reserves	Federal Bridge Funds	Federal Priority or Safety Funds	STP Funds	Rd & Brdg	Total Funding
2017	EM-BRF 6403(6)	00CL	9.5	South Rochford Road from Rochford south to end of Deerfield Road asphalt	PE, Grading, Base Course, & Asphalt Concrete, (Total = \$10.4; EM 85% = 7.65 Local Funds = \$2.75	\$10,000,000		\$2,350,000		\$7,650,000			\$10,000,000
2017	BRO 8052(27) SN 52-312-433	H099	0.1	0.8 W of Keystone over Battle Creek SN 52-312-433	PE, Structure Rehabilitation	\$188,000			\$150,400			\$37,600	\$188,000
2018	PH 6730(01)	01DJ	2.7	Box Elder-Pennington Co Rd 14-16, from Exit 63 East to end of the divided section East of Ellsworth Rd	Reconstruct-convert divided section to a 3-lane section; PE	\$3,366,000		\$337,000		\$3,029,000			\$3,366,000
2019	P 6404	02DW	6.1	Nemo Road from the North County Line, E, SE 6.1 mi. (to between Palmer Road and Schmitz Trail)	Asphalt Concrete Surfacing	\$1,143,000		\$400,000			\$743,000		\$1,143,000
Total						\$24,929,000	\$34,000	\$9,506,236	\$1,006,400	\$11,024,600	\$2,823,764	\$533,600	\$24,928,600

B. Box Elder Fiscally Constrained Projects

The Box Elder Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 23**.

Table 23. Box Elder Fiscally Constrained Projects

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
1	R-55	Roadway	New Roadway	Freude Lane	Construct new collector from Freude Lane west to Creekside Dr to connect existing neighborhoods and to provide a second point of access.	2026–2030	\$1,337,100		\$1,337,100
2	R-66	Roadway	New Roadway	Prairie Rd	Construct new local road to allow access location on Liberty Blvd	2031–2035	\$399,200		\$399,200
3	P-5	Pedestrian	Sidewalk	Tower Rd	Along west side from 224th St to 225th St	2031–2035	\$103,400	Meade County	\$69,300
4	B-60	Bicycle	Off-Street Path	Liberty Blvd	Along north side from Tower Rd to Ellsworth Rd	2031–2035	\$103,400		\$103,400
5	B-83	Bicycle	Off-Street Path	Tower Rd	Along east side from 224th St to 225th St	2031–2035	\$201,700	Meade County	\$68,600
6	R-26	Roadway	Intersection / Interchange	Liberty Blvd & Ellsworth Rd	Replace existing all-way stop traffic control with signalized control when warranted	2036–2040	\$571,800		\$571,800

C. Rapid City Fiscally Constrained Projects

The Rapid City Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 24**.

Table 24. Rapid City Fiscally Constrained Projects

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
1	R-14a	Roadway	Corridor Improvements	Haines Ave	Implement raised median (Knollwood Dr to Lindbergh Ave)	2016–2020	\$59,300		\$59,300
2	R-34a	Roadway	Intersection / Interchange	St Joseph St & 1st St	Install lane use markings	2016–2020	\$8,100		\$8,100
3	R-34b	Roadway	Intersection / Interchange	St Joseph St & 2nd St	Install lane use markings	2016–2020	\$8,100		\$8,100
4	R-34c	Roadway	Intersection / Interchange	St Joseph St & 3rd St	Install lane use markings	2016–2020	\$8,100		\$8,100

#	ID	Mode	Category	Facility/ Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
5	R-34d	Roadway	Intersection / Interchange	St Joseph St & 4th St	Removal of on-street parking between 4th & 5th Streets, install traffic signal if warranted, and install lane use markings	2016–2020	\$449,100		\$449,100
6	B-155	Bicycle	Bike Lanes	Jackson Blvd	Mountain View Rd to W Main St	2016–2020	\$99,900		\$99,900
7	R-10	Roadway	Corridor Improvements	Reservoir Rd	from Twilight Dr to Meadow Ridge Dr	2021–2025	\$2,405,600	Pennington County	\$216,400
8	R-75	Roadway	Capacity Improvements	Canyon Lake Dr	Widen to 4 lane minor arterial from Sheridan Lake Rd to Soo San Dr	2021–2025	\$2,250,700		\$2,250,700
	B-5	Bicycle	Bike Lanes	Canyon Lake Dr	from Sheridan Lake Rd to Soo San Dr	2021–2025	\$87,400		\$87,400
9	R-81	Roadway	Capacity Improvements	W Main St	Widen to 6 lane principal arterial from SD 44 (Jackson Blvd) to Mountain View Rd	2021–2025	\$1,074,100		\$1,074,100
10	R-82	Roadway	Capacity Improvements	Mall Dr	Widen to 4 lanes from Haines Ave to Maple Ave	2021–2025	\$2,193,700		\$2,193,700
11	R-76	Roadway	Capacity Improvements	Catron Blvd	Widen to 3 lane principal arterial from US 16 to Nugget Gulch Rd	2026–2030	\$4,845,900		\$4,845,900
12	R-80	Roadway	Capacity Improvements	Haines Ave	Widen to 4 lane principal arterial from Country Rd to n/o Sitting Bull St where 4-lane cross section ends	2031–2035	\$4,851,800		\$4,851,800
	P-14	Pedestrian	Sidewalk	Haines Ave	from City Limits to Mall Dr (east side)	2031–2035	\$1,555,100		\$1,555,100
13	R-86	Roadway	Capacity Improvements	Sheridan Lake Rd	Widen to 4 lane principal arterial from Corral Dr to Clarkson Rd	2031–2035	\$16,863,100	Pennington County	\$4,552,700
14	R-54	Roadway	New Roadway	Degeest Dr	Extend new collector from the end of Degeest Dr north across railroad tracks and connect to I-90 Service Road	2036–2040	\$1,387,900	Pennington County	\$694,000
15	R-74	Roadway	Capacity Improvements	Cambell St	Widen to 6 lanes from Minnesota St to Fairmont Blvd	2036–2040	\$3,624,200		\$3,624,200
	B-95	Bicycle	Shared Lanes	Cambell St Service Road	from Fairmont Blvd to Richland Dr (street just north of Minnesota St)	2036–2040	\$4,500		\$4,500

#	ID	Mode	Category	Facility/ Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
16	R-89	Roadway	Capacity Improvements	St Patrick St	Widen to 4 lanes from US 16 (Mt Rushmore Rd) to 5th St	2036–2040	\$1,752,200		\$1,752,200
17	P-1	Pedestrian	Sidewalk	5th St	from South St to Clark St (west side)	2036–2040	\$64,600		\$64,600
18	P-6	Pedestrian	Sidewalk	Cambell St	from 280' n/o E St Charles St to E St Patrick St (east side)	2036–2040	\$232,100		\$232,100
19	P-29	Pedestrian	Sidewalk	Apolda St	6th St to Mt Rushmore Rd	2036–2040	\$335,100		\$335,100
20	B-42	Bicycle	Off-Street Path	Concourse Dr	from US 16B (Elk Vale Rd) to Twilight Dr	2036–2040	\$178,300	Pennington County	\$151,500
21	B-87	Bicycle	Shared Lanes	5th St	from Columbus St to SD 44 (Omaha St)	2036–2040	\$27,700		\$27,700
22	B-94	Bicycle	Shared Lanes	Bunker Dr	from Sagewood St to Disk Dr / I-90	2036–2040	\$51,800	Pennington County	\$29,500
23	B-102	Bicycle	Shared Lanes	Degeest Dr	from Homestead St to Twilight Dr	2036–2040	\$39,200	Pennington County	\$4,800
24	B-130	Bicycle	Shared Lanes	S Canyon Rd	from Berry Blvd to N 44th St	2036–2040	\$24,100	Pennington County	\$17,800
25	B-131	Bicycle	Shared Lanes	Sagewood St / Northridge Dr	from Bunker Dr to Haines Ave	2036–2040	\$6,600		\$6,600
26	B-144	Bicycle	Signed Shoulder Bikeway	Country Rd	from Haines Ave to N Elk Vale Rd	2036–2040	\$65,900	Pennington County	\$16,400

D. Rapid Transit Fiscally Constrained Projects

The Rapid Transit Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 25**. Another recommendation of this plan is to complete a new Rapid City Area Transit Plan for the Metropolitan Planning Area. This study should focus on where to provide regional transit service and how funding for these needs should be acquired. See the “Transit” section of **Table 15** for a more extensive description of the issues and ideas to be addressed in the transit plan.

Table 25. Rapid Transit Fiscally Constrained Projects

#	ID	Name	Category	Location / Description	Staging	Cost (Year of Expenditure)
1	T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies	2015–2020	\$131,000
2	T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility	2015–2020	\$26,000
3	T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service	2015-2020	\$1,745,000
4	T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service	2015-2020	\$544,000
5	T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies	2021–2025	\$726,000
6	T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility	2021–2025	\$145,000
7	T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service	2021–2025	\$9,643,000
8	T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service	2021–2025	\$3,009,000
9	T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies	2026–2030	\$803,000
10	T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility	2026–2030	\$161,000
11	T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service	2026–2030	\$10,657,000
12	T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service	2026–2030	\$3,326,000
13	T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies	2031–2035	\$887,000
14	T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility	2031–2035	\$177,000
15	T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service	2031–2035	\$11,779,000
16	T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service	2031–2035	\$3,675,000
17	T-19	Bus Purchase	Capital Improvement	Purchase four buses each year for use by eligible senior and disabled service agencies	2036–2040	\$980,000

#	ID	Name	Category	Location / Description	Staging	Cost (Year of Expenditure)
18	T-20	Bus Barn Improvements	Capital Improvement	Maintain and improve the Rapid Transit Bus Barn Facility	2036–2040	\$196,000
19	T-21	Rapid Transit System Operating Funds	Continued Service	Rapid Transit System operating funds for fixed route and dial-a-ride service	2036–2040	\$13,018,000
20	T-22	Rapid Transit System Capital Assistance	Continued Service	Rapid Transit System capital assistance for fixed route and dial-a-ride service	2036–2040	\$4,062,000

E. Meade County Fiscally Constrained Projects

The Meade County Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 26**.

Table 26. Meade County Fiscally Constrained Projects

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
1	R-3	Roadway	Corridor Improvements	Elk Creek Rd	Realignment e/o I-90	2021–2025	\$4,680,200		\$4,680,200
2	R-5	Roadway	Corridor Improvements	High Meadows Rd Improvements	To existing roadway, RAP surface	2026–2030	\$371,400		\$371,400
3	R-59	Roadway	New Roadway	Mill Rd Extension	Construct new 2 lane minor arterial from Haines Ave to Deadwood Ave	2031–2035	\$7,831,300		\$7,831,300
4	B-83	Bicycle	Off-Street Path	Tower Rd	Along east side from 224th St to 225th St	2031–2035	\$201,700	Box Elder	\$133,100
5	P-5	Pedestrian	Sidewalk	Tower Rd	Along west side from 224th St to 225th St	2031–2035	\$103,400	Box Elder	\$34,100
6	R-2	Roadway	Corridor Improvements	150th Ave	Asphalt paving as minor arterial from the county line north	2036–2040	\$2,345,500		\$2,345,500

F. Pennington County Fiscally Constrained Projects

The Pennington County Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 27**.

Table 27. Pennington County Fiscally Constrained Projects

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
1	R-10	Roadway	Corridor Improvements	Reservoir Rd	from Twilight Dr to Meadow Ridge Dr	2021–2025	\$2,405,600	Rapid City	\$2,189,200
2	R-16	Roadway	Intersection / Interchange	154th Ave & 233rd St	154th Ave & 233rd St	2021–2025	\$344,000		\$344,000
3	R-86	Roadway	Capacity Improvements	Sheridan Lake Rd	Widen to 4 lane principal arterial from Corral Dr to Clarkson Rd	2031–2035	\$16,863,100	Rapid City	\$12,310,400
	B-152	Bicycle	Signed Shoulder Bikeway	Sheridan Lake Rd	from Wildwood Dr to Muirfield Dr	2031–2035	\$16,700		\$16,700
4	R-9	Roadway	Corridor Improvements	Plateau Ln	from Twilight Dr to Williams St	2036–2040	\$3,246,100		\$3,246,100
5	R-17	Roadway	Intersection / Interchange	Boulder Hill Rd & Silver Mountain Rd	Boulder Hill Rd & Silver Mountain Rd	2036–2040	\$289,000		\$289,000
6	R-18	Roadway	Intersection / Interchange	Concourse Dr & Twilight Dr	Concourse Dr & Twilight Dr	2036–2040	\$15,400		\$15,400
7	R-27	Roadway	Intersection / Interchange	South Rockerville Rd & Neck Yoke Rd	South Rockerville Rd & Neck Yoke Rd	2036–2040	\$61,200		\$61,200
8	R-32	Roadway	Intersection / Interchange	Sheridan Lake Rd & Dunsmore Rd	Dunsmore Rd & Sheridan Lake Rd	2036–2040	\$381,200		\$381,200
9	R-54	Roadway	New Roadway	Degeest Dr	Extend new collector from the end of Degeest Dr north across railroad tracks and connect to I-90 Service Road	2036–2040	\$1,387,900	Rapid City	\$694,000
10	B-42	Bicycle	Off-Street Path	Concourse Dr	from US 16B (Elk Vale Rd) to Twilight Dr	2036–2040	\$178,300	Rapid City	\$26,700
11	B-44	Bicycle	Off-Street Path	County Hwy 1416	from Westgate Rd to Ellsworth Rd	2036–2040	\$219,800	Box Elder	\$55,300
12	B-94	Bicycle	Shared Lanes	Bunker Dr	from Sagewood St to Disk Dr / I-90	2036–2040	\$51,800	Rapid City	\$22,300
13	B-100	Bicycle	Shared Lanes	Covington St	from Twilight Dr to SD 44	2036–2040	\$53,600		\$53,600

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)	Cost Sharing	Jurisdiction Cost (Year of Expenditure)
14	B-102	Bicycle	Shared Lanes	Degeest Dr	from Homestead St to Twilight Dr	2036–2040	\$39,200	Rapid City	\$34,400
15	B-130	Bicycle	Shared Lanes	S Canyon Rd	from Berry Blvd to N 44th St	2036–2040	\$24,100	Rapid City	\$6,300
16	B-144	Bicycle	Signed Shoulder Bikeway	Country Rd	from Haines Ave to N Elk Vale Rd	2036–2040	\$65,900	Rapid City	\$49,500

G. South Dakota Department of Transportation Fiscally Constrained Projects

The SDDOT Fiscally Constrained Projects are prioritized during the identified staging period as itemized in **Table 28**.

Table 28. SDDOT Fiscally Constrained Projects

#	ID	Mode	Category	Facility/Name	Description	Staging	Total Cost (Year of Expenditure)
1	R-19	Roadway	Intersection / Interchange	I-90 Exit 46 (Elk Creek Rd)	Interchange Reconstruction	2016–2020	\$9,686,000
2	R-22	Roadway	Intersection / Interchange	I-90 Exit 59 (N Lacrosse St)	Interchange Improvement	2016–2020	\$18,409,000
3	R-83 & R-84	Roadway	Urban Reconstruction	SD 231 (Deadwood Ave) and SD 44 (Omaha St)	Widen to 6 lane principal arterial along SD 231 (Deadwood Ave) from Sheffer St to Mountain View Rd and along SD 44 (Omaha St) from Mountain View Rd to Near 12 th St	2021–2025	\$17,294,000
4	R-35	Roadway	Intersection / Interchange	I-90 Exit 48 (Stage Stop Rd)	Interchange improvements	2026–2030	\$18,879,000
5	R-21	Roadway	Intersection / Interchange	I-90 Exit 55 (SD 445 (Deadwood Ave))	Interchange Improvements	2026–2030	\$10,069,000
6	R-36	Roadway	Intersection Improvements	US 16 & US 16B (Catron Blvd) Intersection	Intersection Improvements	2031–2035	\$34,774,000

H. Rapid City Regional Airport Fiscally Constrained Projects

The Final Airport Master Plan Update is expected to be completed in fall 2015 with a technical report, Capital Improvement Plan, and Airport Layout Plan. The recommendations from the Master Plan Update are incorporated into this plan by reference.

Table 29 contains the Rapid City Regional Airport Fiscally Constrained Projects.

Table 29. Rapid City Regional Airport Fiscally Constrained Projects

Project	Cost (Year of Expenditure)	Year
Commercial Service and North GA Apron Rehab Design	\$99,990	2015
PAPI Replacement (Both Runways)	\$359,500	2015
Apron Expansion (Phase 1) Terminal Demolition	\$535,590	2015
Apron Expansion (Phase 2) Midfield Apron Paving	\$1,605,450	2015
SRE – 2 Plow Truck – 1 High Speed Plow	\$677,300	2015
Apron Rehabilitation (Old Terminal, GA North, GA WestJet, Commercial Service)	\$5,540,000	2016
Public Parking Entry/Exit Shelters	\$138,000	2016
Rental Car Entrance Enhancement	\$150,000	2016
Acquire 8 Unit T-Hangar [North]	\$150,000	2016
Construct 10 Unit T-Hangar (1 Bldgs) [North]	\$737,100	2016
Construct Deicing Apron (1 aircraft position)	\$1,480,700	2017
Construct Rental Car Storage Lot (Phase I)	\$570,000	2017
USFS Phase 1 (Dirtwork and Main loop for large aircraft)	\$3,532,500	2017
Construct Cargo Apron	\$506,000	2017
Construct Cargo Building	\$804,000	2017
Rehabilitate Hangar Taxilanes	\$150,000	2017
SRE - Replace Sweeper (Unit #20)	\$459,300	2017
SRE - Replace Plow (Unit #41)	\$250,000	2017
Reconstruct Entry Road Shoulders	\$900,000	2017
New Baggage Makeup & In-Line Baggage Screening	\$5,166,900	2018
Taxiway A Rehabilitation	\$600,000	2018
Construct Small Box Hangars (4 units in 1 Bldg) [North]	\$398,600	2018
Construct 10 Unit T-Hangar (1 Bldgs) [Middle]	\$737,100	2018
Construct New General Aviation Access Road	\$1,191,400	2018
Construct Cargo Hangar	\$515,000	2019
Construct Conventional Hangars (2 Bldgs) [North & Main]	\$1,830,000	2019
Rehabilitate Hangar Taxilanes	\$150,000	2019
SRE Equipment Replacement	\$600,000	2019
Realign Long View Road	\$1,737,000	2019

Project	Cost (Year of Expenditure)	Year
Precision Instrument Approach for Runway 14	\$2,960,000	2020
Construct Conventional Hangars (1 Bldg) [South]	\$515,000	2020
Construct Small Box Hangars (5 units in 3 Bldgs) [North]	\$623,200	2020
Runway 5-23 Rehabilitation	\$150,000	2021
Road Realignment for Rental Car Access	\$194,000	2021
Construct Additional Public Parking	\$367,000	2021
Construct Sanitary Sewer Line to RC Lift Station	\$800,000	2021
Update Airport Master Plan	\$1,000,000	2021
Expand Commercial Service Apron (square off corners)	\$708,200	2022
Construct Rental Car Storage Lot (Phase II)	\$570,000	2022
SDARNG Readiness Center	\$20,000,000	2022
Rehabilitate Hangar Taxilanes	\$150,000	2022
SRE Equipment Replacement	\$600,000	2022
Expand North Apron Area	\$1,017,000	2023
Runway 14-32 Rehabilitation, Runway 32 Blast Pad & 25' Paved Shoulders	\$7,560,000	2023
Replace ATCT	\$3,513,000	2023
Construct South Large Hangar Apron Area	\$872,300	2024
Construct 10-Unit T-hangar (1 Bldg) [Middle]	\$701,300	2024
Replace SRE/Maintenance Facility	\$9,500,000	2024
Wildlife Hazard Assessment	\$150,000	2024
Construct USFS Phase 2 (apron and roads in north SEAT area)	\$178,000	2025
Construct Conventional Hangars (3 Bldgs) [Main & South]	\$1,835,000	2025
Non-Aeronautical Office Site Prep	\$165,000	2025
SRE Equipment Replacement	\$600,000	2025
Non-Aeronautical Office	\$1,500,000	2026
ARFF Equipment Replacement	\$900,000	2026
Renovate Office for CBP Facility	\$339,000	2027
Taxiway A Rehabilitation	\$600,000	2028
Construct 8-Unit Executive T-Hangar (1 Bldg) [Middle]	\$1,258,000	2028
SRE Equipment Replacement	\$600,000	2028
Runway 5-23 Rehabilitation	\$150,000	2029
USFS Phase 3 (3rd loading position)	\$1,000,000	2029
Construct 10-Unit T-Hangar (1 Bldg) [Middle]	\$701,300	2029
Expand Deicing Apron (2 aircraft positions)	\$2,000,000	2030
SRE Equipment Replacement	\$600,000	2030
Construct Conventional Hangars (3 Bldgs) [Main & South]	\$2,580,000	2031
ARFF Equipment Replacement	\$900,000	2032

Project	Cost (Year of Expenditure)	Year
Runway 14-32 Rehabilitation	\$1,500,000	2033
Construct East Parallel Taxiway	\$21,435,500	Ultimate
Construct East Apron Area	\$3,023,300	Ultimate
Construct 3-Unit T-Hangars (3 Bldgs) [Middle]	\$738,600	Ultimate
Construct Exec Box Hangars (10 units in 3 Bldgs) [Middle]	\$1,996,000	Ultimate
Construct Conventional Hangars (5 Bldgs) [East]	\$3,156,000	Ultimate
Construct 10-Unit T-Hangars (3 Bldgs) [East]	\$2,032,200	Ultimate
Construct Small Box Hangars (8 Bldgs) [East]	\$1,288,000	Ultimate
Construct East Side Roads & Parking	\$862,000	Ultimate
Construct East Side Taxiway Connectors	\$129,000	Ultimate
Construct Small Hangar/T-Hangar Taxilanes/Taxiways/Apron	\$750,200	Ultimate
Construct East Side Utilities (Water, Sewer Connection, Electricity, Natural Gas)	\$1,807,700	Ultimate

IX. CONCLUSION

RapidTRIP 2040 provides a map for the development of the regional, multimodal transportation network over the next 25 years. An important aspect of this plan is the assurance that the resulting plan provides a fiscally constrained project listing. **Table 30** provides a review of the capital improvement revenues and expenses by entity to demonstrate the fiscal constraint of the plan. As can be seen, through a combination of TIP and Plan expenditures, investment within the region maintains fiscal constraint during all planning periods.

Table 30. Demonstration of Fiscal Constraint

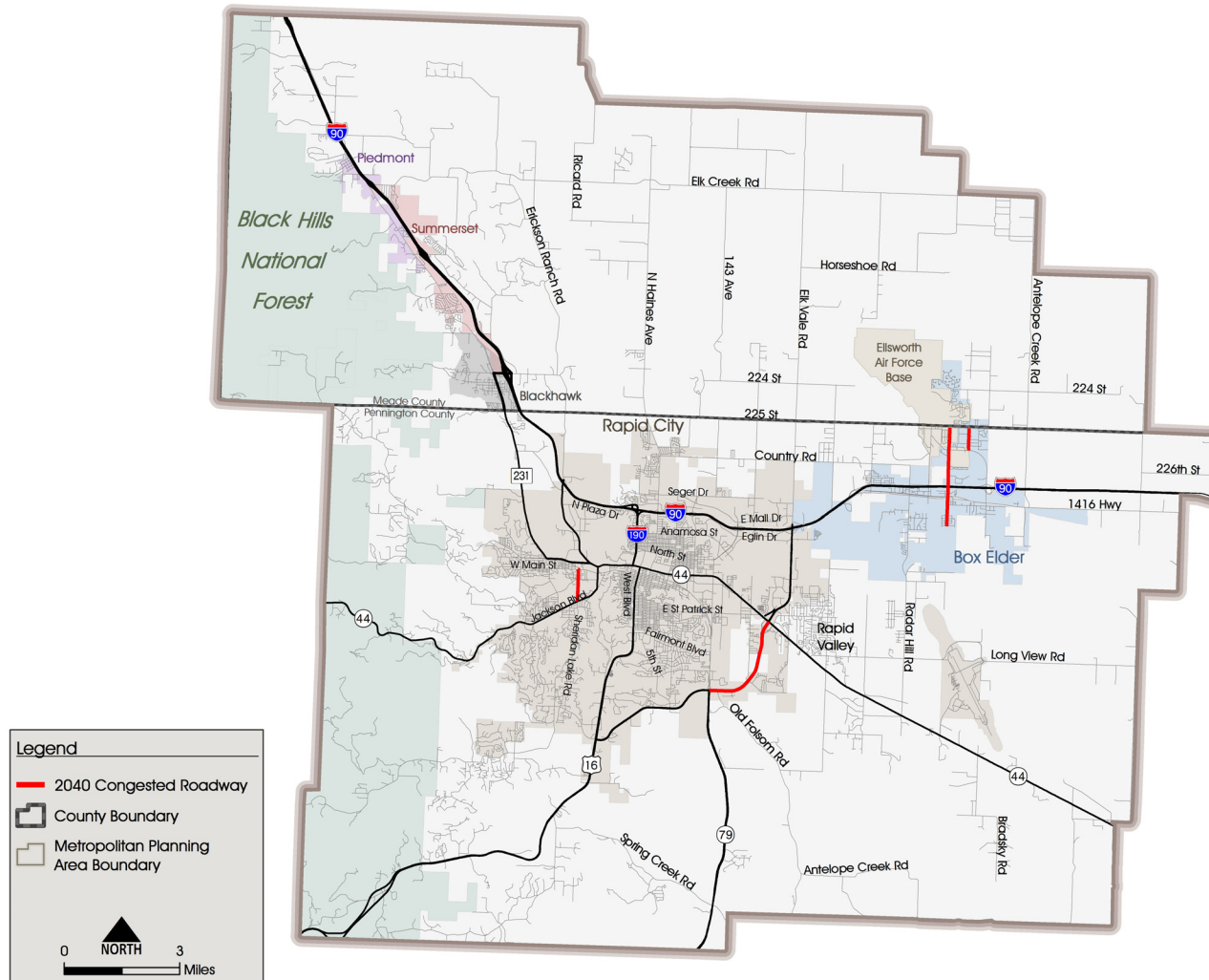
	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040
Box Elder					
Revenue	\$3,205,000	\$3,205,000	\$3,205,000	\$3,205,000	\$3,205,000
Capital Expenses	\$0	\$0	\$1,337,100	\$640,500	\$571,800
Maintenance and Preservation Expenses	\$540,000	\$540,000	\$540,000	\$540,000	\$540,000
Operations and Maintenance Expenses	\$2,125,000	\$2,125,000	\$2,125,000	\$2,125,000	\$2,125,000
Balance	\$540,000	\$1,080,000	\$282,900	\$182,400	\$150,600
Rapid City					
Revenue	\$49,070,000	\$49,070,000	\$49,070,000	\$49,070,000	\$49,070,000
TIP Expenses	\$5,568,000	–	–	–	–
Capital Expenses	\$632,600	\$5,822,300	\$4,845,900	\$10,959,600	\$6,961,000
Maintenance and Preservation Expenses	\$24,070,000	\$24,070,000	\$24,070,000	\$24,070,000	\$24,070,000
Operations and Maintenance Expenses	\$18,040,000	\$18,040,000	\$18,040,000	\$18,040,000	\$18,040,000
Balance	\$759,400	\$1,897,100	\$4,011,200	\$11,600	\$10,600
Rapid City Transit					
Revenue	\$12,230,000	\$13,523,000	\$14,947,000	\$16,518,000	\$18,256,000
TIP Expenses	\$9,784,000	–	–	–	–
Operating Expenses	\$1,745,000	\$9,643,000	\$10,657,000	\$11,779,000	\$13,018,000
Capital Expenses	\$701,000	\$3,880,000	\$4,290,000	\$4,739,000	\$5,238,000
Balance	\$0	\$0	\$0	\$0	\$0

	2016–2020	2021–2025	2026–2030	2031–2035	2036–2040
Meade County					
Revenue	\$33,190,000	\$33,190,000	\$33,190,000	\$33,190,000	\$33,190,000
TIP Expenses	\$3,276,000	–	–	–	–
Capital Expenses	\$0	\$4,680,200	\$371,400	\$7,998,500	\$2,345,500
Maintenance and Preservation Expenses	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000	\$4,095,000
Operations and Maintenance Expenses	\$25,000,000	\$25,000,000	\$25,000,000	\$25,000,000	\$25,000,000
Balance	\$819,000	\$233,800	\$3,957,400	\$53,900	\$1,803,400
Pennington County					
Revenue	\$53,150,000	\$53,150,000	\$53,150,000	\$53,150,000	\$53,150,000
TIP Expenses	\$3,912,000	–	–	–	–
Capital Expenses	\$0	\$2,533,200	\$0	\$12,327,100	\$4,935,000
Maintenance and Preservation Expenses	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000	\$4,890,000
Operations and Maintenance Expenses	\$43,370,000	\$43,370,000	\$43,370,000	\$43,370,000	\$43,370,000
Balance	\$978,000	\$3,334,800	\$8,224,800	\$787,700	\$742,700
SDDOT					
Revenue	\$119,992,000	\$79,334,000	\$114,408,000	\$113,674,000	\$97,287,000
Capital Expenses	\$94,292,000	\$17,294,000	\$28,948,000	\$34,774,000	\$0
Maintenance and Preservation Expenses	\$14,200,000	\$50,540,000	\$73,960,000	\$67,400,000	\$85,787,000
Operations and Maintenance Expenses	\$11,500,000	\$11,500,000	\$11,500,000	\$11,500,000	\$11,500,000
Balance	\$0	\$0	\$0	\$0	\$0
Summerset					
Revenue	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000
Operations and Maintenance Expenses	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000
Balance	\$0	\$0	\$0	\$0	\$0

This planning effort has relied on the incorporation of results from the travel demand model as a source of information about future areas of roadway congestion. For this evaluation, capacity has been defined as any roadway with volumes greater than 70 percent of the capacity.

Figure 5 in **Chapter III** presented the anticipated future roadway congested locations based on inclusion of only committed roadway improvements in 2040. Corridors with future congestion were included in the Roadway Needs Plan with many Fiscally Constrained Projects identified to remedy future congestion. **Figure 25** shows the location of remaining future congestion in 2040 after the implementation of roadway capacity projects in the Fiscally Constrained Plan.

Figure 25. 2040 Congested Corridors with Implementation of Fiscally Constrained Plan





RAPID CITY AREA
MPO



FELSBURG
HOLT &
ULLEVIG

connecting and enhancing communities