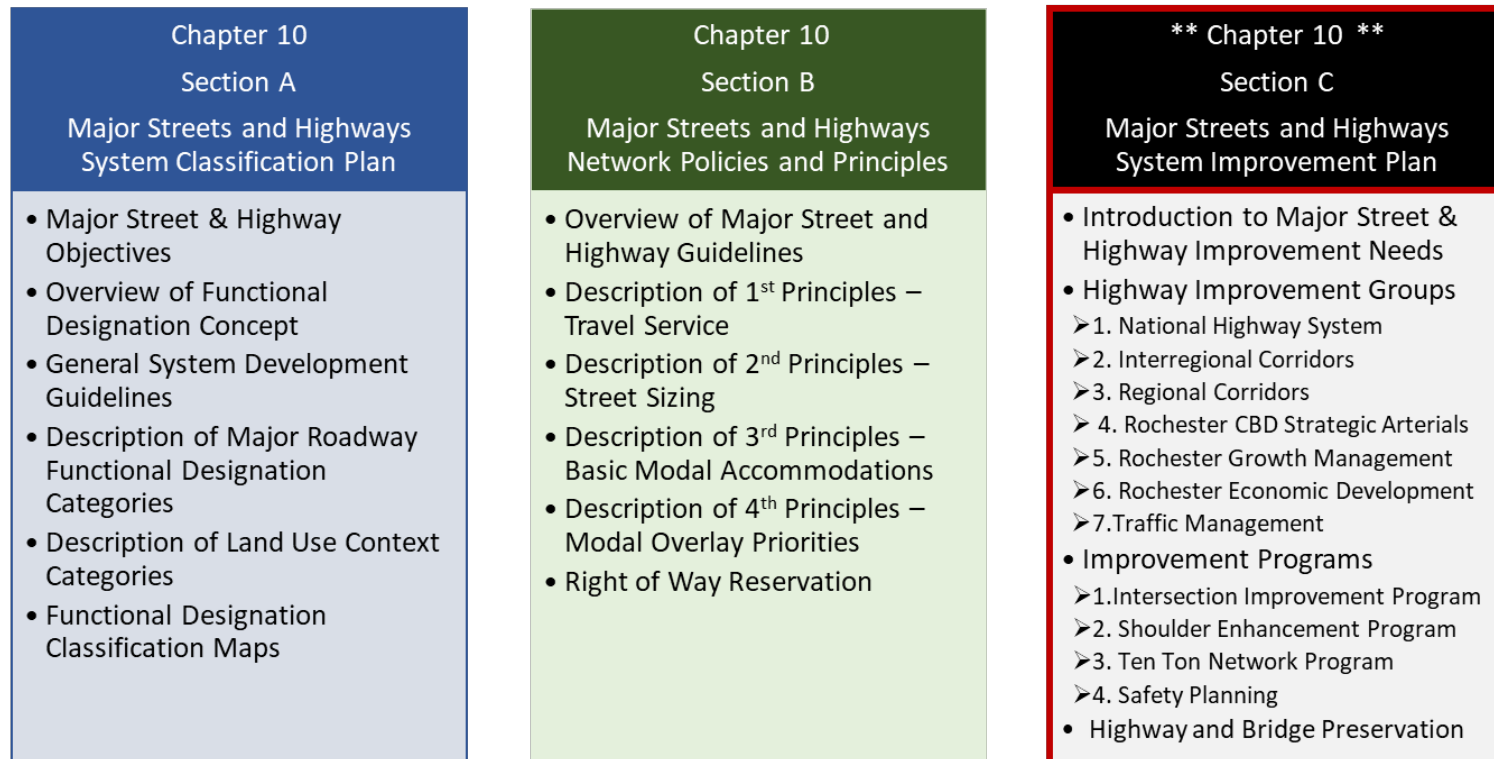


10 • Major Street & Highway System Plan

Chapter 10 presents an overall policy framework for development and management of the major streets and highway network in the ROCOG planning area. Chapter 10 is divided into 3 Sections; Section 10-C (this document) focuses on describing anticipated improvements to the Major Street and Highway Network anticipated over the next 20-30 years.

Figure 10-9



Section 10-C: Major Streets & Highways: System Improvement Plan

Street Improvement Needs

Major street and highway improvement needs are identified in the Plan for purposes of advancing the planning and development process illustrated in Chapter 1, which highlights the LRTP as an early first step in the cycle of activities that leads to a project being realized.

Projects were identified based on the assessment of high-level parameters such as traffic forecasts, crash experience, support for future land use plans, and community needs such as economic development. The projects identified have been reviewed with ROCOG's planning partners, technical and policy officials, and have been presented to the public. Projects are presented on the following pages in the following seven groups, with a general location map and a summary table provided for each group.

- ▶ National Highway System Access Upgrades
- ▶ Interregional Corridors Safety/Mobility Projects
- ▶ Regional Arterials Safety/Mobility Projects
- ▶ Rochester Central Business District Strategic Arterial Gateway Projects

- ▶ Projects supporting Rochester Growth Management Plan
- ▶ Projects supporting Economic Development
- ▶ Traffic Management Projects

Figure 10-10 on the following page illustrates the information that is found in the summary tables.

Along with individual projects, there are also three program groups presented, including:

- Intersection Improvement Program
- 10-Ton Route Upgrade Program
- Regional Highway Shoulder Upgrade Program

Consideration of proposed projects and programs in the context of existing financial constraint is discussed in Chapter 15 of the Plan. Outside of identifying which projects are identified as candidates for ROCOG-managed federal funds, projects are not prioritized as that is ultimately a jurisdictional action influenced by any number of factors outside the purview of this Plan.

Figure 10-10: Information Found in Project Summary Tables

When shaded in black, this column indicates the project has been prioritized as a candidate for federal funding by ROCOG

“Primary Roadway” identifies the major street or highway on which the project will occur

Endpoint 1 and 2 identify the endpoints of the project along the Primary Roadway

“Project Type” provides a general description of the work proposed

“Lead Agency” indicates the road authority who be responsible for leading the project

“Estimated Cost” is a planning level estimate of project cost in today’s dollars

Use the Map ## to find the project location on the project group map

Map ##	ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Miles of Corridor Improvement	Estimated Cost	Discretionary Grant \$\$ Sought
National Highway System Access Upgrade Projects							\$ 174,530,000	
1-1	5	TH 52	TH 14 West		Improve Interchange	MNDOT	\$ 35,350,000	
1-2	1	I-90	TH 52	Bridge/Ramps	Improve Interchange Phase 1	MNDOT	FUNDED 2021	
1-3		I-90	TH 52	Bridge/Ramps	Improve Interchange Phase 2	MNDOT	\$ 13,200,000	
Rochester CBD Strategic Arterial Gateway Projects							\$ 97,420,000	
4-1	4	North Broadway Av	Civic Center Dr	14th St North	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 18,950,000	DMC
4-2		N Broadway Av	14 St NE	Northern Heights Dr	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 10,810,000	
4-3	4	S Broadway Av	14th St S	28 St S	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 17,230,000	DMC
Spot Safety and Mobility Programs							\$ 5,530,000	
		Safety Evaluation			MNDOT District Safety Plan	See Chap 8 / Page 8	\$ 7,200,000	HSIP

Where the “Discretionary Grant \$\$ Sought” column is shaded in red / bronze, it indicates that funding will be needed from grants or sources other than gas tax or local property tax.

This chapter concludes with a discussion of system preservation needs. System preservation recognizes that one of the most effective uses of street funding is for the preservation of facilities that are already in place. Adequate spending on maintenance and preservation is estimated to provide \$4 to \$6 in economic benefit for every direct dollar spent on maintenance. The emphasis on maintenance and preservation that has been seen at

every level of government over the last 10-15 years has noticeably improved the overall condition of the area roadway network. The discussion included herein provides a look at the magnitude of funding that would be needed to fully fund future preservation needs over the horizon of the Plan.

Group 1: National Highway System Access Upgrade Projects

Group 1 reflects projects identified on the National Highway System (NHS) that are intended to improve local access to/from the NHS through improvements to existing interchanges or construction of new

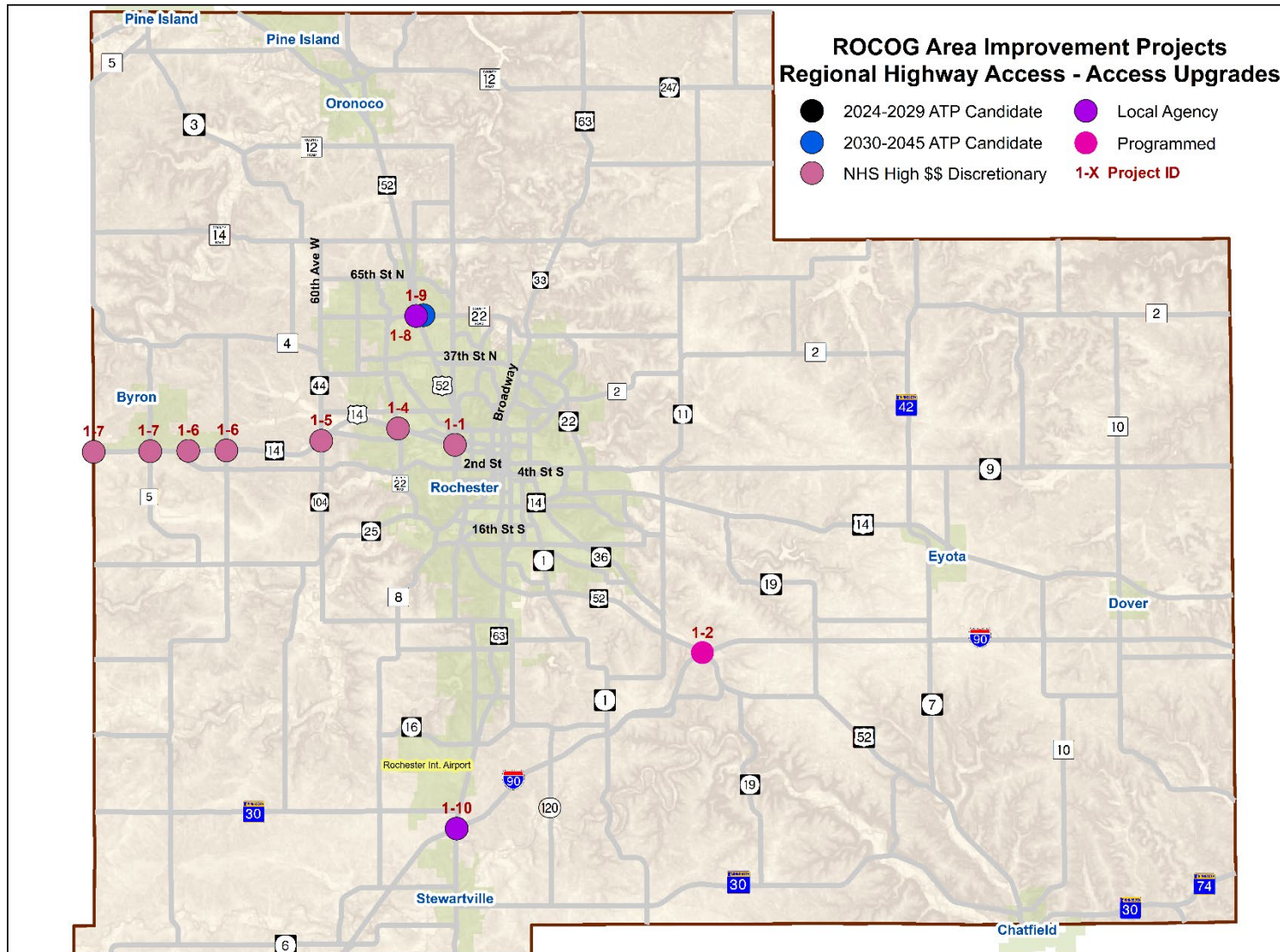
interchanges. Aside from three projects, two of which are programmed through the STIP, all the remaining projects are identified currently as illustrative projects as the scale of funding needed is beyond the scope of current budgets to accommodate. It is expected that all these projects will likely need some level of discretionary funding in order to move ahead.

Table 10-1: National Highway System Access Improvement Projects

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$
National Highway System Access Upgrade Projects							\$ 174,530,000							
1-1		TH 52	TH 14 West		Improve Interchange	MNDOT	\$ 35,350,000	X	X	X				
1-2		I-90	TH 52	Bridge/Ramps	Improve Interchange Phase 1	MNDOT	FUNDED 2021							
1-3		I-90	TH 52	Bridge/Ramps	Improve Interchange Phase 2	MNDOT	\$ 13,200,000	X						
1-4		TH 14 W	CSAH 22		Improve Interchange	MNDOT	\$ 33,630,000	X	X					
1-5		TH 14 W	CR 104		Construct Interchange	MNDOT	\$ 38,850,000	X	X					
1-6	Under Study	TH 14 West Corridor	East Core Area Grade Separation		Interchange A in Byron Area	MNDOT	\$ 19,000,000	X	X					
1-7	Study	TH 14 West Corridor	West Core Area Grade Separation		Interchange B in Byron Area	MNDOT	\$ 20,500,000	X	X			X		
1-8		CSAH 22	Bandel Road NW		Intersection Relocation	Olmsted	\$ 6,000,000		X	X				
1-9		CSAH 22 N (55 St NW)	TH 52 E Front Rd	TH 52 W Front Rd	Interchange Enhancement	Olmsted	\$ 8,000,000	X	X					
1-10		I-90	TH 63		Phase 2 Interchange Upgrade	MNDOT	FUNDED 2021							

NOTE: Rows highlighted in gray related to TH 14 West Corridor were under study at the time of plan adoption, but general consensus had been arrived at that two new interchanges in the ROCOG area will be developed. Estimated costs may change based on the final interchange concept.

Figure 10-11: Location Map/Group 1 - National Highway System Access Improvement Projects



Group 2: Interregional Corridors Safety/Mobility/Access Projects

Group 2 includes projects on state highways that server an interregional travel function which are intended to improve safety or mobility or protect the through travel

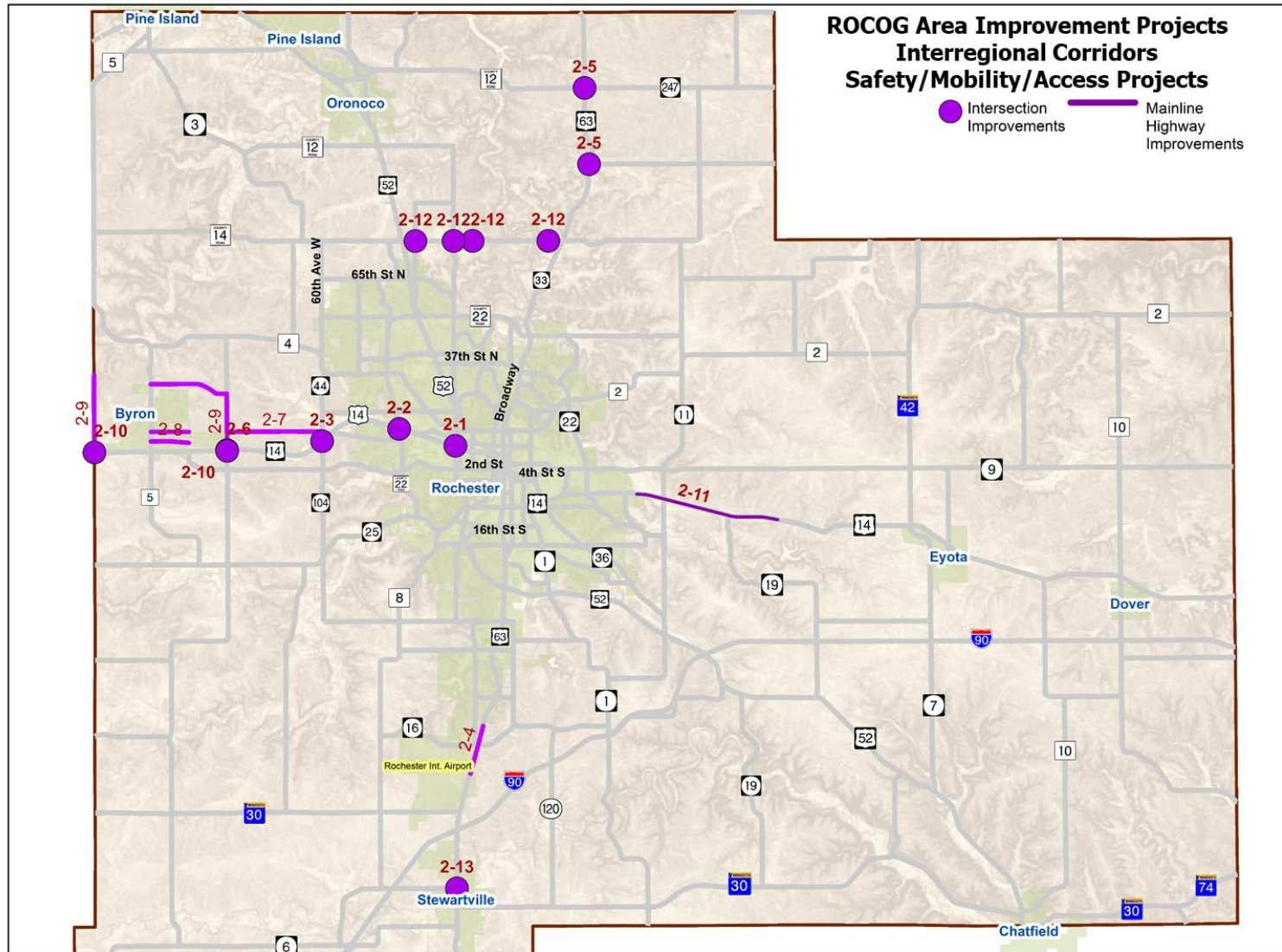
function of a corridor by implementing access management improvements along the corridor. There are a number of interim safety projects proposed at current or future interchange locations in anticipation that it may be a number of years before Group 1 projects occur.

Table 10-2: Interregional Corridors Safety/Mobility/Access Projects

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$	Sought
Interregional Corridors Safety/ Mobility / Access Projects							\$ 52,660,000								
2-1		TH 52	TH 14 West		Interim Interchange Safety Project	MNDOT	\$ 1,500,000	X							
2-2		TH 14 W	CSAH 22		Interim Interchange Safety Project	MNDOT	\$ 1,500,000	X	X						
2-3		TH 14 W	CR 104		Interim Intersection Safety Project	MNDOT	\$ 2,000,000	X	X						
2-4		TH 63 S	60th St S	80th St S	Mainline Access Replacement	MNDOT	\$ 5,130,000	X		X					
2-5		TH 63 N	CSAH 14 E	MN 247	Access Mitigation	MNDOT	\$ 500,000	X							
2-6	Under Study	TH 14 West Corridor	Suburban Grade Separation		Overpass Construction	MNDOT	\$ 16,000,000	X	X						
2-7		TH 14 West Corridor	14th ST NW		TH 14 Connectivity Improvements	Local	\$ 2,500,000	X	X						
2-8		TH 14 West Corridor	7th St / 4th St		TH 14 Connectivity Improvements	Local	\$ 1,980,000	X	X			X			
2-9		TH 14 West Corridor	CSAH 5 / CSAH 15		TH 14 Connectivity Improvements	County	\$ 16,830,000	X	X						
2-10		T 14 West Corridor	CSAH 3 / County Line Rd		Interim Intersection Safety Project	MNDOT	\$ 500,000	X	X						
2-11		TH 14 E	40th Av SE	0.8 mi E of CSAH 10	Access Mitigation	MNDOT	\$ 2,000,000	X							
2-12		TH 63 N	CR 154	CSAH 33	Access Mitigation	MNDOT	\$ 1,720,000	X	X						
2-13		TH 63 S	CSAH 35		High Cost Intersection	MNDOT	\$ 500,000	X	X			X			

NOTE: Rows highlighted in gray related to TH 14 West Corridor were under study at the time of plan adoption, but general consensus had been arrived at that an overpass and various local road connectivity upgrades would be needed. Final corridors and costs may change based on final adopted plan

Figure 10-12: Location Map/Group 2 – Interregional Corridors Safety/Mobility/Access Projects



Group 3: Regional Arterials Safety/Mobility Projects

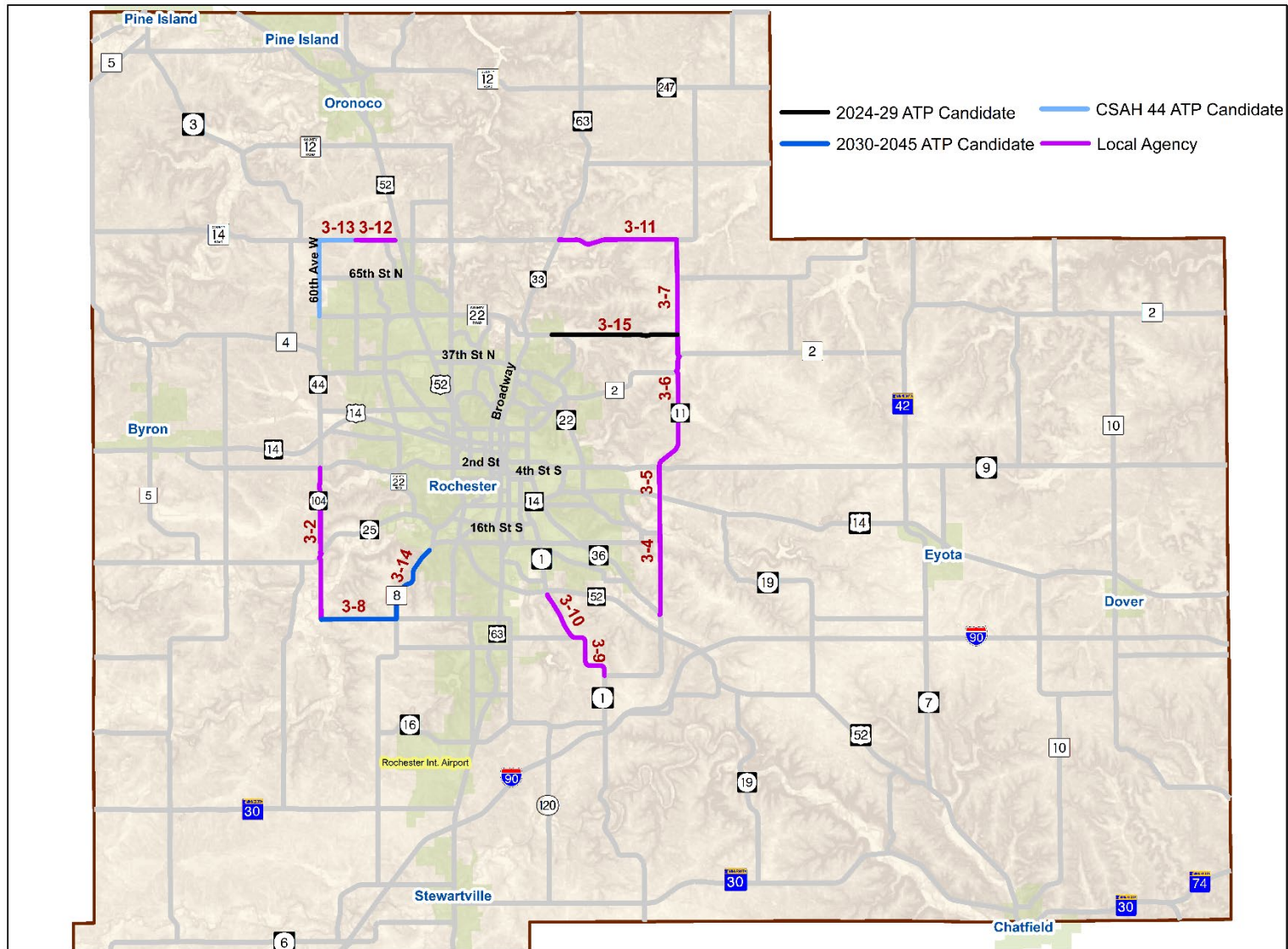
Group 3 reflects projects found on regional arterials, typically Olmsted County roads, where safety/mobility

upgrades are anticipated that will provide improved travel lanes, shoulder areas, recovery areas, grades or other measures that will modernize these corridors to accommodate growth in higher speed rural/suburban traffic that has occurred or is anticipated in the future.

Table 10-3: Regional Arterial Safety/Mobility Projects

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$	Sought
Regional Arterials / Safety - Mobility Projects							\$ 39,540,000								
3-1		CSAH 44	55 St NW	65 St NW	Suburban Safety/Mobility Upgrade	Olmsted	\$ 3,050,000	X	X						
3-2		CR 104	CSAH 34	CR 117	Suburban Safety/Mobility Upgrade	Olmsted	\$ 4,410,000	X							
3-3		CSAH 44	65 St NW	75 St NW	Suburban Safety/Mobility Upgrade	Olmsted	\$ 3,120,000	X							
3-4		CSAH 11	CSAH 36	TH 14	Safety / Shoulder Enhancement	Olmsted	\$ 720,000	X							
3-5		CSAH 11	TH 14	CSAH 9	Safety / Shoulder Enhancement	Olmsted	\$ 170,000	X							
3-6		CSAH 11	CSAH 9	CSAH 2	Safety / Shoulder Enhancement	Olmsted	\$ 760,000	X							
3-7		CSAH 11	CSAH 2	CSAH 14 E	Safety / Shoulder Enhancement	Olmsted	\$ 700,000	X							
3-8		CR 117	CR 104	CSAH 8	Suburban Safety/Mobility Upgrade	Olmsted	\$ 4,160,000	X							
3-9		CSAH 1	CR 101	CR 111	Suburban Safety/Mobility Upgrade	Olmsted	\$ 410,000	X							
3-10		CSAH 1	TH 52	CR 101	Suburban Safety/Access Upgrade	Olmsted	\$ 780,000	X	X						
3-11		CSAH 14 E	TH 63 N	CSAH 11	Suburban Safety/Mobility Upgrade	Olmsted	\$ 730,000	X							
3-12		CSAH 14 W	TH 52 W Frntge	50 Av NW	Suburban Safety/Mobility Upgrade	Olmsted	\$ 2,130,000	X							
3-13		CSAH 14 W	50 Av NW	60 Av NW	Suburban Safety/Mobility Upgrade	Olmsted	\$ 2,130,000	X							
3-14		CSAH 8	CR 125	CR 117	Suburban Safety/Mobility Upgrade	Olmsted	\$ 5,300,000	X							
3-15		48 St NE	CR 124	CSAH 11	Suburban Safety/Mobility Upgrade	Olmsted	\$ 10,970,000	X							

Figure 10-13: Location Map/Group 3 – Regional Arterial Safety/Mobility Projects



Group 4: Rochester CBD Strategic Arterial Gateway Projects

Group 4 reflects projects anticipated on the major strategic arterial corridors that serve downtown Rochester. The need for anticipated improvements on these corridors has been identified in previous studies including the 2016 Broadway Corridor Study, as well as in the DMC Integrated Transit Studies and DMC Development Plan. Aside from Civic Center Dr, which is

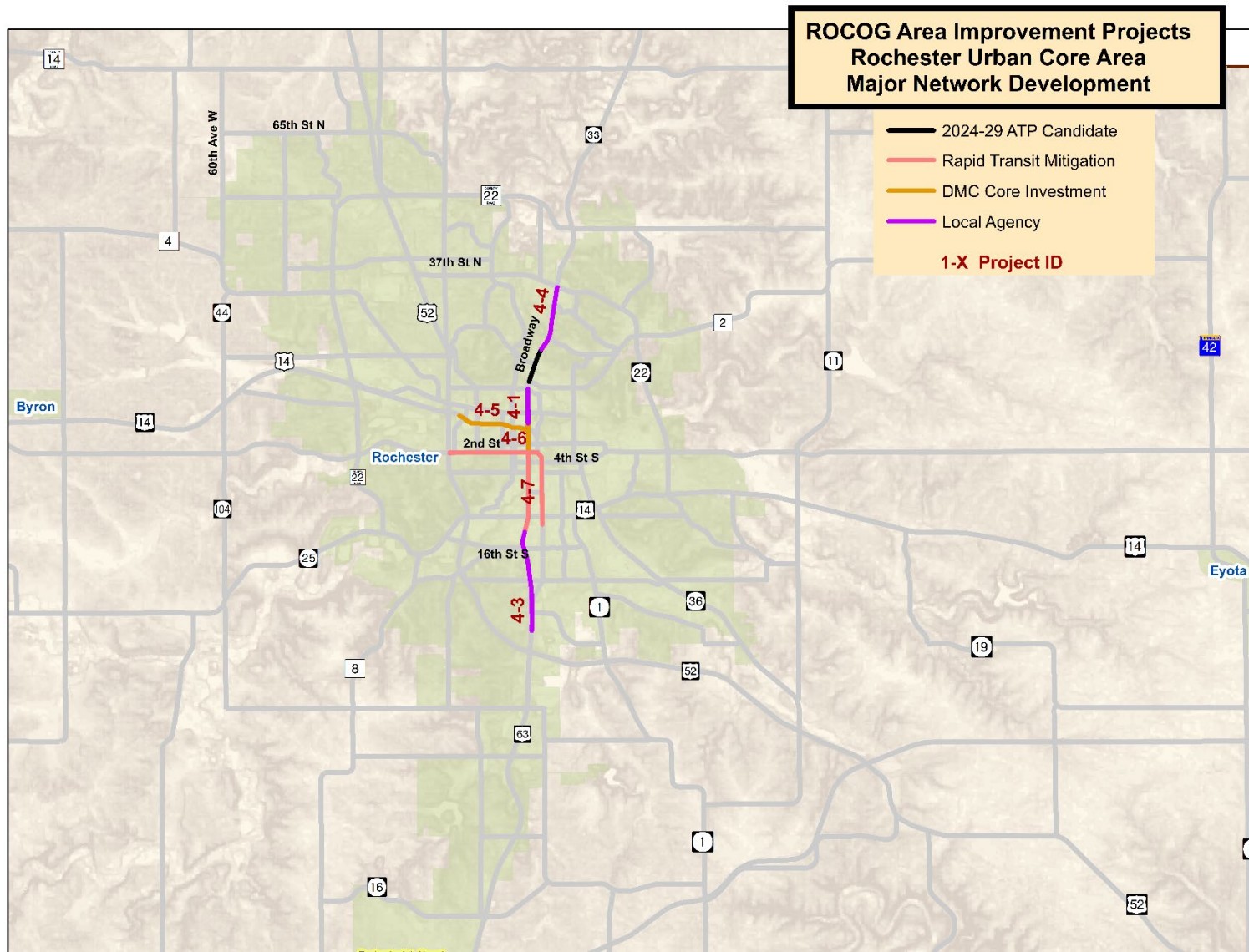
expected to be impacted primarily by increasing vehicular traffic, the other corridors (aside from the Downtown Rapid Transit Corridors) probably involve no change in number of travel lanes but improvements to support other modes and a high level of attention to traffic flow management over time to accommodate some level of growth in traffic. These projects are not considered illustrative but are flagged as projects where discretionary funding may be pursued to limit the impact of these higher cost projects on local budgets.

Table 10-4: Rochester CBD Strategic Arterial Gateway Projects

Map #/ #	ROCOG/ ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$/ \$ Sought
Rochester CBD Strategic Arterial Gateway Projects							\$ 97,420,000	Total w/o Rapid Transit Projects						
4-1		North Broadway Av	Civic Center Dr	14th St North	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 18,950,000		X	X		X		+DMC\$
4-2		N Broadway Av	14 St NE	Northern Heights Dr	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 10,810,000			X	X		X	
4-3		S Broadway Av	14th St S	28 St S	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 17,230,000		X	X			X	+DMC\$
4-4		N Broadway Av	Northern Heights	37 St NE	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 16,160,000			X			X	+DMC\$
4-5		Civic Center Dr	N Broadway Av	16 Av NW	Urban Core Capacity Project	Rochester	\$ 21,390,000			X	X			+DMC\$
4-6	Under Study	2nd St SW	TH 52 W Frntge	Broadway	Transit Mobility Corridor	Rochester	\$ 107,000,000							FTA Small Starts
4-7		DMC South Gateway	2nd St South	14th St South	Transit Mobility Corridor	Rochester	\$ 96,000,000							FTA Small Starts
4-8		DMC Broadway Ave	2 St South	6 St North	Major Arterial Multi-Modal / Safety Modernization	Rochester	\$ 12,880,000			X	X			+DMC\$

Projects highlighted in gray reflect Phases I/II of Rochester Downtown Rapid Transit project. In Discretionary Grant column, red highlighting indicates interest in pursuing federal / state discretionary funding, while "+DMC\$" indicates that DMC Infrastructure funding may be utilized

Figure 10-14: Location Map/Group 4 – Rochester CBD Strategic Arterial Gateway Projects



Group 5: Support for Rochester Urban Area Growth Management Plan

Group 5 reflects a larger number of projects that are anticipated to support 2020-2045 future growth areas identified in P2S 2040, as well as continued development that is occurring in areas beyond the city’s growth management area in areas designated in the *Olmsted County General Land Use Plan* for suburban residential development. These projects involve a combination of upgrades to existing corridors that were originally built as township roads, which now need to be modernized and upgraded to support service to emerging urban and suburban growth areas. These corridors will serve as the arterial and collector street network backbone in these

emerging growth areas. This work can include a combination of actions such as paving gravel roads, adding active transportation facilities, improving management of stormwater runoff, intersection upgrades and enhanced street lighting. Projects on roads that in the future are anticipated to be city streets will likely be partially funded by private development interests through development fees in addition to public dollars. Advancement of projects on this list will depend in part on the pace and location of new development, with projects driven by emerging need materializing as new residential and commercial development occurs.

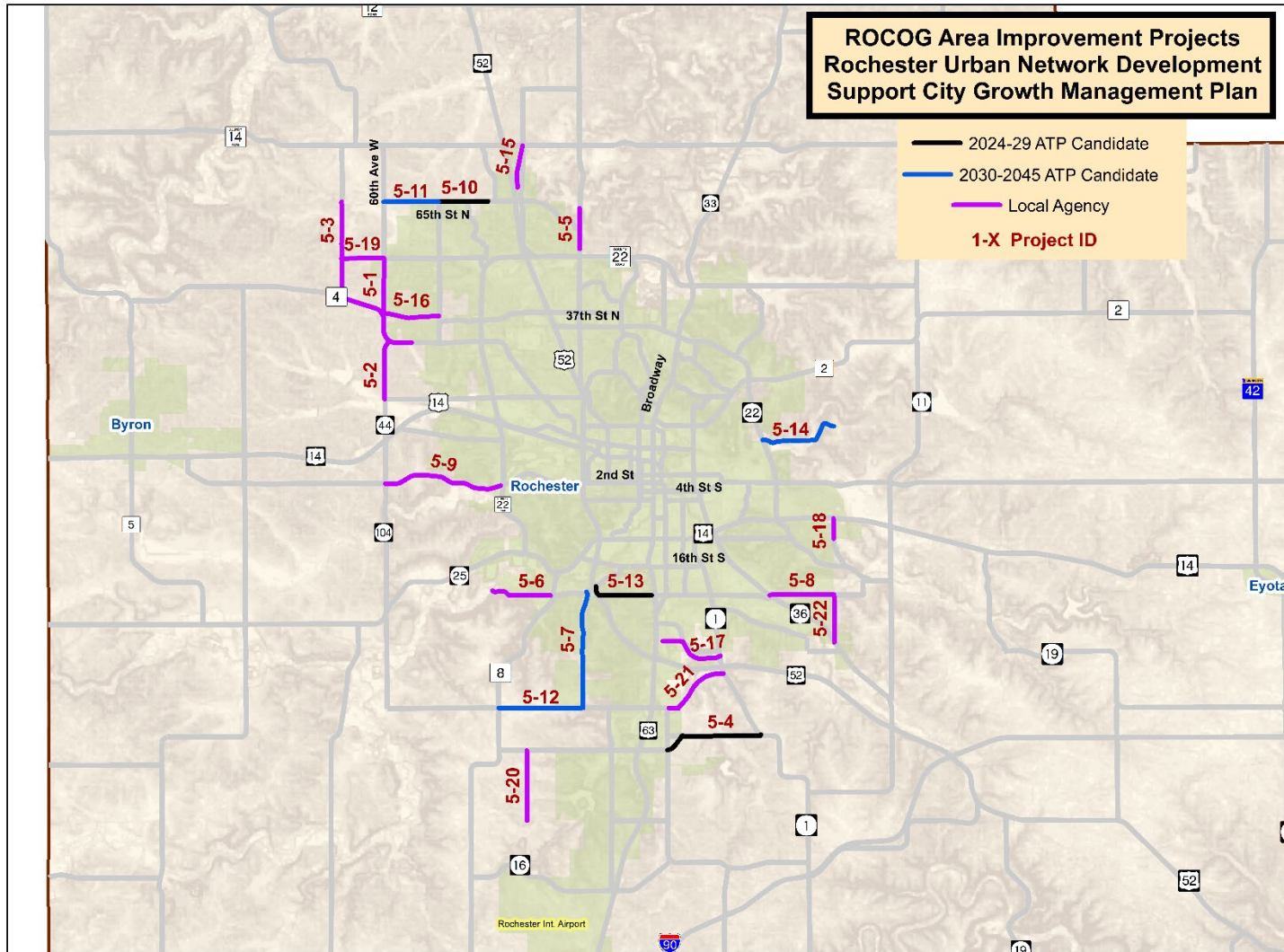
Table 10-5: Projects Supporting Rochester Urban Area Growth Management

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$	Sought
Support for Rochester Urban Area Growth Management Plan							\$ 89,240,000								
5-1		CSAH 4/CSAH 44	55 Av NW	CSAH 3	Urban Safety / Mobility Upgrade	<i>Olmsted</i>	\$ 10,660,000	X							
5-2		CSAH 44	19 St NW	CSAH 4	Urban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 2,260,000	X							
5-3		CSAH 3	CSAH 4	65 St NW	Suburban Safety Enhancement	<i>Olmsted</i>	\$ 390,000	X	X						
5-4		CR 101	CSAH 20	CSAH 1	Suburban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 4,240,000	X							
5-5		CR 112	CSAH 22	Overland Dr	Urban Multimodal Enhancement	<i>Olmsted</i>	\$ 150,000	X	X						
5-6		CR 125	CSAH 8	CSAH 25	Urban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 2,230,000	X	X						

Table 10–22 (continued): Projects Supporting Rochester Urban Area Growth Management

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$	Sought
Support for Rochester Urban Area Growth Management Plan							\$ 89,240,000								
5-7		CR 147	40 St SW	CR 125	Urban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 6,190,000		X	X					
5-8		CR 143	CSAH 36	40 Ave SW	Suburban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 260,000		X	X					
5-9		CSAH 34	CR 104	CSAH 22	Urban Safety/Mobility Upgrade	<i>Olmsted</i>	\$ 1,230,000		X	X					
5-10		65 St NW	TH 52 W Frntge	50 Av NW	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 9,210,000			X			X		
5-11		65 St NW	50 Ave NW	60 Av NW	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 6,090,000			X			X		
5-12		40 St SW	18 Av SW	CSAH 8	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 3,290,000		X	X					
5-13		20 St SW	S Broadway Av	CR 125	Urban Collector Safety/Mobility Upgrd	<i>Rochester</i>	\$ 10,030,000		X						
5-14		Silver Creek Rd	CSAH 22 E	40 Ave NE	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 8,840,000			X					
5-15		TH 52 E Frontage Rd	65 St NW	TH 63 N	Urban Grid Expansion	<i>Rochester</i>	\$ 4,600,000							X	
5-16		41 St/Badger Hills Dr	50 Av NW	60 Av NW	Urban Grid Expansion	<i>Rochester</i>	\$ 5,660,000			X				X	
5-17		30 St SE	3 Av SE	CSAH 1	Urban Grid Expansion	<i>Rochester</i>	\$ 6,300,000		X	X				X	
5-18		40 Av SE	TH 14 E	Eastwood Rd	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 80,000			X					
5-19		55 St NW	CSAH 44	75 Av NW	Urban Grid Expansion	<i>Rochester</i>	\$ 1,680,000			X				X	
5-20		31 Av SW	48 St SW	60 St SW	Suburban Safety/Mobility Upgrade	<i>Rochester</i>	\$ 2,720,000			X					
5-21		40 St SE	TH 63 S	CSAH 1	Urban Grid Expansion	<i>Rochester</i>	\$ 2,990,000			X				X	
5-22		40 Av SE	CR 143	CSAH 36	Suburban Safety Enhancement	<i>Rochester</i>	\$ 140,000			X					

Figure 10-15: Location Map/Group 5 – Support for Urban Area Growth Management Plan



Group 6: Support for Economic Development

Projects in Group 6 were identified in areas where access for commercial or industrial development will be improved or where a project promises to enhance the

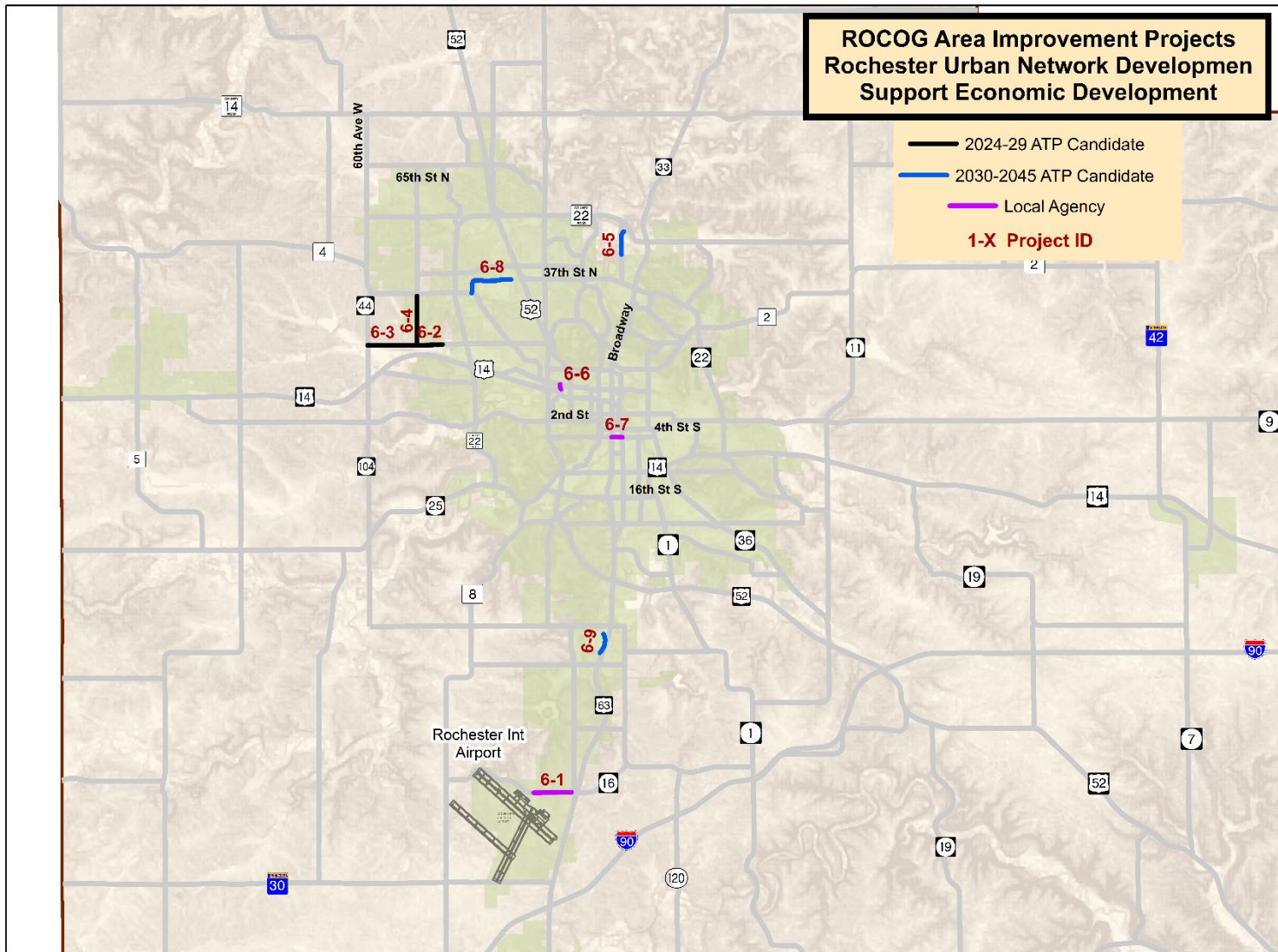
street grid in a predominantly non-residential or mixed-use development area. None of these projects are considered illustrative, but one project (improvement of MN 30 Airport Access) is anticipated as a project where Airport Improvement Funds or other discretionary funding could be pursued for a project.

Table 10-6: Projects Supporting Economic Development

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$
Support for Economic Development							\$ 48,010,000							
6-1		MN 30	TH 63 S	Braatas Dr	Corridor Modernization	MNDOT	\$ 2,790,000	X	X	X				
6-2		19 St NW	Ashland Dr	50 Av NW	Suburban Safety/Mobility Upgrade	Rochester	\$ 2,830,000			X				
6-3		19 St NW	50 Av NW	CSAH 44	Suburban Safety/Mobility Upgrade	Rochester	\$ 6,070,000			X				
6-4		50 Av NW	19 St NW	CSAH 4	Urban Grid Expansion	Rochester	\$ 6,070,000			X				
6-5		East River Rd	44 St NE	CSAH 22 N	Suburban Safety/Mobility Upgrade	Rochester	\$ 6,770,000			X				
6-6		16 Av NW	Civic Center Dr	7 St NW	Urban Grid Enhancement	Rochester	\$ 2,270,000			X				
6-7		6 St SE	S Broadway Av	3 Av SE	Urban Core Grid Enhancement	Rochester	\$ 6,720,000			X	X	X		+DMC\$
6-8		37 St NW - IBM Campus	TH 52 W Frntge	Valleyhigh Dr	Arterial Grid Expansion	Rochester	\$ 8,400,000			X				
6-9		Commercial Dr	40 St SW	48 St SW	Urban Grid Expansion	Rochester	\$ 6,090,000			X				

Projects highlighted in gray reflect Phases I/II of Rochester Downtown Rapid Transit project. In Discretionary Grant column, red highlighting indicates interest in pursuing federal / state discretionary funding, while "+DMC\$" indicates that DMC Infrastructure funding may be utilized

Figure 10-16: Location Map/Group 6- Support for Economic Development



Group 7/8: Traffic Management & Rail Crossing Projects

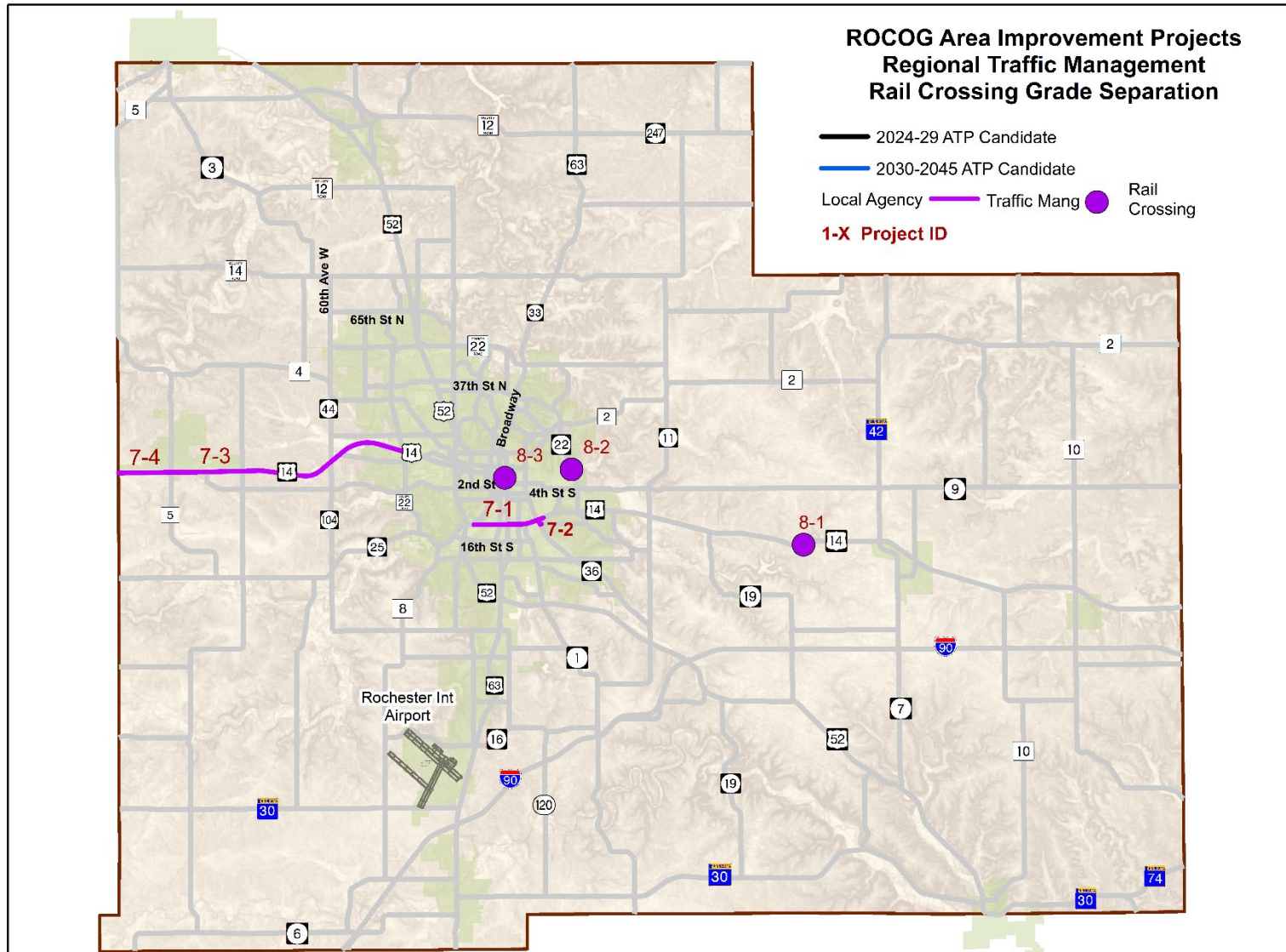
Projects in Group 7 are generally lower cost traffic management projects involving installation of communications, information, and warning equipment to help aid the flow of traffic on these corridors. The CSAH 36 is a project anticipated to include a typical construction component which would be likely to involve

median or edge curbing to provide a higher level of traffic flow control. The rail crossing projects are all illustrative and would be anticipated to involve some level of discretionary or rail-related funding if a need for any of these projects actually would materialize. While the need for the rail crossing projects is low and expected to remain so long as rail traffic remains minimal, flagging the projects in the plan can help to guide other planning in the vicinity of the crossings.

Table 10-7: Group 7/8 – Traffic Management and Rail Crossing Projects

Map #/ #	ROCOG/ ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Lead Agency	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City	Private	Discretionary Grant \$/ \$/ Sought
Regional Traffic Management Subgroup							\$ 2,250,000							
7-1		TH 14 (S)	TH 52	CSAH 36	TSMO	MNDOT	\$ 50,000	X						
7-2		CSAH 36	TH 14 E	Eastwood Rd	Urban Safety / Access Mang Upgrade	Olmsted	\$ 500,000		X	X				
7-3		TH 14 West	CSAH 5	CSAH 22	Install Traffic Management Equip	MNDOT	\$ 700,000	X						
7-4		TH 14 West	CSAH 5	Kasson	Install Traffic Management System	MNDOT	\$ 1,000,000	X						
Rail Crossing Subgroup							\$ 44,700,000							
8-1		TH 14 E	CP Rail	Crossing	New Rail Overpass	MNDOT	\$ 17,190,000	x						Rail Safety Funding
8-2		CSAH 22 E	CP Rail	Crossing	Rail Crossing Safety	Olmsted	\$ 15,280,000		x					
8-3		West Silver Lake Dr	CP Rail	Crossing	Rail Crossing Safety	Rochester	\$ 12,230,000			x	x			

Figure 10-17: Location Map/Group 7/8 –Traffic Management & Rail Crossing Projects



Street & Highway Network Improvement Program Groups

In addition to the specific project groups summarized on the previous pages, the Plan also identifies four program groups that call for investment in highway system features. It is expected that not all the locations identified as candidate improvement areas will occur during the next 25 years; improvements are likely to occur as opportunity arises as part of system preservation projects or where significant changes in traffic conditions occur.

The four programs identified include:

- Intersection Improvement Program
- 10-Ton Route Improvement Program
- Regional Highway Shoulder Upgrade Program
- District 6 Highway Safety Program

Table 10-25 highlights the estimated cost for all the program project areas that were identified. For 10-ton route improvements and regional shoulder upgrades, the dollar costs are based on the incremental cost of adding the improvements as part of a larger preservation projects; for example, paving gravel shoulders as part of a larger mill and overlay project adds incremental costs that would be less than a free-standing shoulder paving project.

Figure 10-14 identifies locations for the Intersection Improvement Program. A screening process was used that analyzed projected 2045 traffic volumes to determine whether unacceptable levels of delay or conflict would occur at locations currently operating under two way stop control. Depending on results, intersections were grouped into one of 3 categories:

- **High cost intersections** where signalization or use of a roundabout intersection appear to be needed in the future
- **Moderate cost intersections** where improvements such as turning lanes or enhanced level of intersection warning device installation may be needed
- **Low cost intersections** where minimum improvements such as improved intersection lighting or signage would likely be sufficient

Figure 10-15 highlights corridors identified as part of the 10-Ton Route Improvement Program. A set of criteria were used to identify candidate locations. The criteria utilized were:

- Corridor provides connection to 9/10-ton route in adjacent county
- Corridor Volume > 750
- Corridor improves connectivity to State 10-ton network

- Corridor provides improved first mile /last mile service to a rural agricultural/rural business area currently not within 1-2 miles of a 10-ton route
- Corridor helps to create a bypass route for rural heavy commercial traffic around the city of Rochester.

Figure 10-16 identifies corridors identified for the Regional Highway Shoulder Improvement Program. The criteria used to identify corridors were:

- Volume > 750
- Corridor is coincident with existing or planned 10-ton network and corridor has seen heavy commercial vehicle crashes not at an intersection in the past
- Corridor is coincident with planned regional Shoulder Bikeway Network;

- Corridor has a functional designation of arterial

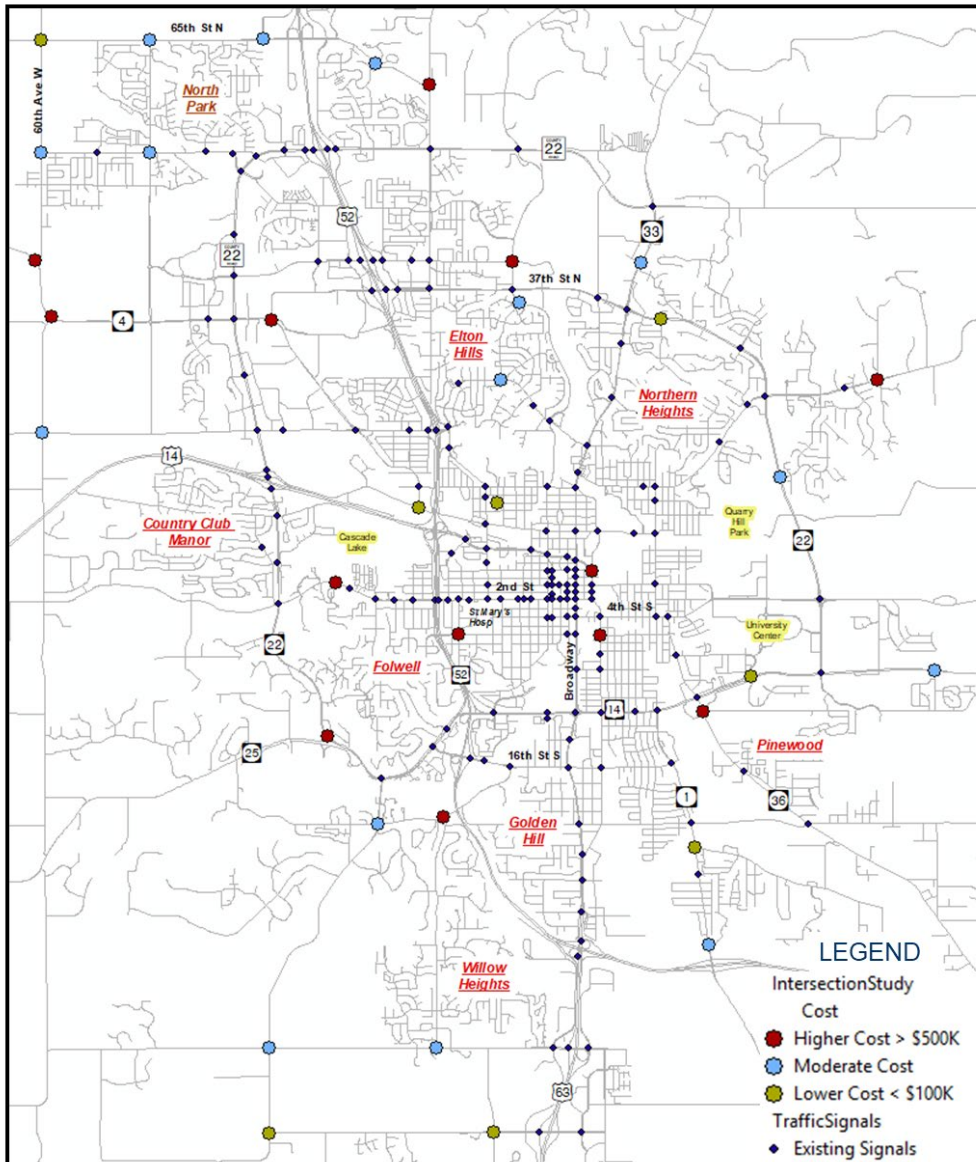
The final program group identified is the District 6 Highway Safety Program. The 2016 District 6 Highway Safety Plan identified locations, shown in Figure 10-17, where safety investment, ranging from high cost improvements such as potential signalization to low cost measures such as curve warning signage, were warranted.

The aggregate cost of these safety improvements is reported in Table 10-25. Discussion of the costs of these improvement programs in the context of Fiscal Constraint is found in Chapter 16.

Table 10-8: Spot Safety and Mobility Program Costs

Map #	ROCOG/ATP Candidate Project	Primary Roadway	Endpoint 1	Endpoint 2	Project Type	Miles of Corridor Improvement OR # of Locations	Estimated Cost	MNDOT	Olmsted	Rochester	DMC	Small City Private	Discretionary Grant \$
Spot Safety and Mobility Programs							\$ 5,530,000						
		Shoulder Enhancement Program			MnDOT Highway Shoulder Enhancement	19 Miles	\$ 2,040,000	X					
					Olmsted Roads Shoulder Enhancement	32 miles	\$ 3,490,000		X				
		Intersection Improvement Program			MNDOT Locations	3	\$ 430,000	X					
		"Locations" refers to intersections where agency will participate in funding			Olmsted County Locations	18	\$ 3,830,000		X				
					Rochester Locations	32	\$ 7,550,000			X			
		10 Ton Route Network Enhancement			Olmsted County Roads	41.5 Miles	\$ 9,630,000		X				
		Safety Evaluation			MNDOT District Safety Plan	See Chap 8 / Page 8	\$ 7,200,000	X					HSIP

Figure 10-18: Intersection Improvement Program Locations



In the legend of the map the terms categories are defined as follows:

- **High cost intersections** where signalization or use of a roundabout intersection appear to be needed in the future
- **Moderate cost intersections** where improvements such as turning lanes or enhanced level of intersection warning device installation may be needed
- **Low cost intersections** where minimum improvements such as improved intersection lighting or signage would likely be sufficient

Figure 10-19: 10-Ton Route Improvement Program – Recommended Highway Upgrades

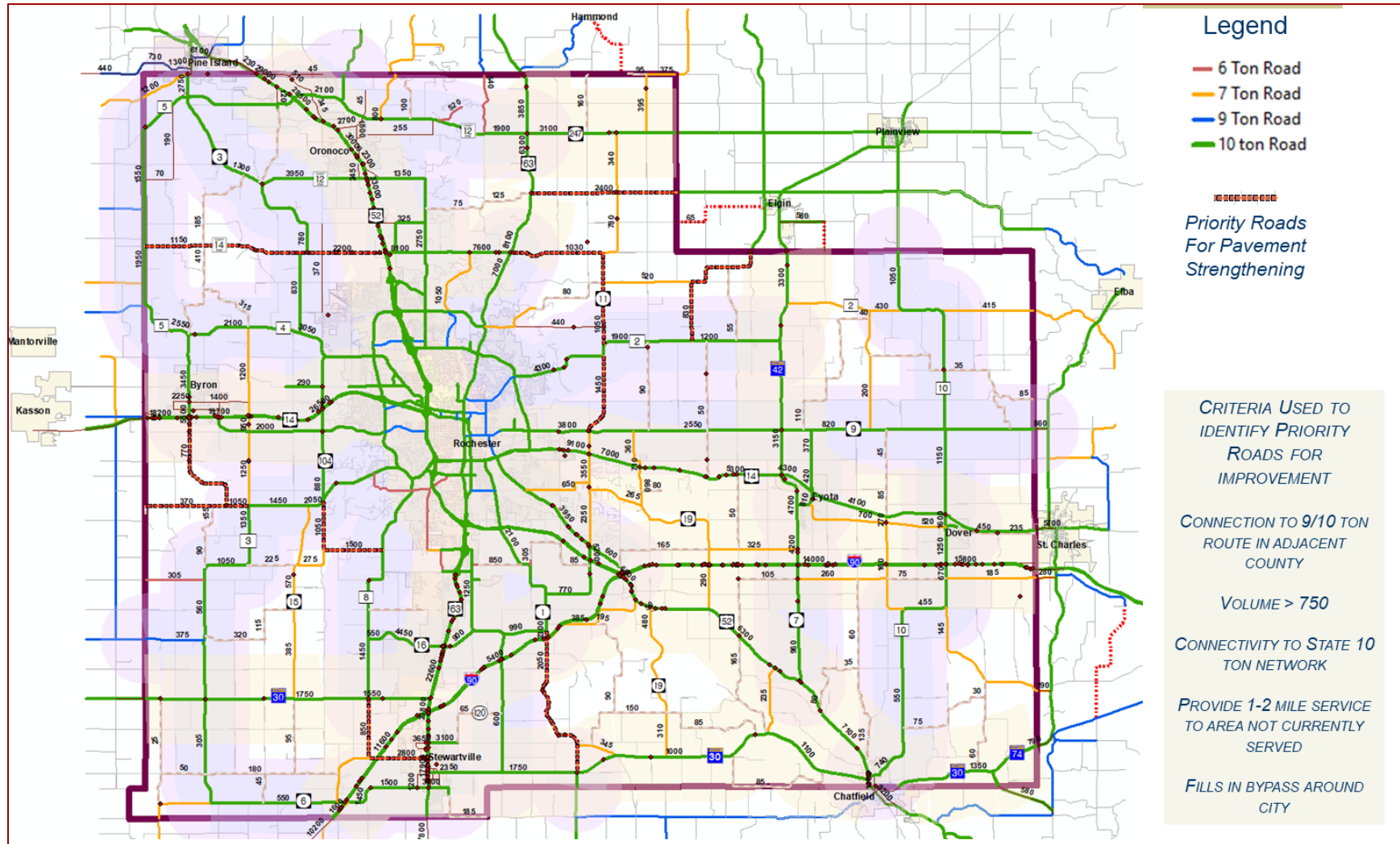


Figure 10-20: Regional Shoulder Improvement Program

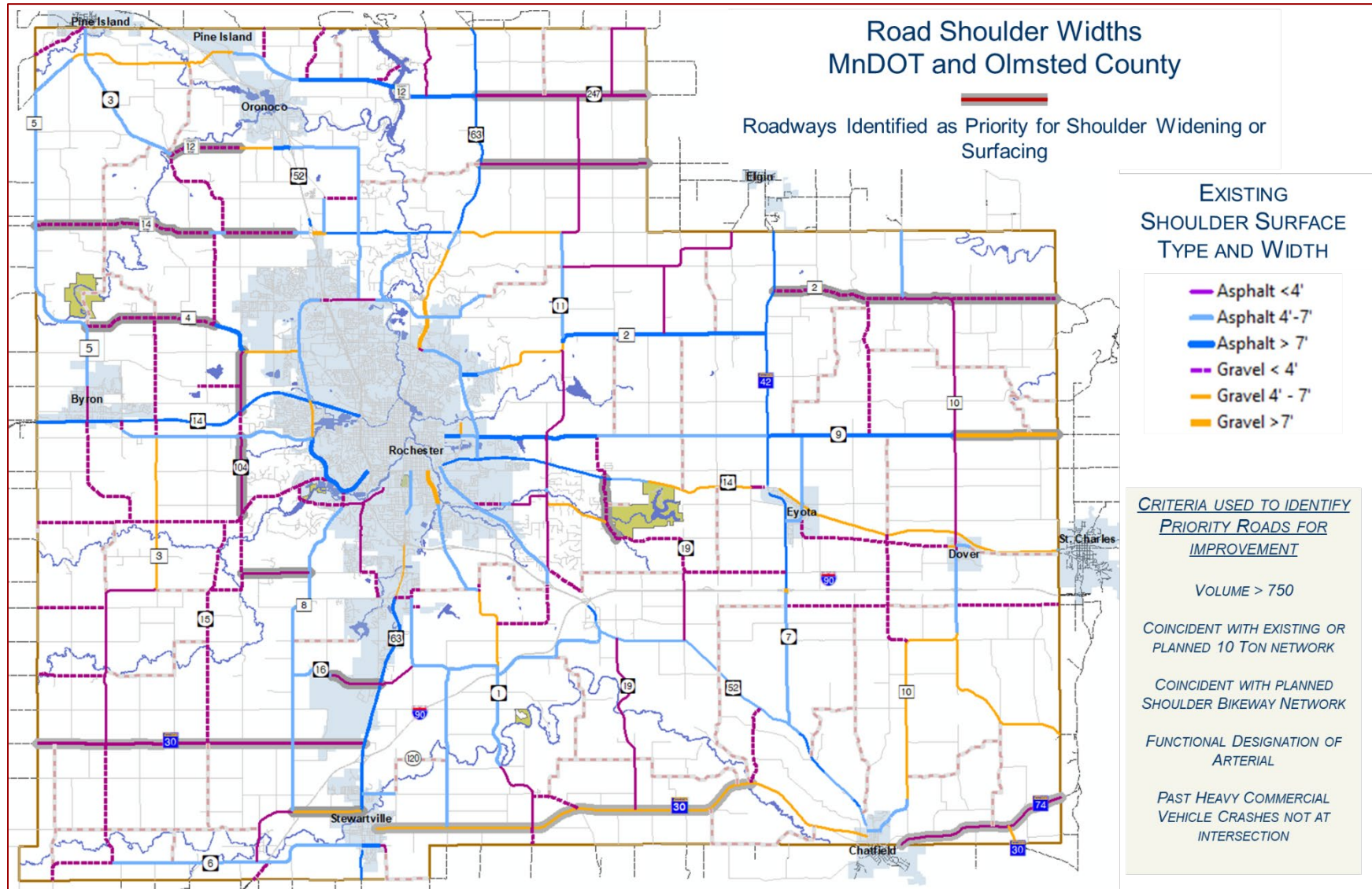
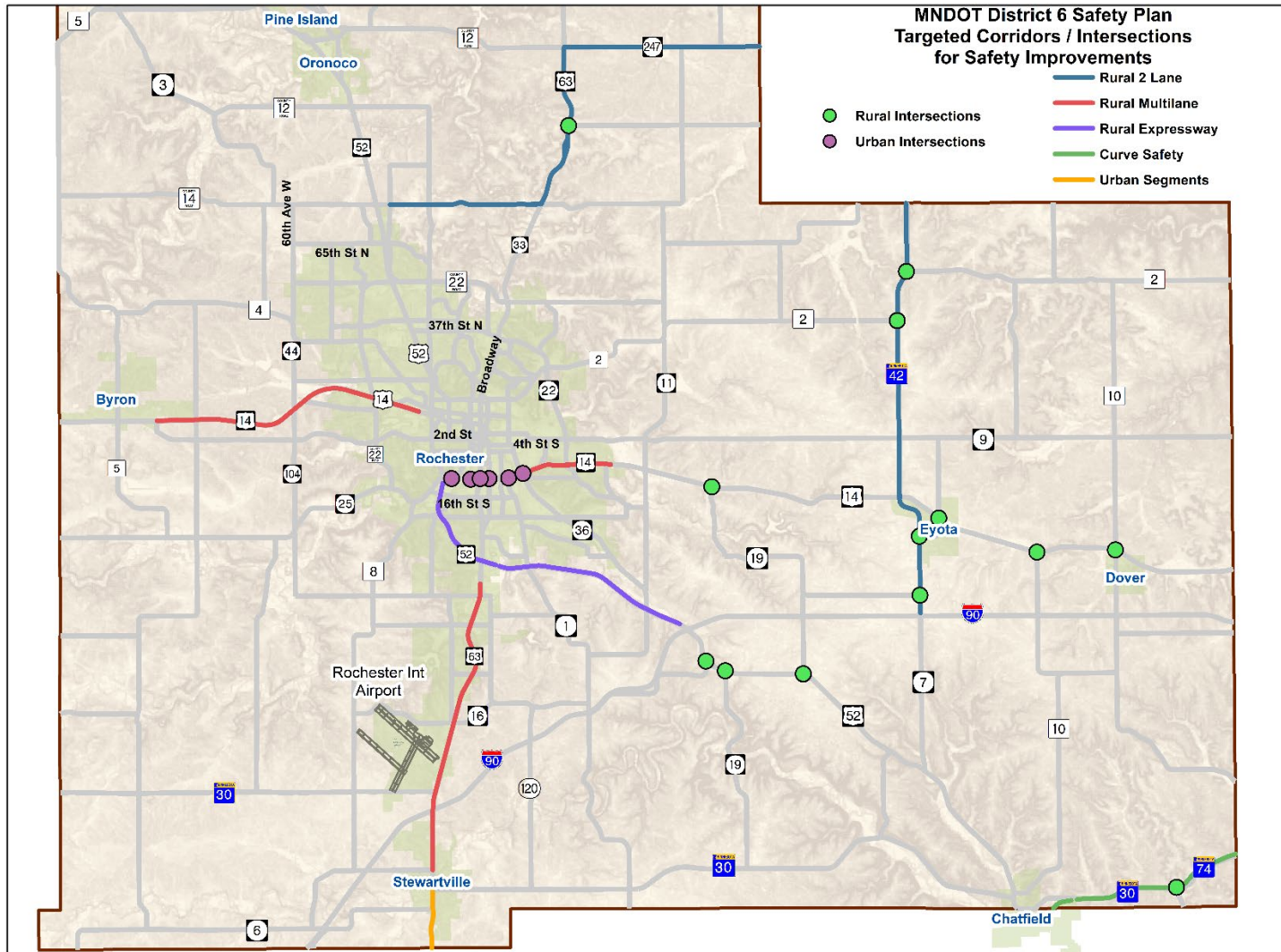


Figure 10-21: MnDOT District 6 Highway Safety Plan – Improvement Locations



Street Preservation Needs

A significant consideration in the financial analysis of the plan is the funding needed for preservation and maintenance of the existing network of roadways and bridges in the ROCOG Planning Area. MnDOT, Olmsted County, and Rochester are responsible for keeping 1,134 centerline miles of street, composed of 2,546 lane miles of roadway with an estimated capital value of \$3.4 billion, in reasonably good operating condition for travel in the planning area.

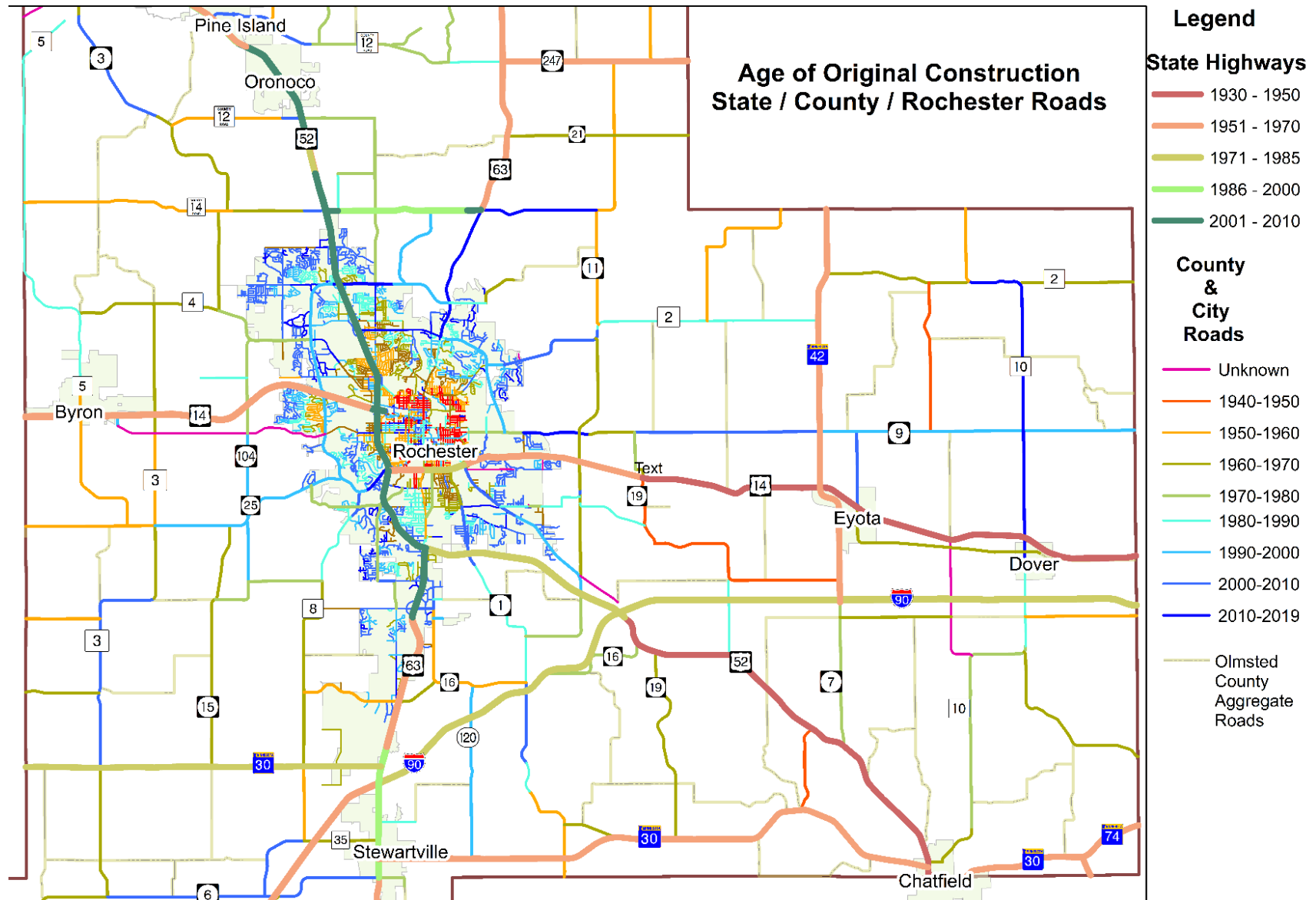
The primary discussion of street system preservation is found in Chapter 15 where it is discussed as part of the financial analysis. Table 10-26 provides some basic metrics of the street network and an estimate of what percentage of each agency’s road network will need

reconstruction by 2045. Overall, it is estimated that 50% of the current road network will have reached its design life and need reconstruction during the next 25 years. Primary roads built before 1995 and secondary roads built before 1975 are prime candidates for reconstruction based on a 50-year design life for primary roads and 70 years for secondary roads (design life assumptions are explained more fully in Chapter 15). Table 10-26 indicates that MnDOT faces the most significant reconstruction burden, with 75% of primary roads and 99% of secondary roads likely to be candidates for reconstruction. Approximately half of the Olmsted County system will reach its expected design life during this time as will 55% of major roads but only 28% of secondary roads (which would include most neighborhood streets) of Rochester.

Table 10-9: Age/Expected Reconstruction Need on MnDOT – Olmsted County – Rochester Roads

	MnDOT		Olmsted		Rochester		Description of % Factors
Total Lane Miles (LM)	488		797		990		
Primary Road LM	348	71%	130	16%	280	28%	% of Total Lane Miles
<i>Built Since 1995</i>	86	25%	66	51%	124	44%	% of Primary Road Lane Miles
<i>Built Before 1995</i>	262	75%	64	49%	156	56%	% of Primary Road Lane Miles
Secondary Road LM	140	29%	668	84%	709	72%	% of Total Lane Miles
<i>Built Since 1975</i>	1	1%	342	51%	509	72%	% of Secondary Lane Miles
<i>Built Before 1975</i>	139	99%	326	49%	200	28%	% of Secondary Lane Miles

Figure 10-22: Year of Original Construction/Reconstruction of Current Road Network



Bridge Preservation Needs

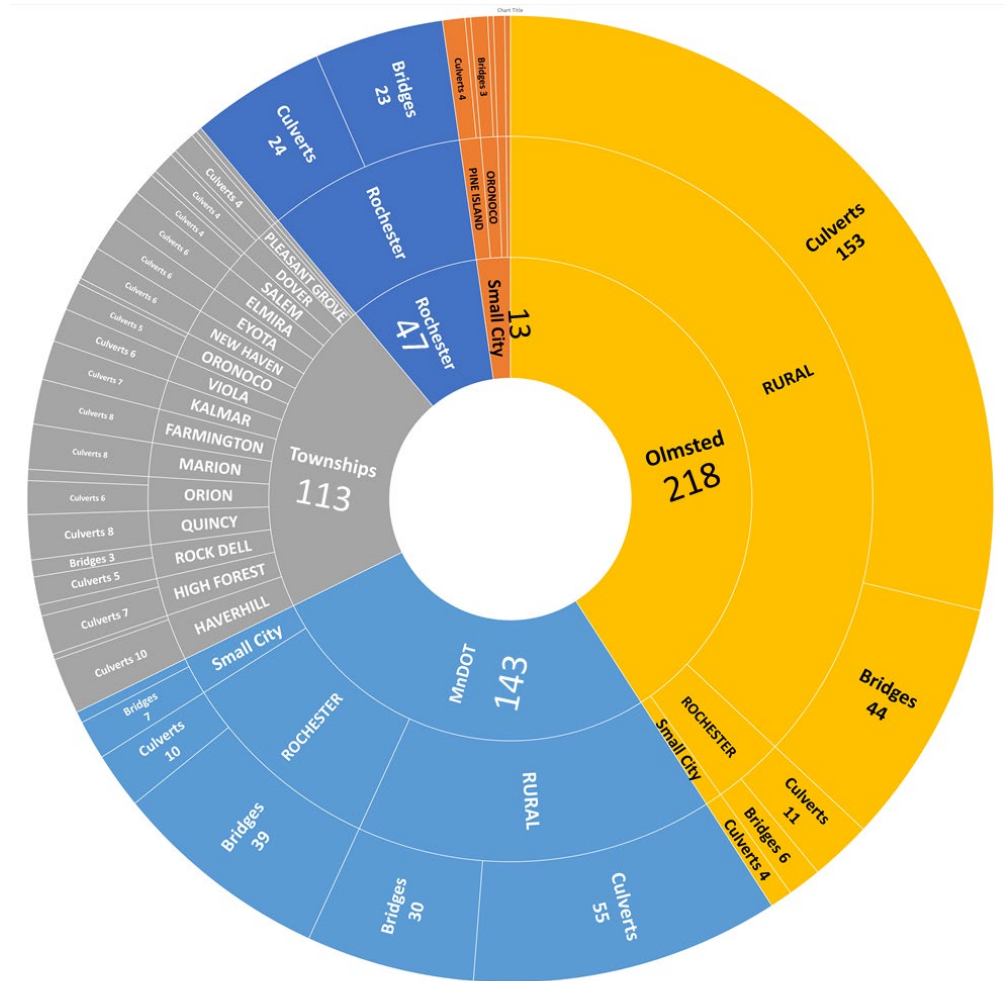
There is a total of 534 bridge structures in the ROCOG planning area that must be maintained to insure ongoing connectivity of the road network. Figure 10-19 illustrates the ownership pattern. Olmsted County owns 41% of the structures plus has the responsibility for managing work on the Township Bridge Network, accounting for another 21% of structures.

Figure 10-20 indicates the results of an analysis by ROCOG indicating bridges expected to need reconstruction or major rehab work over the next 25 years. Table 10-27 reports the number of structures in each category for each jurisdiction. As with street preservation needs, the cost of future work is discussed in Chapter 15.

Table 10-10: Bridge Preservation Needs

Jurisdiction	Estimated Reconstruction Needed	Estimated Major Rehab Needed
MnDOT	19	69
Olmsted	30	93
Rochester	8	5
Townships	26	20
Small Cities	2	4

Figure 10-23: Distribution of Bridge Structures by Owner in ROCOG Area



**Rochester has additional 37 Skyway/Plaza/Trail Structures*

Figure 10-24: Results of ROCOG Bridge Network Analysis Estimating Reconstruction or Major Rehab Needs Through 2045

