Executive Summary

The transportation system of Dakota County, Minnesota, is built around a framework of Principal Arterial (PA) highways, which are well established to the north – for example, the major river crossings (I-35W, I-35E, I-494, US 52, US 61, MN 77, and MN 55). However, possible gaps in the PA system are apparent to the south and east. ***Figure ES-1*** illustrates this, showing which highways are existing principal arterials (red lines) with relative 2015 daily traffic volumes on all highways (line weights).

Designated PA highways include freeways and other highways planned and managed to provide time-efficient and safe travel over long distances for many motorists. These "backbone" highways emphasize mobility over access. PA highways help connect the region with the other areas in the state, carry the major portion of trips to/from activity centers, and serve the majority of through movements.

The Dakota County PA Study focused on planning for selected highways, all of which are not freeways and are not intended to become freeways in the future. The key outcomes are priorities for near-term designation of new PA segments and identification of other segments as recommended future PA highways.

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Need for the Study

Dakota County Growth and Principal Arterial Spacing

Dakota County's highway system has been established to follow the area's growth and development, which continues. US Census data and State Demographer forecasts indicate the County gained 42,648 residents from 2000 to 2010 (a 12 percent increase). The County's population, at 398,552 persons in 2010, is expected to exceed 500,000 persons by 2035.

Technical guidance for spacing of PA highways encourages a network spaced logically within the region:

- 2-6 miles apart in developed suburban growth areas
- 6-12 miles apart in rural areas

With reference to Figure ES-1, Dakota County's existing system includes no east-west PA highways south of County Highway (CH) 42, a distance of about 20 miles. Similarly, the gaps between north-south PAs include 15-20 miles from I-35 to US 52 and about 10 miles from US 52 to MN 316. The PA Study looked at the importance of selected highways based on their potential to fit applicable guidance; specifically:

- County Highway 63 (Argenta Trail)
- MN Highway 3
- MN Highway 149
- County Highway 28 (Yankee Doodle Rd.)
- County Highway 23 (Cedar Ave.)
- County Highway 70
- MN Highway 50
- County Highway 86

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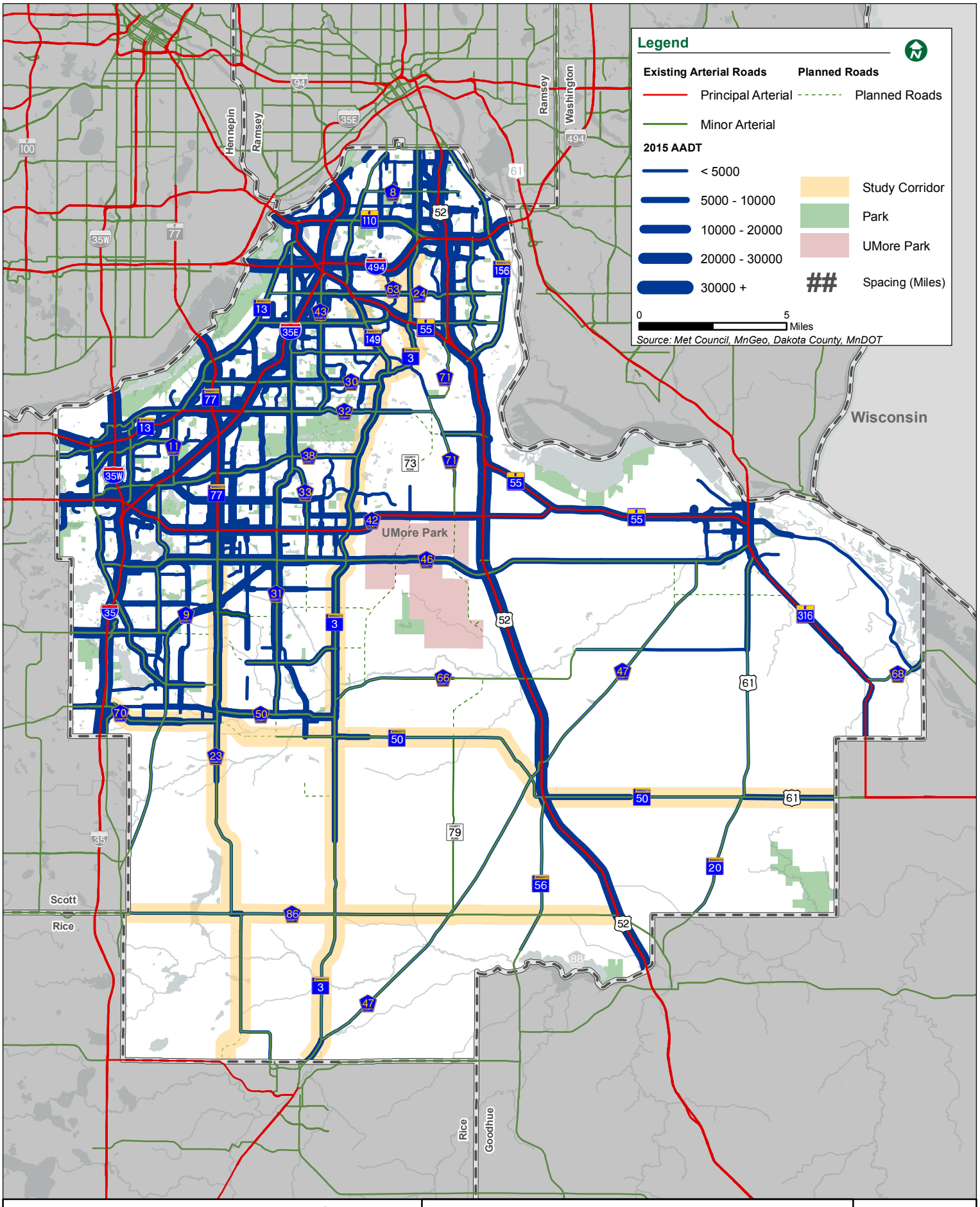

Principal Arterial Study

Dakota County

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Source: MnDOT, Dakota Co, Met. Council

Principal Arterial Corridor Volumes

Figure ES-1

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These corridors, highlighted on Figure ES-1, were identified by Dakota County as the best candidates for future PA designation. All of them exhibit good north-south or east-west continuity and provide connections to important destinations. A one-mile segment of CH 28 (Yankee Doodle Road) was also identified as a possible connection in a future PA system based on its links to CH 63 and MN 149.

Study Objectives

The Study's primary objectives were to evaluate how the above-noted highways are used and the features they exhibit compared with PA highway characteristics. Other objectives included documenting context for the highways and providing guidance to help Dakota County and its partners plan for both regional and local highway system priorities.

The intent of the study was not to identify corridors that require major infrastructure investment or to prioritize improvement needs, but to identify corridors that will be required to provide a PA function for the public either now or in the future. This will allow Dakota County, MnDOT, and the cities to plan for and manage the corridors and supporting road network over time and make appropriate investment to support the PA function at the time they are needed.

Importantly, the Study does not complete a formal decision-making process for designation of new PA highway segments. But it does provide supporting data and guidance on next steps, including identification of a few segments proposed for near-term PA designation (in the coming months or few years). The Study may also serve as a reference for future discussions of highway jurisdictional roles—county vs. state highways.

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While setting priorities for highway system funding was also not a primary objective, designated PA highways have greater potential for National Highway System (NHS) preservation funding and for other federal and state funding programs.

Study Scope, Process, and Partners

All highways addressed in the Study provide continuity over long distances, serving many trips, commuters, and population or employment destinations. Initially, dozens of parameters were considered based on FHWA, MnDOT, Metropolitan Council, and Dakota County guidance. But certain characteristics were found to be most relevant in building the Study's technical framework:

- **Decision characteristics: Does the highway function like a PA?** Decision characteristics concern the suitability of corridors to be future PA highways. The key decision characteristics included system spacing, traffic volumes, system connectivity, capacity role in system, and role in carrying freight.
- **Timing characteristics: Is the highway ready to be a PA?** Timing characteristics are those affecting the "readiness" of the corridor and often provide a basis for additional corridor planning. The key timing characteristics included access spacing, posted speed, high-capacity intersections, transit (in urban areas), right-of-way, and absence of parking.

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Dakota County invited and encouraged participation from a full range of relevant partners, specifically:

- MnDOT
- Metropolitan Council
- Dakota County
- Scott County
- Cities of Apple Valley, Eagan, Farmington, Inver Grove Heights, Lakeville, and Rosemount
- Representatives of the County's 13 townships and rural centers (under 5,000 residents each)

Representatives of these agencies participated in periodic ***Study Management Team*** **(SMT) meetings**. The same agencies, as well as other invited stakeholders, were also involved in a series of four subarea outreach meetings, which were held from late November 2017 into January 2018.

Study Results and Conclusions/Recommendations

Figure ES-2 presents the PA Study's overall conclusions and recommendations. The information below briefly notes how Study conclusions and recommendations were reached, including consideration of input from outreach meetings. More details are provided in the full Final Report A.

North Subarea – Eagan, Inver Grove Heights, and Rosemount MN 149, CH 63, CH 28, and MN 3

This is a developed urban part of Dakota County and exhibits some of the highest traffic volumes observed on PA Study highways. Discussions of this area noted close spacing between MN 149, CH 63 (a planned new connection to I-494), and close spacing for MN 3 to the north and constraints from development on MN 3 in downtown Rosemount. Considering these and other unique characteristics, a one-mile segment of CH 28 connecting CH 63 and MN 149 was added to the Study.

Conclusions. *Because of close spacing and roles in serving future traffic, the northern-most segments of MN 149 and MN 3 are not recommended as future PA highways. All other segments in the North Subarea are recommended as future PA highway routes, but not for near-term designation. CH 63 is noteworthy in the Study as a special case because it is a planned, partially completed, new corridor with right-of-way reserved for a future access-managed arterial connecting to I-494.*

West Subarea – Apple Valley and Lakeville CH 23 and CH 70

Like the North, the West Subarea is mostly developed and exhibits some of the highest traffic volumes observed on PA Study highways. Discussions for this area focused on the current and future roles of CH 23 (north-south) and CH 70 (east-west), including the proposed future eastward extension of CH 70 to Farmington and to MN 50 and US 61 (see more below in the East Subarea section).

Conclusions. *The Study found that CH 23 and CH 70 exhibit regional importance now and in the future; additionally, these links have available rights-of-way, good access spacing/management, and high posted speeds. The two segments, which connect to each other and to I-35 on the west, are recommended for near-term designation as PA highways (Figure ES-2). In the coming months or few years, Dakota County will work with the two cities, as well as the Metropolitan Council and MnDOT, to officially determine a functional classification change. The one other segment in the West Subarea (CH 70 west of I-35) is recommended as a future PA highway route, but not for near-term designation.*

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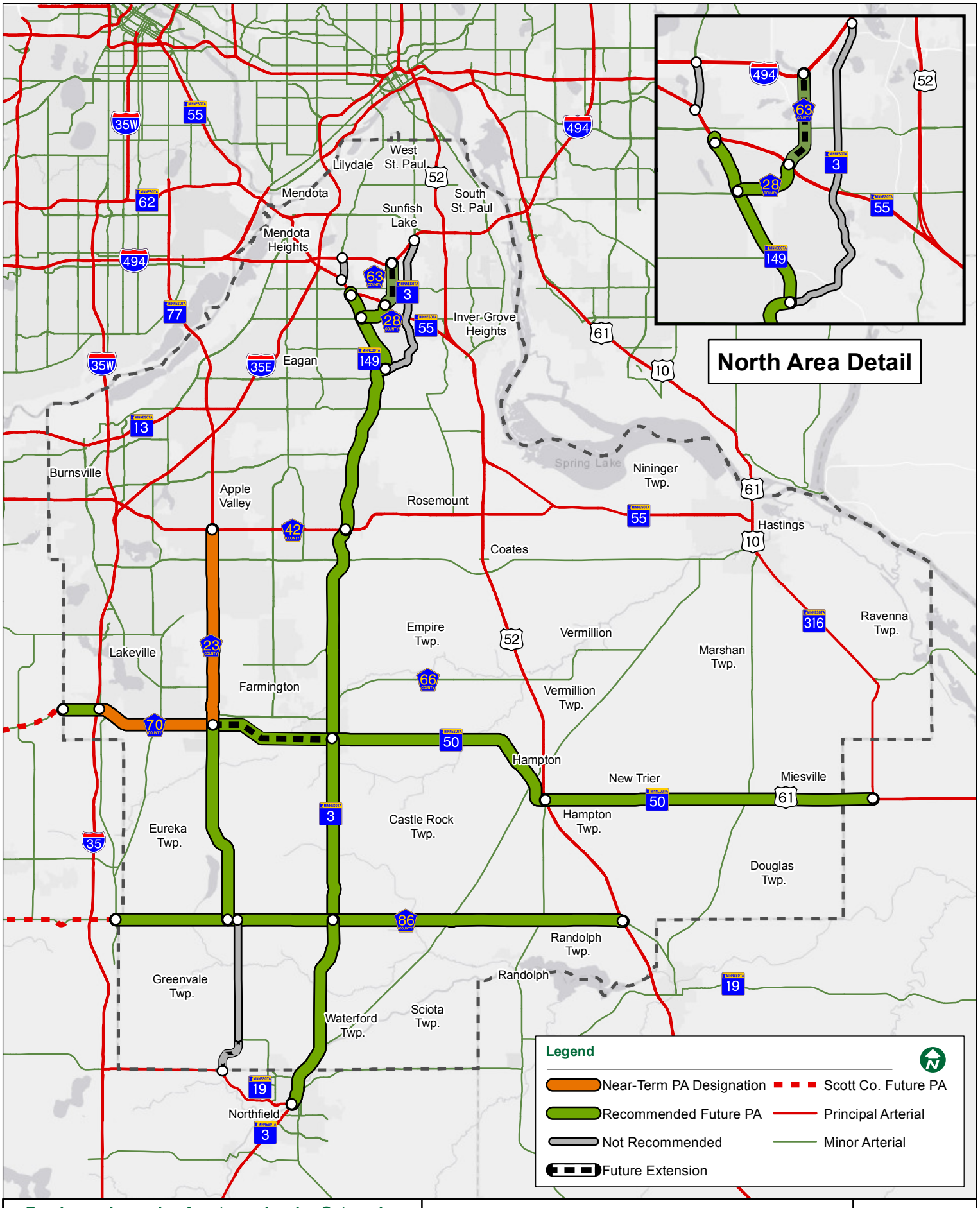

Principal Arterial Study

Dakota County

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Study Conclusions & Recommendations

Figure ES-2

East Subarea – Farmington, Hampton, and Rural Townships to East CH 70 (Future Connection), MN 3, MN 50, and US 61

The East Subarea has important connections to the North and West Subareas via MN 3 and the future connection to CH 70. Transitional land use is an important characteristic, with both urban and rural areas observed. As noted for the West Subarea above, the future regional importance of the CH 70 – CH 50 - MN 50 - US 61 corridor is also a consideration to the east. The Study noted the need to manage highway access and mobility through the small but growing communities to the east – Hampton, New Trier, and Miesville.

Conclusions. *The East Subarea's highway segments reflect PA characteristics and all are recommended as future PA highway routes, but not for near-term designation. As noted for both the West and East Subareas, the regional importance of this multi-jurisdictional corridor for future mobility, and planning for future demands, should be considered in future studies.*

South Subarea – Southern Lakeville/Farmington and Rural Townships to South CH 23, MN 3, and CH 86

The South Subarea is rural, but includes future growth areas. With few local traffic generators, the highways in the South are often used for through trips and provide important connections to jobs and commerce. The system issues for this subarea include connectivity to the north, to I-35, to Northfield, and to Rochester via US 52, an existing PA. Discussions of this subarea noted that CH 86 has some limited rights-of-way and no interchange with I-35. The close spacing of parallel segments of MN 3 and CH 23 was also noted.

Conclusions. *The segments in the South Subarea typically fit the characteristics of PA highways. However, the spacing is close between the southern-most portions of CH 23 and MN 3, and relative importance in connecting to Northfield is an issue as noted above. Therefore, MN 3 is recommended as a future PA segment connecting to Northfield; CH 23 south of CH 86 is not recommended as a future PA. All other segments of CH 23, MN 3, and CH 86 are recommended as future PA highway routes, but not for near-term designation based on timing/readiness issues.*

Next Steps

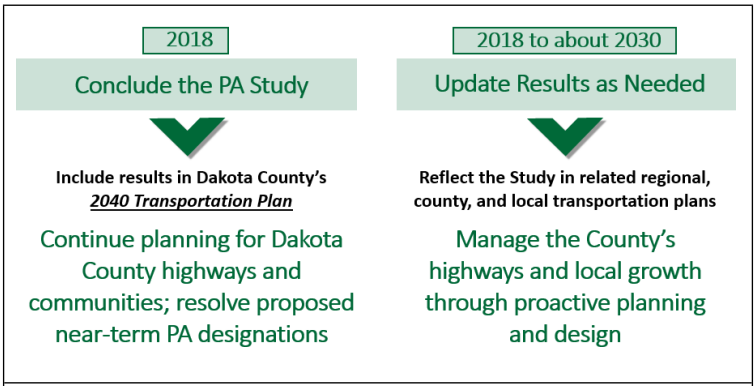

FIGURE ES-3. SUMMARY OF NEXT STEPS

The Dakota County PA Study concludes with the above-noted conclusions and recommendations, including the proposed near-term official designation of CH 70 east of I-35 and CH 23 north of CH 70 as PA highways (West Subarea). ***Figure ES-3*** summarizes next steps, which will include noting recommendations in the County's *2040 Transportation Plan*. The proposed near-term designations will be formally addressed in the coming months or years with the Metropolitan Council and MnDOT. This Study's results, which include several recommendations to manage all of the recommended future PA highways, will be updated periodically and reflected in transportation plans.