# Welcome

# HIGHWAY 212

## Corridor Access Management, Safety & Phasing Plan

## Agenda

- 6:00 to 7:00 p.m. - **Open House** - Highway 212 Update
- 7:00 to 8:00 p.m. - **Southwest Corridor Transportation Coalition Candidates Forum**

CARVER COUNTY

MINNESOTA DEPARTMENT OF TRANSPORTATION

SRF Consulting Group, Inc. | Engineers Planners Designers

# Study Background

- **The purpose of the Highway 212 Corridor project is to improve access management and safety in the corridor, while working towards the long-term conversion of the corridor to a four-lane facility. Key objectives throughout this study include the following:**

  ✓ Improve safety and access management through interim improvements.

  ✓ Ready interim improvements for implementation.

  ✓ Increase project readiness of the Cologne to Carver segment for future highway expansion.

  ✓ Develop potential funding strategies and seek funding.

  ✓ Coordinate and communicate with project partners and the public.

## Project Contact Information:


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## Project Partners

Minnesota Department of Transportation

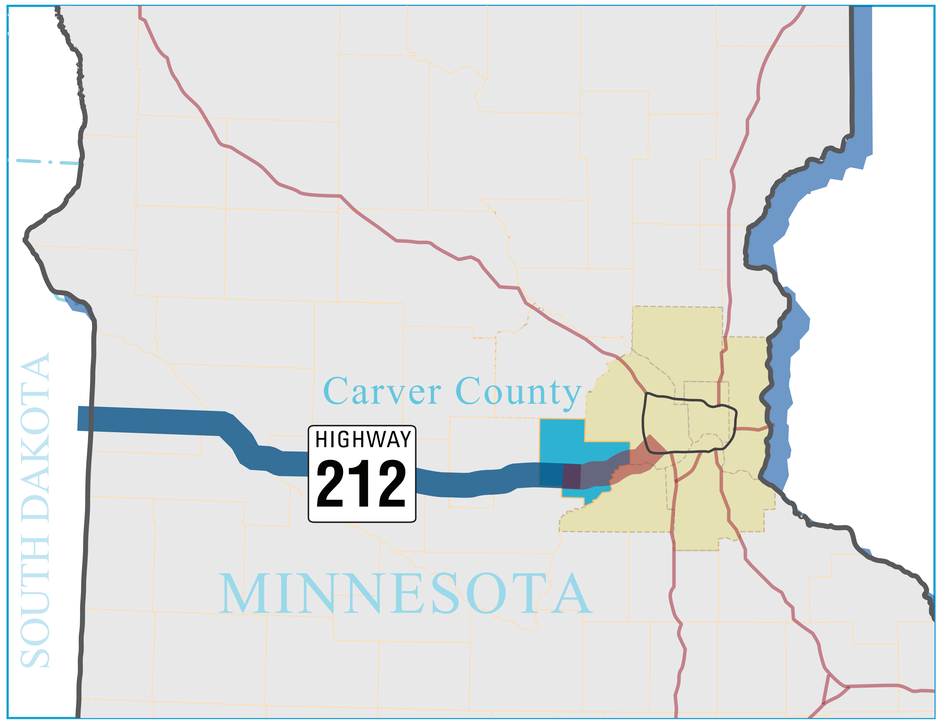
Carver County

SW Corridor Transportation Coalition

# Highway 212 Project Importance

## Important Arterial Route

- Highway 212 is a major route that connects many communities in western Minnesota with the Twin Cities.




## Local Support

- 41 agencies passed resolutions supporting the upgrade to Highway 212 in Carver County.

## Two-Lane Gaps (IRC Metro)

- Highway 212 in Carver County is the only two-lane Interregional Corridor (IRC) in the seven county metro area.

## Significant Freight Use

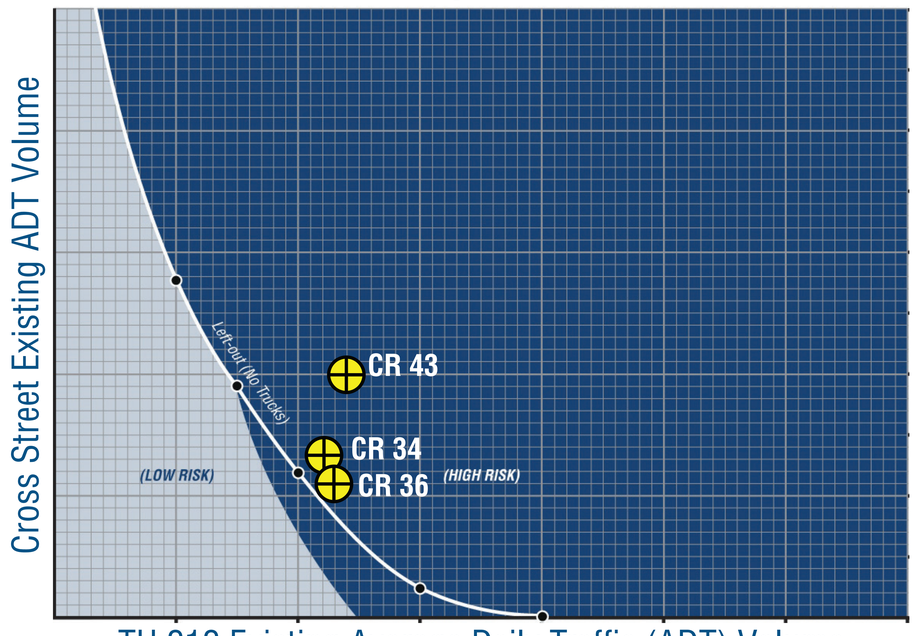
- Over three million truck miles are traveled on the corridor annually. This accounts for 13 to 15% of the usage on the corridor, which exceeds MnDOT's typical volume of 8 to 10%.

# Highway 212's Safety Issues

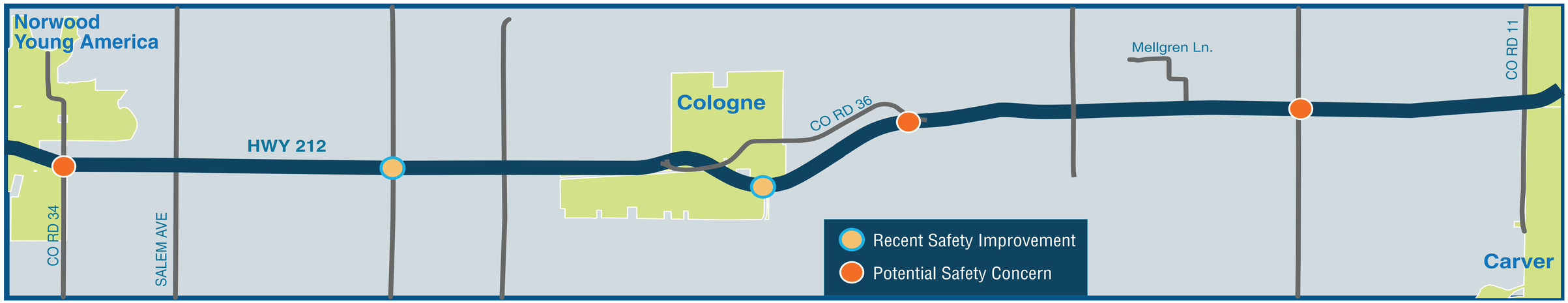
## Safety

- The segment between Carver and Cologne has two intersections that exceed the critical crash rate* and are high-risk intersections (CR 36 & CR 43). This is a result of large traffic volumes along the corridor and side streets, which impact the safety of vehicles entering or crossing Highway 212.
- The segment between Norwood Young America & Cologne has one intersection that exceeds the critical crash rate* and is a high-risk intersection (CR 34).

### Two-Lane Roadway & Gap Assessment




## Highway 212 Safety Analysis




Crashes analyzed are over the last 5-years (2008-2012). Crash rates are compared to other similar segments and intersections to determine safety concerns.

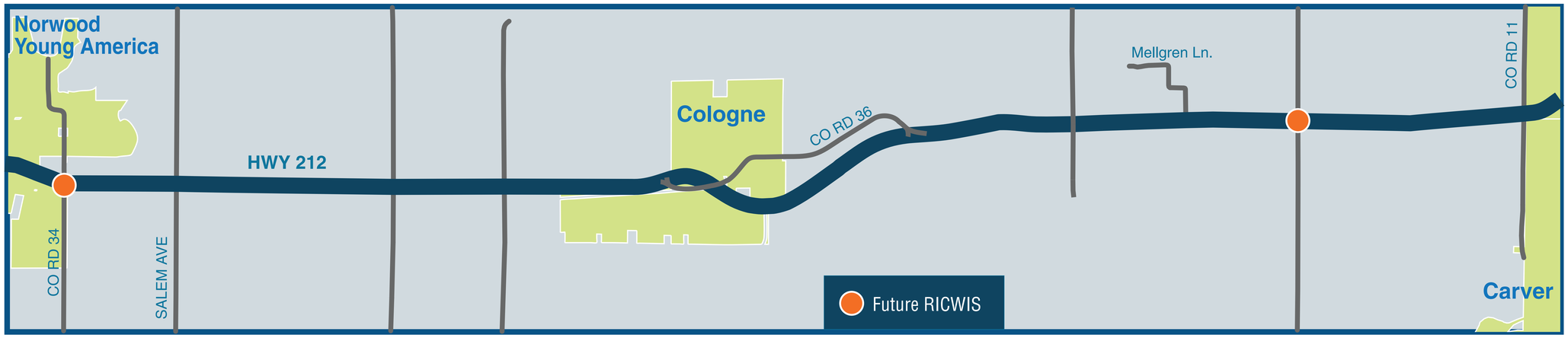
** The critical crash rate is calculated to determine the statistical significance of the actual crash rates. If the actual crash rate is above the critical crash rate, the crashes can be considered related to a geometric design or traffic control issues. If it is below the critical crash rate, the crashes can be considered to have occurred randomly.*

# Rural Intersection Conflict Warning Systems (RICWS)

- The goal of the RICWS is to reduce fatal and serious injury crashes at rural non-signalized intersections. RICWS use a combination of static signing, detection, and dynamic elements, to provide drivers with a dynamic warning of other vehicles approach the intersection.

## RICWS in Carver County

- Carver County and MnDOT are pursing interim safety improvements at County Road 34 and 43, which will include RICWS. These intersections have been identified by the study as high crash/high risk intersections.




## Precedent Examples of RICWS





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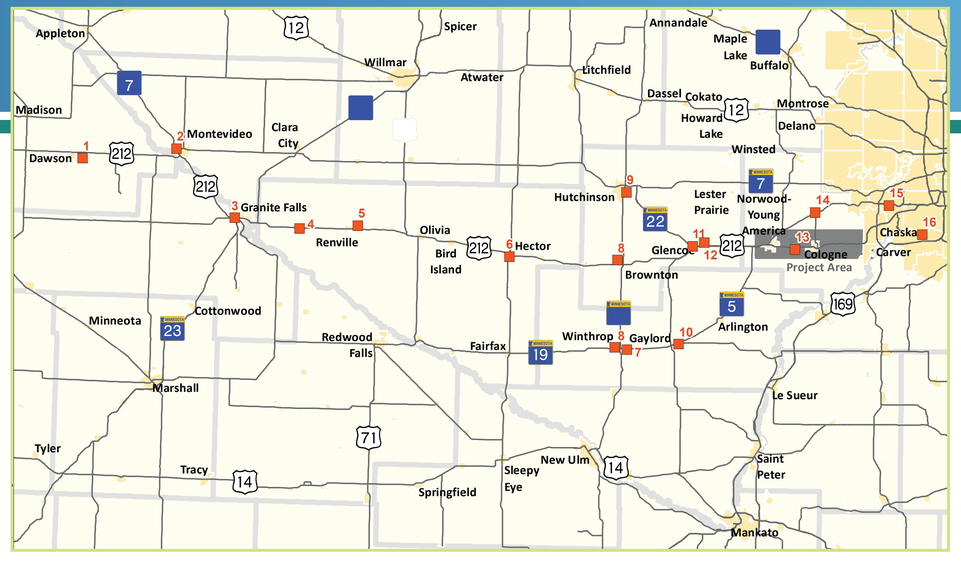
# Freight Interviews

- As part of the recent Highway 212 study, the Project Management Team (PMT)reached out to the freight community to better understand their needs along the Highway 212 corridor between the Twins Cities and South Dakota.
- Interviews represent 22% of truck traffic on Highway 212.




# Key themes from the interviews included:

1. Maintaining high average speed (preferably 55-65 miles per hour) is important
2. Smooth pavements are desired to reduce damage
3. Wider shoulders are necessary for recovery areas and emergency pullovers
4. Turn lanes at major intersections are essential for safety purposes
5. Highway 212 is a major freight corridor & is a vital component to the state's economic prosperity
6. All interviews support a four-lane facility to eliminate significant freight flow bottlenecks and meet shippers' mobility and safety needs

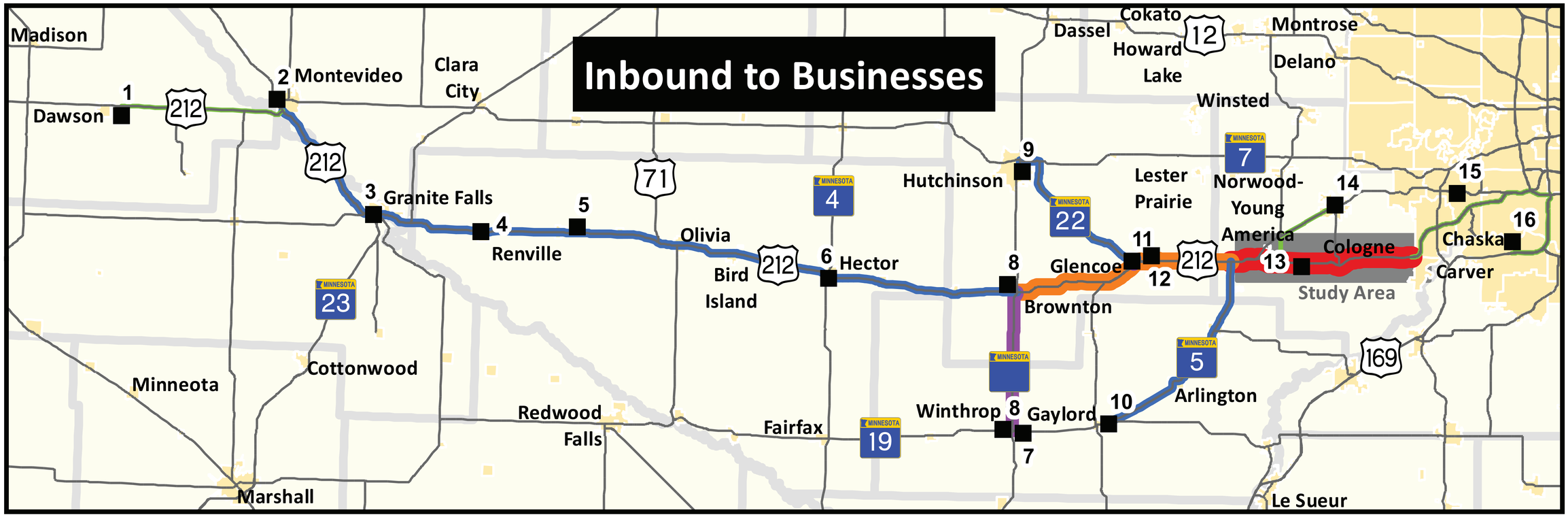
# Important Factors for Businesses

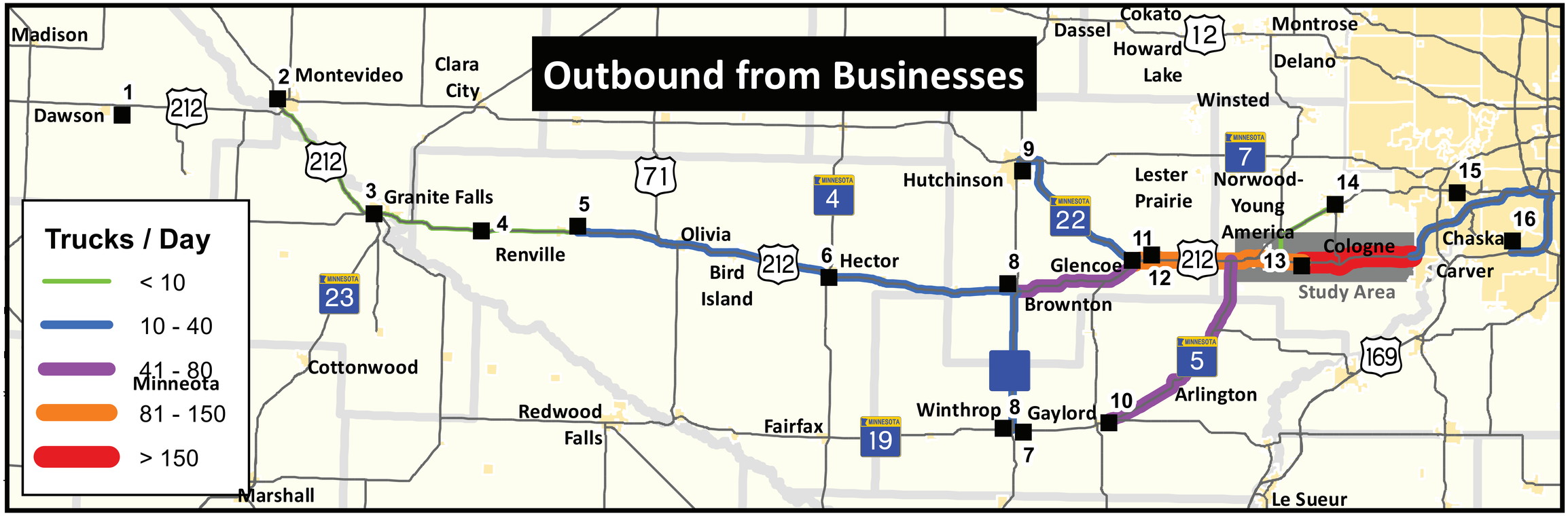
- The following table documents the importance of key freight factors for businesses through the study area.

| Important Factors for Freight Movement | Importance to Business |
|---|---|
| • Safety | 94% |
| • Transit Time (Speed) | 88% |
| • Shipping Cost | 44% |
| • Travel Time Reliability | 44% |

# Heavy Commercial Average Daily Traffic

# Average Daily Traffic Generated by 16 Interviewed Businesses



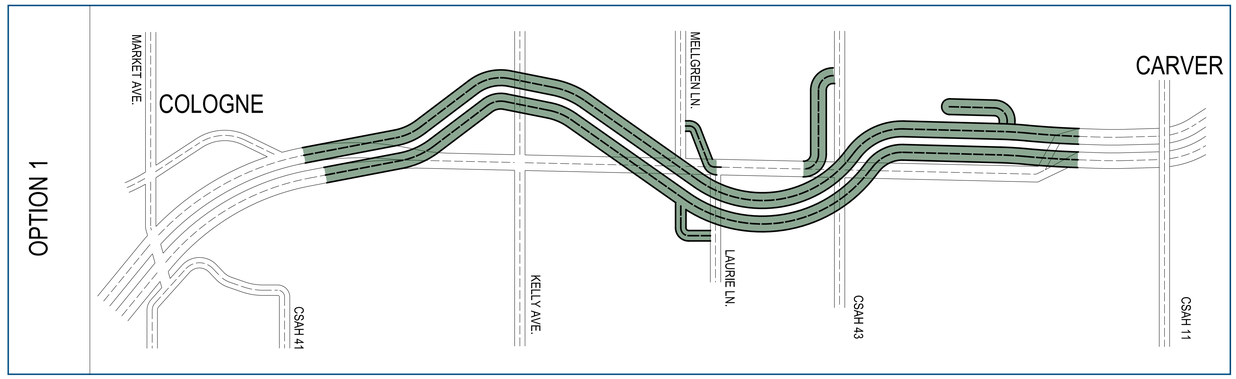




Legend: ■ = Interviewed Businesses

# Design Options

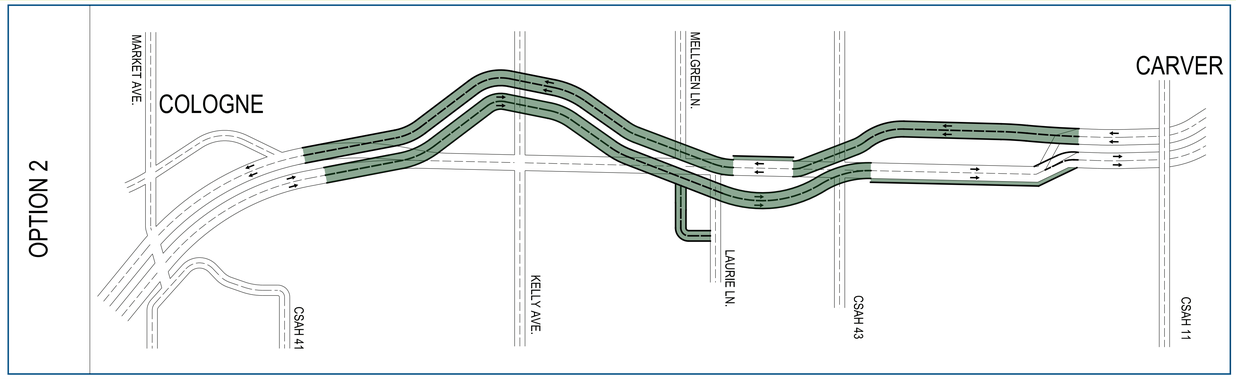
## ✓ Option 1 – Ultimate Four Lane

Option 1 represents the layout prepared in 2009 for the Environmental Assessment (EA), which constructs a new four-lane divided facility throughout the entire segment length. As part of this layout, some frontage and backage roadways will be created utilizing existing TH 212 pavement.



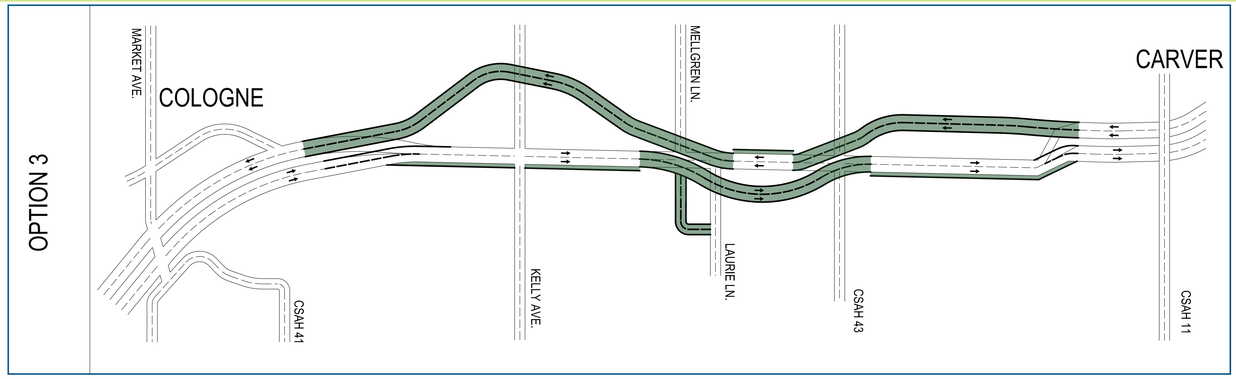

## ✓ Option 2 – Hybrid Four Lane

**Option 2 utilizes the Ultimate Four Lane layout in its entirety from the west end of the segment to Mellgren Lane; from this point to the east termini at CSAH 11, the current two-lane roadway will be used for two-lanes of traffic and a second two-lanes will be constructed adjacent to the current route.**




## ✓ Option 3 – Modified Four Lane

Option 3 utilizes a portion of the Ultimate Four Lane layout; the eastbound lanes from the west end to Mellgren Lane will become the new westbound lanes. From the west end to Mellgren Lane, the existing two lanes will be used as the new eastbound lanes; from Mellgren Lane to the east, the existing two lanes will be used for two lanes of traffic and two new lanes will be constructed adjacent to the current route.




## ✓ Option 4 – No Build/Interim Improvements

Option 4 includes the widening of the existing mainline shoulders (four-feet to ten-feet) and includes addressing anticipated preservation needs (e.g., resurfacing and culvert repairs). This option does not include the expansion of a two-lane facility to four-lane roadway.

# Evaluation Goals, Objectives and Criteria

## Evaluation Goals

1. Maximize and leverage existing public infrastructure resources.
2. Continue to advance the corridor toward a four-lane facility, while improving safety & mobility.
3. Focus on needs of corridor's users (e.g., residents, businesses and the freight community).

## Evaluation Objectives

1. If possible, use more of the existing alignment and right-of-way to reduce cost and limit right-of-way acquisitions.
2. Improve the reliability of the corridor for all users of the corridor, as well as the movement of goods and agricultural products to/from rural Minnesota producers/manufactures to the Twin Cities markets and transshipment terminals.
3. Build upon already completed official mapping, engineering and environmental documentation to provide "shovel-ready" implementation.

## Evaluation Criteria

- Based on the goals and objectives,a set of evaluation criteria was established to compare four design options against various planning elements. The intent behind this process is to distinguish the benefits and challenges with each option.  As a result, Option 2 aligns with the majority of the evaluation criteria.

# Evaluation Criteria

Criteria #1: **Mobility** – Each option was evaluated to determine its mobility benefits by adding capacity to the system (i.e., two-lane roadway to a four-lane roadway).

Criteria #2: **Safety** – Each option was evaluated to determine its safety benefits.

Criteria #3: **Freight** – Each option was evaluated to determine safety and mobility benefits for freight vehicles.

Criteria #4: **Environmental Review** – Each option was evaluated to determine if modifications will be needed to the 2009 Environmental Assessment (EA).

Criteria #5: **Conflict Points** – Each option was evaluated to identify the reduction of existing conflict points.

Criteria #6: **Right-of-Way** – Each option was evaluated to determine right-of-way acquisition needs (i.e., number of parcels, number of acres, and acquisition costs).

Criteria #7: **Right-of-Way Needs Beyond Official Map** - Each option was evaluated to determine if any modifications will be needed to the 2010 Official Map.

Criteria #8: **Landlocked** – Each option was evaluated to identify the parcels that would become landlocked between existing and proposed lanes; in addition to the cost associated with acquiring those parcels.

Criteria #9: **Historical Impacts** – Each option was evaluated to determine potential impacts associated with the historical home located at the northeast quadrant of TH 212 and Kelly Avenue.

Criteria #10: **Existing Property Accessibility** – Each option was evaluated to determine the alignment's proximity and impact to existing residential homes.

Criteria #11: **Project Phasing** – Each option was evaluated to determine its feasibility of being phased over a period of time.

Criteria #12: **Construction Staging** – Each option was evaluated to determine the feasibility of staging improvements during construction to minimize impacts to residents and businesses, while minimizing traffic delays.

Criteria #13: **Project Cost** – Each option was evaluated to determine approximate construction costs (2014 dollars).

Criteria #14: **State / Regional Plans** – Each option was evaluated to determine its consistency with state and regional plans & policies.

# Decision Matrix

**Legend**

- The design option provides the greatest benefit in achieving the planning element or low impact.
- The design option provides some benefit in achieving the planning element or moderate impact.
- The design option provides little or no benefit in achieving the planning element or high impact.

| Design Options | 1. Mobility | 2. Safety | 3. Freight | 4. Environmental Review | 5. Conflict Points | 6. Right of Way | 7. Right of Way Needs Beyond Official Map | 8. Landlocked | 9. Historical Impacts | 10. Existing Property Accessibility | 11. Project Phasing | 12. Construction Staging | 13. Project Cost | 14. State/Regional Plans |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Option 1 (Ultimate)** | Increase traffic capacity & mobility | Two lane to four lane conversion results in crash reduction of 22% | Provides mobility / safety benefits for freight | Review of Environmental Document required | Reduces conflict points by 61% | Approximately 190 acres of ROW needed | Official map is completed; No additional ROW needed | Approximate 40 acres severed | No impact to historical property | Shifts travel lane(s) away from some residents. | Improvements may be phased over time | Lesser impacts to traffic | Highest Construction Cost (approx. $74M) | Updates and amendments needed to state and regional plans. |
| **Option 2 (Hybrid)** | Increase traffic capacity & mobility | Two lane to four lane conversion results in crash reduction of 22% | Provides mobility / safety benefits for freight | Update of Environmental Document required | Reduces conflict points by 51% | Approximately 175 acres of ROW needed | Approximate 7 acres additional ROW needed | Approximate 40 acres severed | No impact to historical property | Shifts travel lane(s) away from some residents. | Improvements may be phased over time | Lesser impacts to traffic | Mid-Range Construction Cost (approx. $59M) | Updates and amendments needed to state and regional plans. |
| **Option 3 (Modified)** | Increase traffic capacity & mobility | Two lane to four lane conversion results in crash reduction of 22% | Provides mobility / safety benefits for freight | Update of Environmental Document required | Reduces conflict points by 49% | Approximately 210 acres of ROW needed | Approximate 41 acres additional ROW needed; includes probable landlocked parcel acquisitions | Approximate 40 acres landlocked | Possible impact to historical property | Shifts travel lanes(s) to both sides of some residents. | Improvements may be phased over time | Lesser impacts to traffic | Mid-Range Construction Cost (approx. $53M) | Updates and amendments needed to state and regional plans. |
| **Option 4 (No Build/ Interim Improvements)** | Provides some mobility with wider shoulders, but adds no capacity | Interim safety improvements (e.g., wider shoulders and RICWS) will provide some safety benefits. | Provides some freight benefits by adding wider shoulders for emergency stops. | Update of Environmental Document required | Reduces conflict points by 0% | Approximately 30 acres of ROW needed | Approximate 14 acres additional ROW needed | No land locked parcels | No impact to historical property | Does not change existing configuration | Improvements may be phased over time | Would require closures and greater impacts to traffic | Lowest Construction Cost (approx. $11M) | Consistent with state and regional plans. |