# Ramsey Gateway Highway 10 Project

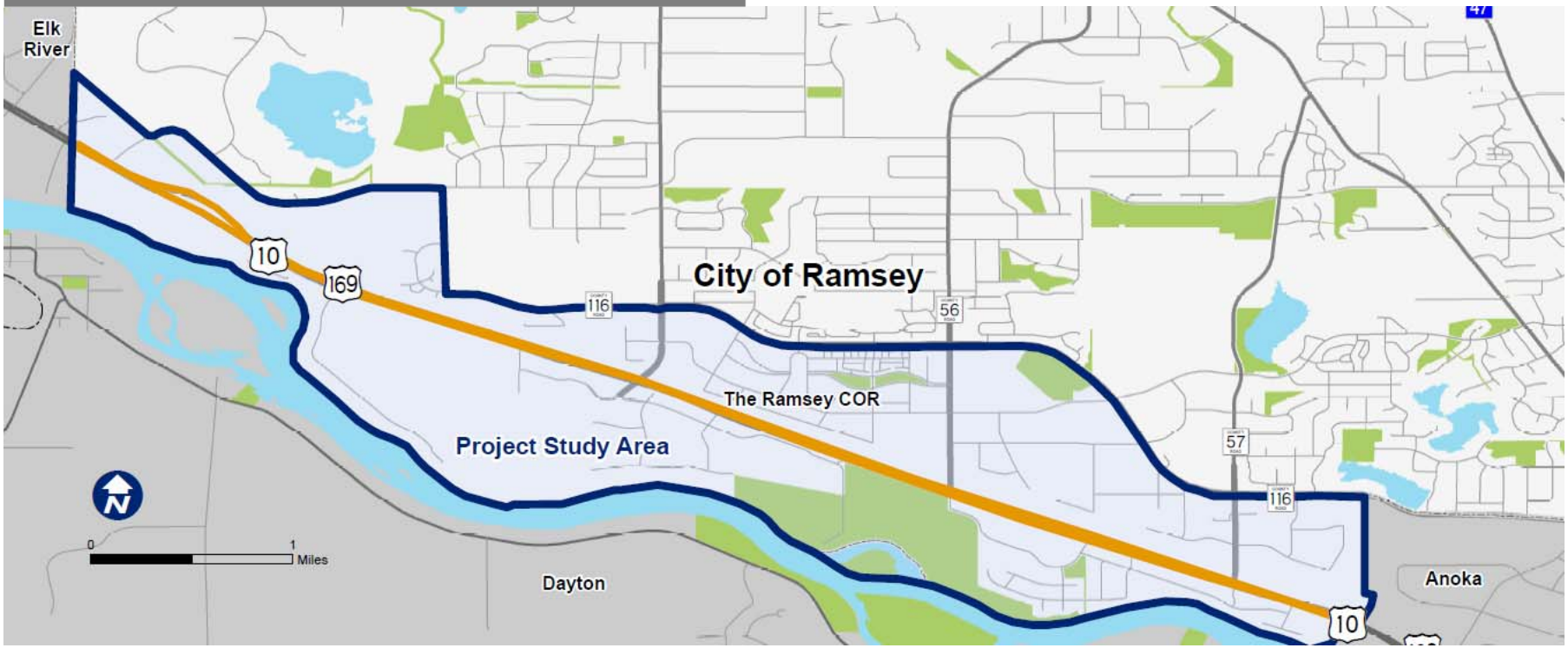
## City Council Workshop

January 29, 2019

CITY OF RAMSEY
GATEWAY

# Meeting Overview

- ✓ Study Recap
- ✓ Purpose of Council Update
- ✓ Draft Improvement Concepts
- ✓ Concept Evaluation
- ✓ Schedule and Next Steps

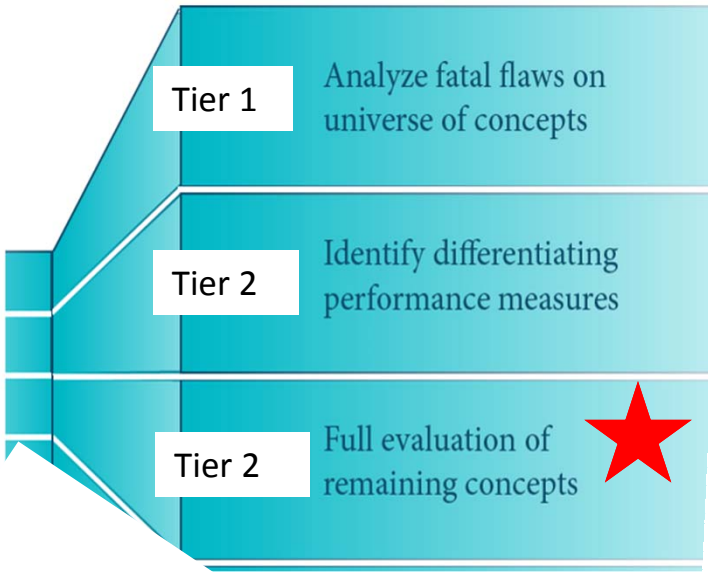


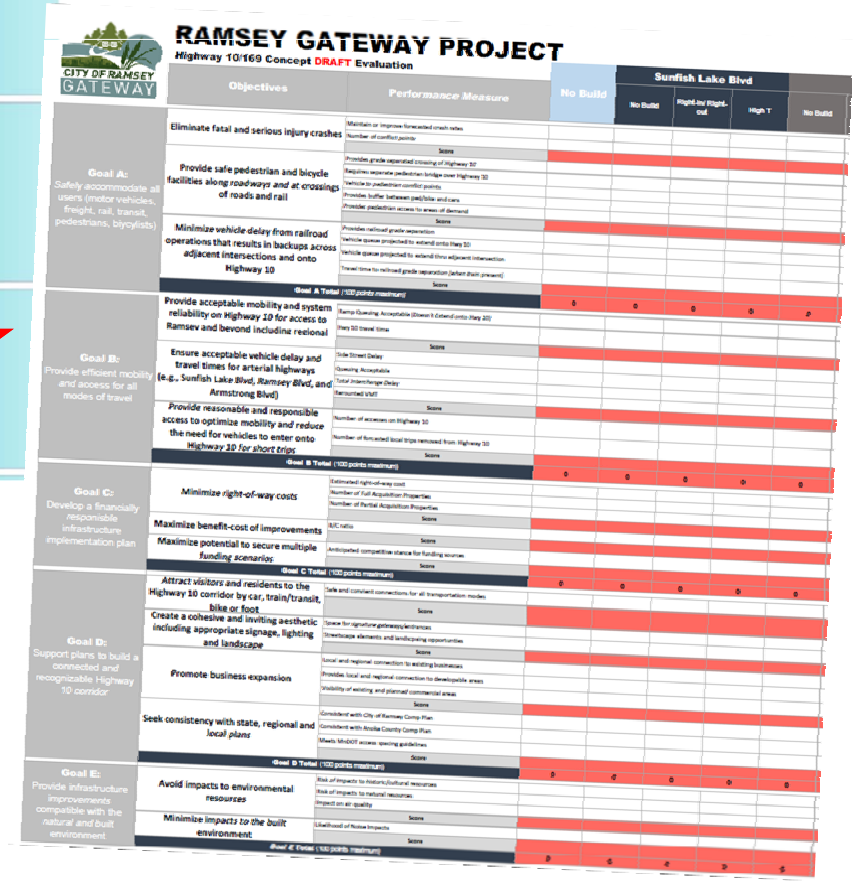
# Ramsey Blvd Concepts – See Link

- Railroad Grade Separation Options
- Standard Diamond
- Tight Diamond
- Folded EB On Tight Diamond
- Folded WB Off Tight Diamond
- Folded EB On & WB Off Tight Diamond
- Folded EB On & Semi-folded WB Off Tight Diamond
- Single Point Urban Interchange (SPUI)
- Overpass with Right-In/Right-Out

# Concept Evaluation Process

Universe of Concepts



RAMSEY GATEWAY PROJECT

Highway 10/169 Concept DRAFT Evaluation

| Objectives | Performance Measure | No Build | Sunfish Lake Blvd | | | |
|---|---|---|---|---|---|---|
| | | | No Build | Right-in/ Right-out | High T | No Build |
| Goal A: Safely accommodate all users (motor vehicles, freight, rail, transit, pedestrians, bicyclists) | | | | | | |
| Eliminate fatal and serious injury crashes | Maintain or improve forecasted crash rates | | | | | |
| | Number of conflict points | | | | | |
| | Score | | | | | |
| Provide safe pedestrian and bicycle facilities along roadways and at crossings of roads and rail | Provides grade separated crossing of Highway 10 | | | | | |
| | Requires separate pedestrian bridge over Highway 10 | | | | | |
| | Vehicle to pedestrian conflict points | | | | | |
| | Provides buffer between ped/bike and cars | | | | | |
| | Provides pedestrian access for areas of demand | | | | | |
| | Score | | | | | |
| Minimize vehicle delay from railroad operations that results in backups across adjacent intersections and onto Highway 10 | Provides railroad grade separation | | | | | |
| | Vehicle queue projected to extend onto Hwy 10 | | | | | |
| | Vehicle queue projected to extend thru adjacent intersection | | | | | |
| | Travel time for railroad grade separation (when train present) | | | | | |
| | Score | | | | | |
| Goal A Total (100 points maximum) | | | | | | |
| Goal B: Provide efficient mobility and access for all modes of travel | | | | | | |
| Provide acceptable mobility and system reliability on Highway 10 for access to Ramsey and beyond including regional | Ramp Queuing Acceptable (Doesn't Extend onto Hwy 10) | | | | | |
| | Hwy 10 travel time | | | | | |
| | Score | | | | | |
| Ensure acceptable vehicle delay and travel times for arterial highways (e.g., Sunfish Lake Blvd, Ramsey Blvd, and Armstrong Blvd) | Side Street Delay | | | | | |
| | Queuing Acceptable | | | | | |
| | Total Intersection Delay | | | | | |
| | Ramsmead V/C | | | | | |
| | Score | | | | | |
| Provide reasonable and responsible access to optimize mobility and reduce the need for vehicles to enter onto Highway 10 for short trips | Number of accesses on Highway 10 | | | | | |
| | Number of non-external local trips removed from Highway 10 | | | | | |
| | Score | | | | | |
| Goal B Total (100 points maximum) | | | | | | |
| Goal C: Develop a financially responsible infrastructure implementation plan | | | | | | |
| Minimize right-of-way costs | Estimated right-of-way cost | | | | | |
| | Number of Full Acquisition Properties | | | | | |
| | Number of Partial Acquisition Properties | | | | | |
| | Score | | | | | |
| Maximize benefit-cost of improvements | B/C ratio | | | | | |
| | Score | | | | | |
| Maximize potential to secure multiple funding scenarios | Anticipated competitive stance for funding sources | | | | | |
| | Score | | | | | |
| Goal C Total (100 points maximum) | | | | | | |
| Goal D: Support plans to build a connected and recognizable Highway 10 corridor | | | | | | |
| Attract visitors and residents to the Highway 10 corridor by car, train/transit, bike or foot | Safe and coherent connections for all transportation modes | | | | | |
| | Score | | | | | |
| Create a cohesive and inviting aesthetic including appropriate signage, lighting and landscape | Space for signature gateways/entrances | | | | | |
| | Streetscape elements and landscaping opportunities | | | | | |
| | Score | | | | | |
| Promote business expansion | Local and regional connection to existing businesses | | | | | |
| | Provides local and regional connection to developable areas | | | | | |
| | Visibility of existing and planned commercial areas | | | | | |
| | Score | | | | | |
| Seek consistency with state, regional and local plans | Consistent with City of Ramsey Comp Plan | | | | | |
| | Consistent with Anoka County Comp Plan | | | | | |
| | Meets MnDOT access spacing guidelines | | | | | |
| | Score | | | | | |
| Goal D Total (100 points maximum) | | | | | | |
| Goal E: Provide infrastructure improvements compatible with the natural and built environment | | | | | | |
| Avoid impacts to environmental resources | Risk of impacts to historic/cultural resources | | | | | |
| | Risk of impacts to natural resources | | | | | |
| | Impact on air quality | | | | | |
| | Score | | | | | |
| Minimize impacts to the built environment | Likelihood of Noise Impacts | | | | | |
| | Score | | | | | |
| Goal E Total (100 points maximum) | | | | | | |

# Evaluation Measures - Differentiators

| Project Goals | Measures |
|---|---|
| Safely accommodates all users | Pedestrian-Vehicle Conflict Points |
| | Perceived Pedestrian Comfort |
| Provide efficient mobility and access for all modes of travel | Design Year Traffic Operations |
| | Requires a Separate Pedestrian Bridge |
| | Community Connectivity – Provides all movements |
| | Provides Railroad Grade Separation |
| | Ease of Business Access – Retail |
| | Ease of Business Access – Industrial |
| | Access to Business Park |
| Compatible with the natural and built environment | Potential Property Impacts* |
| | Impact to Regional Park |
| | Impact to Public Works Campus |
| Develop a financially responsible infrastructure implementation plan | Relative Cost Comparison |
| | Constructability/Long Term Maintanance |
| Support plans to build a connected and recongnizable Highway 10 corridor | Likelihood of Railroad Approval |
| | Agency Support to Carry Concept Forward |

*Assessment based on planning-level concepts and will require further review to verify actual impacts.

# Ramsey Blvd Evaluation

| Measures | | No Build | RAMSEY BLVD OVER RAILROAD CONCEPTS | | | | | | | | RAMSEY BLVD UNDER RAILROAD CONCEPTS | | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | Standard Diamond | Tight Diamond | Folded EB On Tight Diamond | Folded WB Off Tight Diamond | Folded EB On & WB Off Tight Diamond | Folded EB On & Semi-Folded WB Off Tight Diamond | Overpass with Right-In/Right-Out | Single Point Urban Interchange (SPUI) | Standard Diamond | Tight Diamond | Folded EB On Tight Diamond | Folded WB Off Tight Diamond | Folded EB On & WB Off Tight Diamond | Folded EB On & Semi-Folded WB Off Tight Diamond | Overpass with Right-In/Right-Out | Single Point Urban Interchange (SPUI) | |
| Pedestrian-Vehicle Conflict Points | | 13 | 23 | 23 | 43 | 27 | 47 | 47 | 27 | 23 | 23 | 23 | 43 | 27 | 47 | 47 | 27 | 23 | Conflict points were counted where crosswalks and sidewalk connections will be provided |
| Perceived Pedestrian Comfort | | | | | | | | | | | | | | | | | | | |
| Design Year Traffic Operations | | | | | | | | | | | | | | | | | | | Design year 2045 |
| Ease of Business Access - Retail | From EB TH 10 | N/A | N/A | | | | | | | | N/A | | | | | | | | Assume traveling to Holiday Gas Station.<br>Green - addr <60 seconds<br>Yellow - addr 60-120 seconds<br>Red - addr 120+ seconds |
| | From WB TH 10 | N/A | N/A | | | | | | | | N/A | | | | | | | | |
| Ease of Business Access - Industrial | From EB TH 10 | N/A | | | | | | | | | | | | | | | | | Assume traveling to 143rd Ave at Ebony St<br>Green - addr <60 seconds<br>Yellow - addr 60-120 seconds<br>Red - addr 120+ seconds |
| | From WB TH 10 | N/A | | | | | | | | | | | | | | | | | |
| Potential Property Impacts* | | N/A | | | | | | | | | | | | | | | | | |
| Impact to Regional Park | | N/A | 21Acres | 4Acres | 21Acres | 4Acres | 21Acres | 21Acres | 4Acres | 4Acres | 21Acres | 4Acres | 21Acres | 4Acres | 21Acres | 21Acres | 4Acres | 4Acres | Any impact is a concern because the park is already smaller than the average regional park. |
| Impact to Public Works Campus | | N/A | | | | | | | | | | | | | | | | | Underpass options require a shaftly which impacts the existing Public Works Campus |
| Relative Cost Comparison | | N/A | -10% | -13% | -11% | -13% | -11% | -11% | -18% | +20% | +6% | Median Cost | +7% | +3% | +10% | +10% | Median Cost | +51% | Green: <10% Median Cost<br>Yellow: +/-10% Median Cost<br>Red: >10% Median Cost |
| Constructability/Long Term Maintenance | | N/A | | | | | | | | | | | | | | | | | Underpass options require a shaftly which influences the construction schedule and requires extra measures for drainage. Additionally TH 10 grade change is more impactful to traffic than Ramsey grade change. |
| Likelihood of Railroad Approval | | N/A | | | | | | | | | | | | | | | | | Discussions with BNSF Railroad indicate strong preference for an overpass. |
| Agency Support to Carry Concept Forward | | N/A | No Support | | No Support | | No Support | No Support | | No Support | No Support | No Support | No Support | No Support | No Support | No Support | No Support | No Support | |

*Assessment based on planning-level concepts and will require further review to verify actual impacts.

# Sunfish Lake Blvd Concepts – See Link

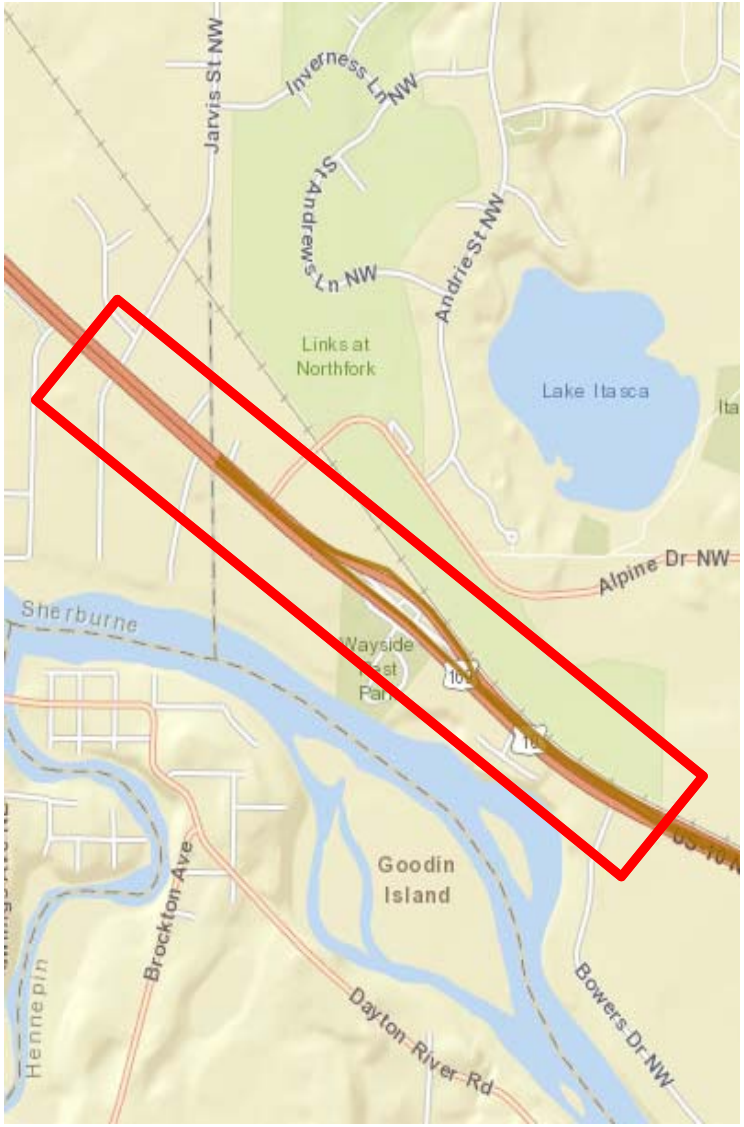
- Railroad At-Grade and Grade Separation Options
- Overpass with Right-In/Right-Out
- Standard Diamond
- Tight Diamond
- Single Point Urban Interchange
- Grade-Separated Roundabout
- Center Turn Overpass
- High-T

# Sunfish Lake Blvd Evaluation

| Measures | | No Build | SUNFISH LAKE BLVD CONCEPTS | | | | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | GRADE SEPARATED RAILROAD CROSSING | | | | | | | AT GRADE RAILROAD CROSSING | | | |
| | | | 1A | 1B | 3 | 4 | 5A | 6A | 7 | 2 | 5B | 6B | |
| | | | Overpass with Right-In/Right Out | Overpass with Right-In/Right Out | Standard Diamond | Tight Diamond | Single Point Urban Interchange (SPUI) | Grade Separated Roundabout | Center Turn Overpass | High-T | Single Point Urban Interchange (SPUI) | Grade Separated Roundabout | |
| **Pedestrian-Vehicle Conflict Points** | | 7 | 26 | 17 | 30 | 30 | 30 | 30 | 30 | 23 | 30 | 30 | Conflict points were counted where crosswalks and sidewalk connections will be provided |
| **Perceived Pedestrian Comfort** | | | | | | | | | | Assumes separated ped bridge | | | |
| **Design Year Traffic Operations** | | | | | | | | | | | | | Design year 2045 |
| **Requires a Separate Pedestrian Bridge** | | N/A | NO | NO | NO | NO | NO | NO | NO | YES | NO | NO | |
| **Community Connectivity - Provides all movements** | | | | | | | | | | | | | |
| **Ease of Business Access - Retail** | From EB TH 10 | N/A | | | | | | | | | | | Assumes traveling to Do It All Printing<br>Green - addt <60 seconds<br>Yellow - addt 60-120 seconds<br>Red - addt 120+ seconds |
| | From WB TH 10 | N/A | | | | | | | | | | | |
| **Ease of Business Access - Industrial** | From EB TH 10 | N/A | | | | | | | | | | | Assumes traveling to McKinley St at Unity St<br>Green - addt <60 seconds<br>Yellow - addt 60-120 seconds<br>Red - addt 120+ seconds |
| | From WB TH 10 | N/A | | | | | | | | | | | |
| **Access to Business Park** | | N/A | | | | | | | | | | | |
| **Potential Property Impacts*** | | | | | | | | | | | | | |
| **Provides Railroad Grade Separation** | | | | | | | | | | | | | |
| **Relative Cost Comparison** | | N/A | +6% | +6% | +12% | +20% | +20% | +11% | Median Cost | -38% | -11% | -13% | Green: <10% Median Cost<br>Yellow: +/-10% Median Cost<br>Red: >10% Median Cost |
| **Constructability/Long Term Maintenance** | | N/A | | | | | | | | | | | TH 10 grade change is more impactful to traffic than Sunfish Lake grade change. |
| **Agency Support to Carry Concept Forward** | | N/A | | | No Support | No Support | | | | No Support | | | |

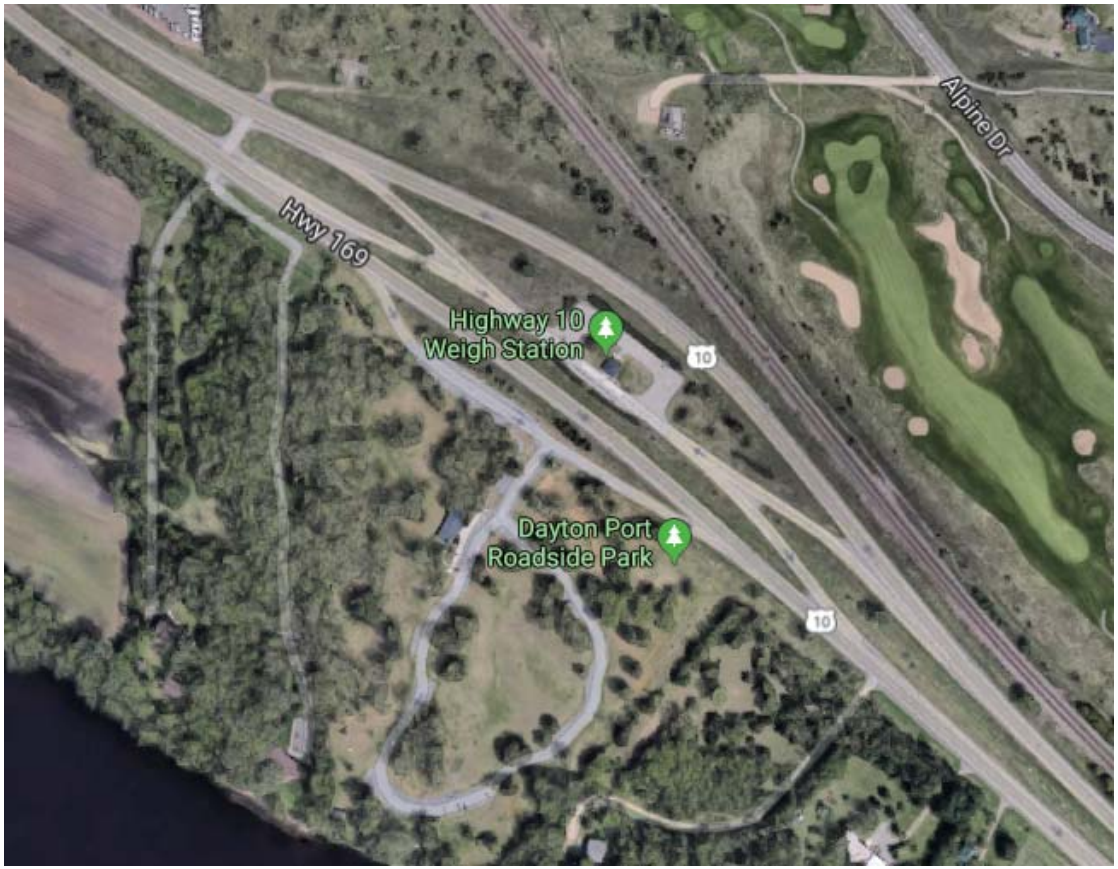
*Assessment based on planning-level concepts and will require further review to verify actual impacts.

# West End Concepts



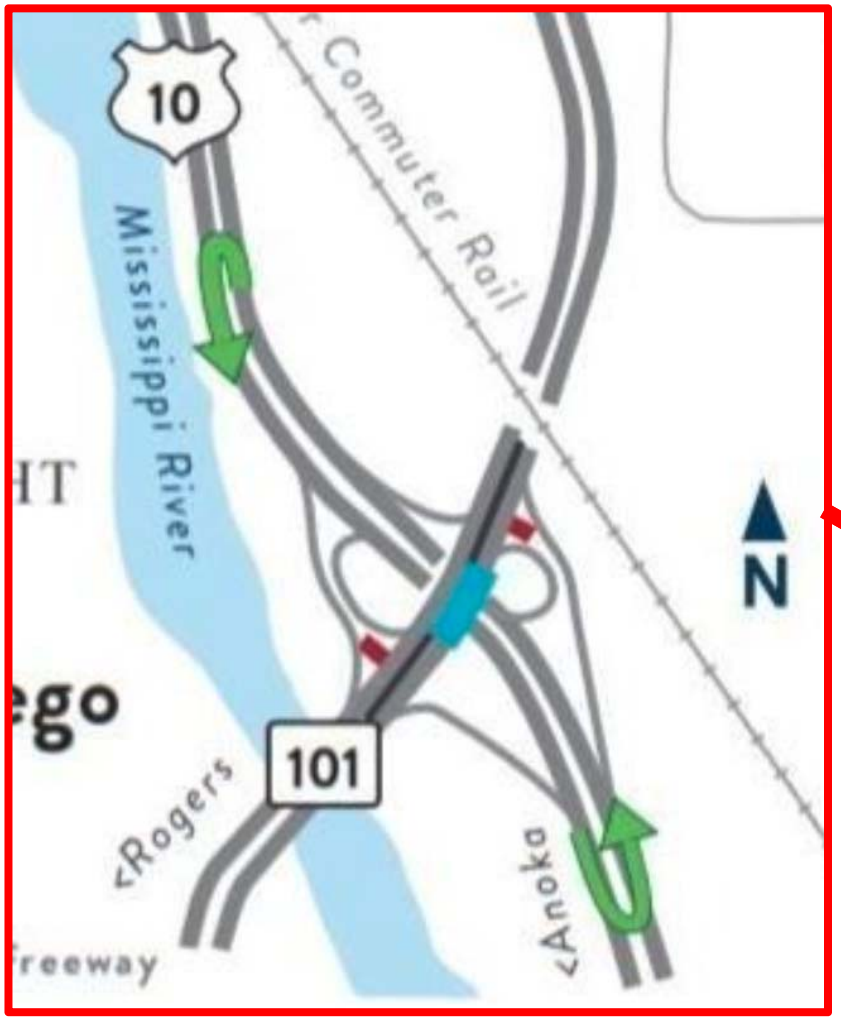

# MnDOT Rest Area/Weigh Station Input

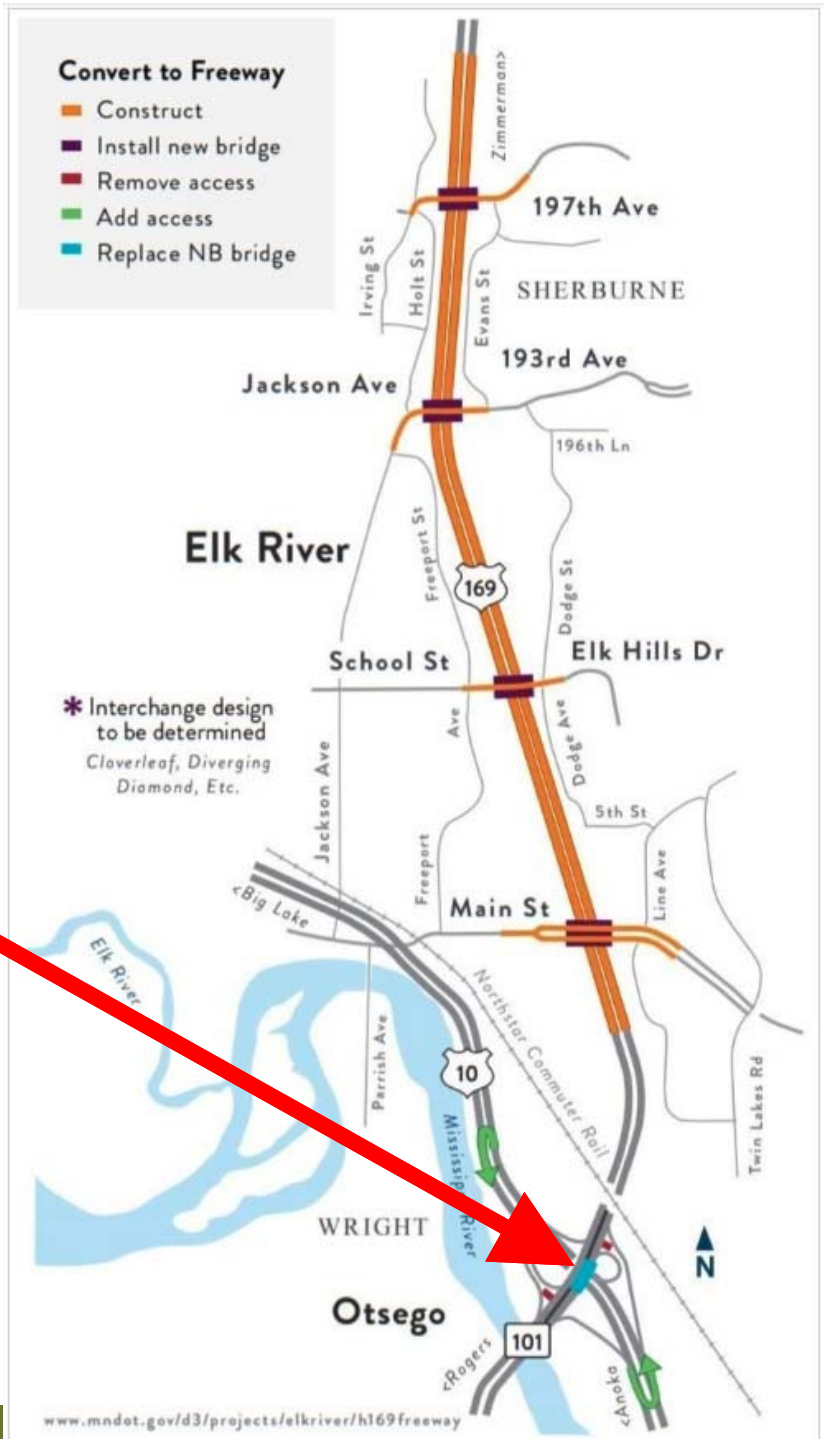
- Weigh station accel/decel lanes substandard length
- Weigh station closed during peak traffic hours for safety
- No plans to close weigh station
- Rest Area entrance/exit confusing



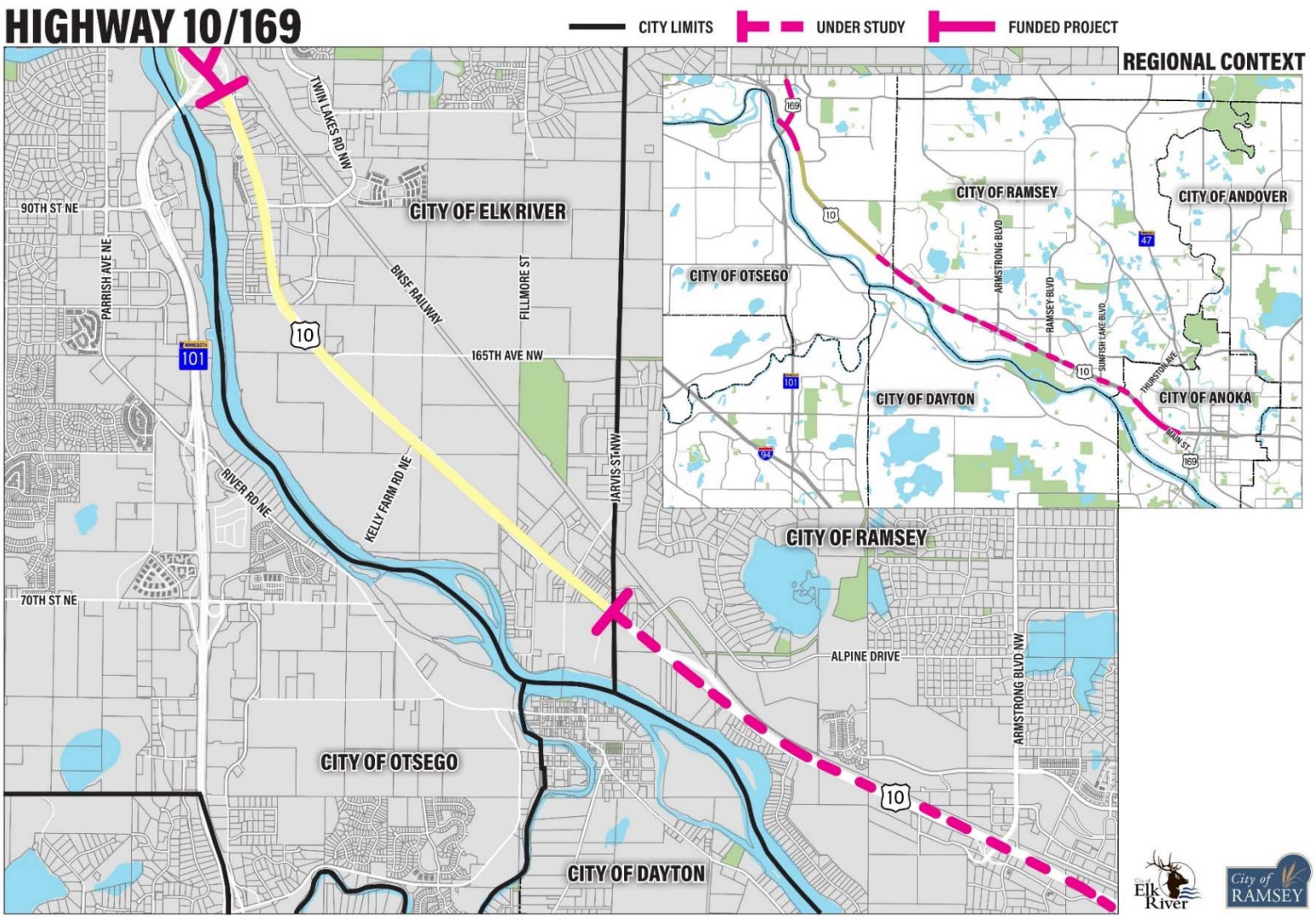
# TH 10 at TH 101/ TH 169

(Elk River)



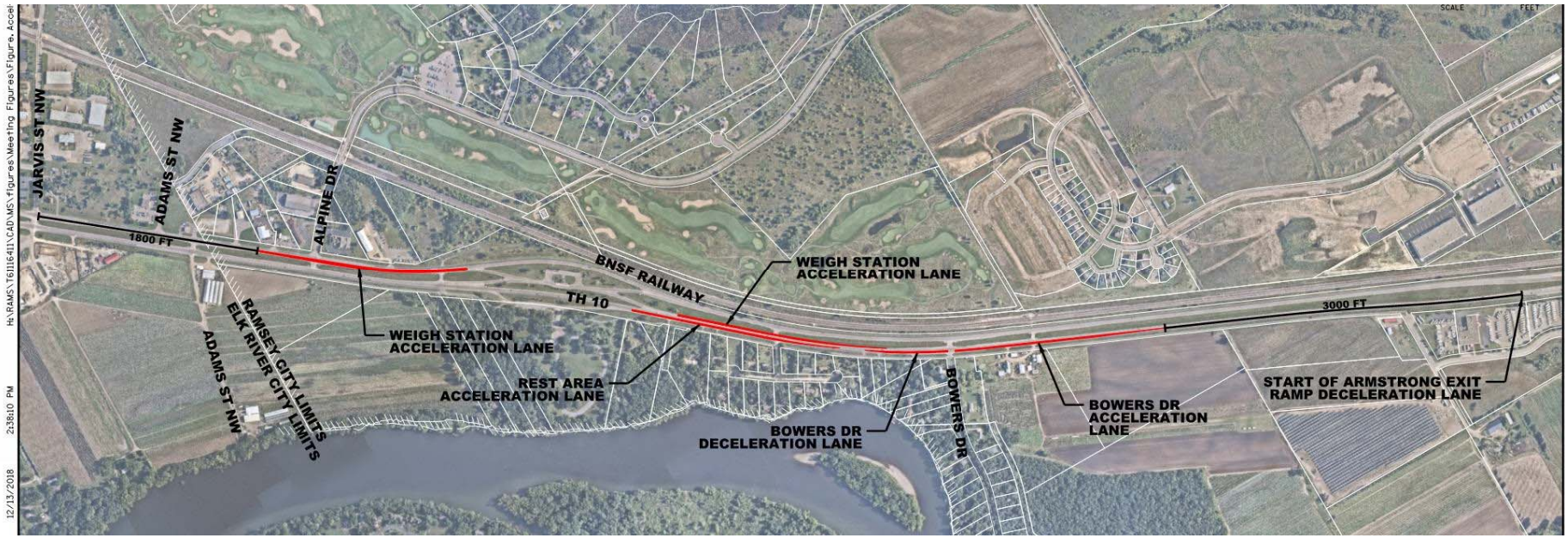
# Corridor Vision West of Ramsey Unknown



# West End Range of Concepts - See Link

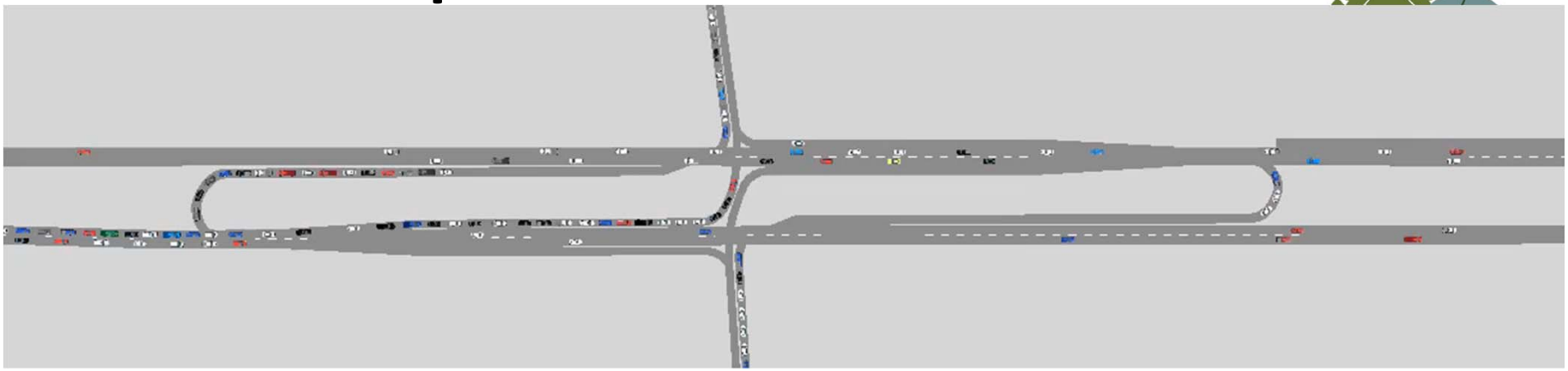
- Signalized RCUT
- Overpass at with RIRO
- Right-in/Right-out at Bowers Dr

- Lengthen accel/decel to weigh station
- Rest Area scenarios
  - Remains in current location
  - Expand to north side Hwy 10 for WB access
  - No longer exists in study area

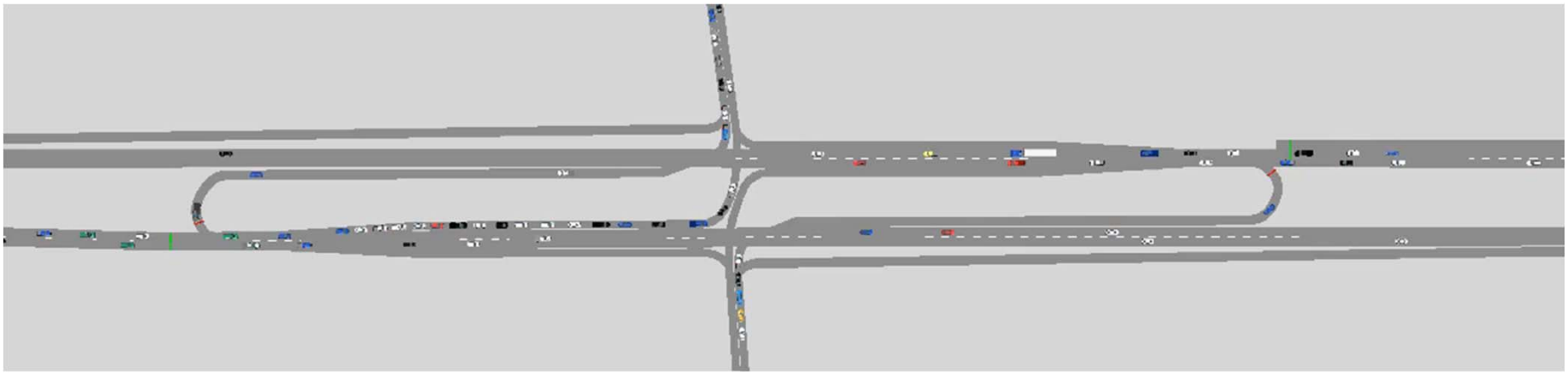


# West End Concepts

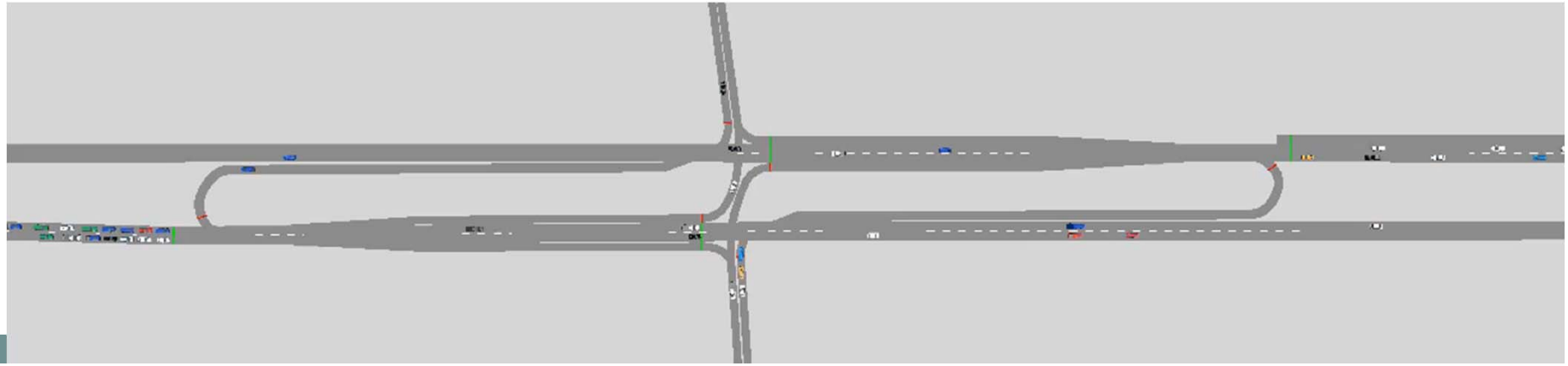
UNSIGNALIZED



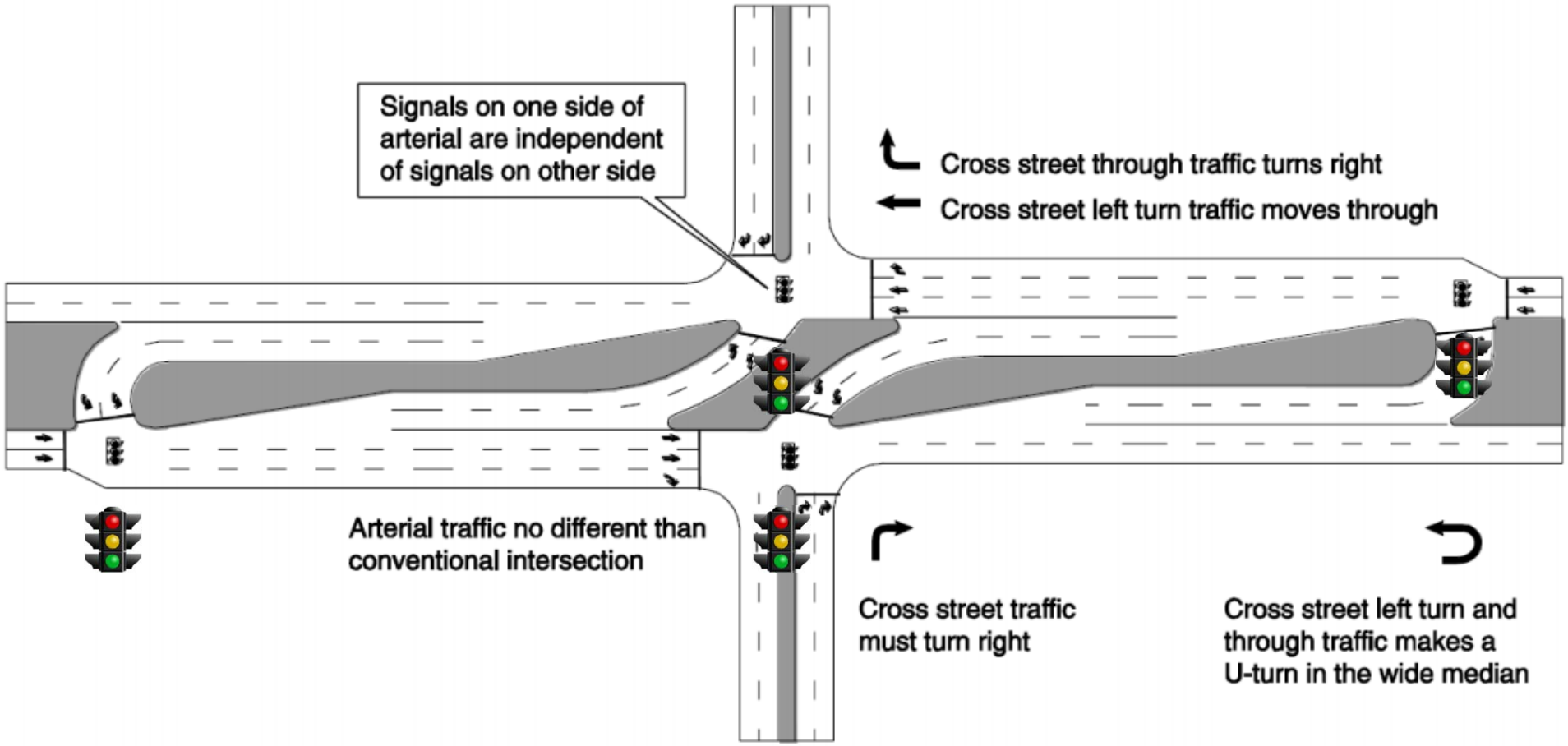
SIGNALIZED U-TURN



SIGNALIZED



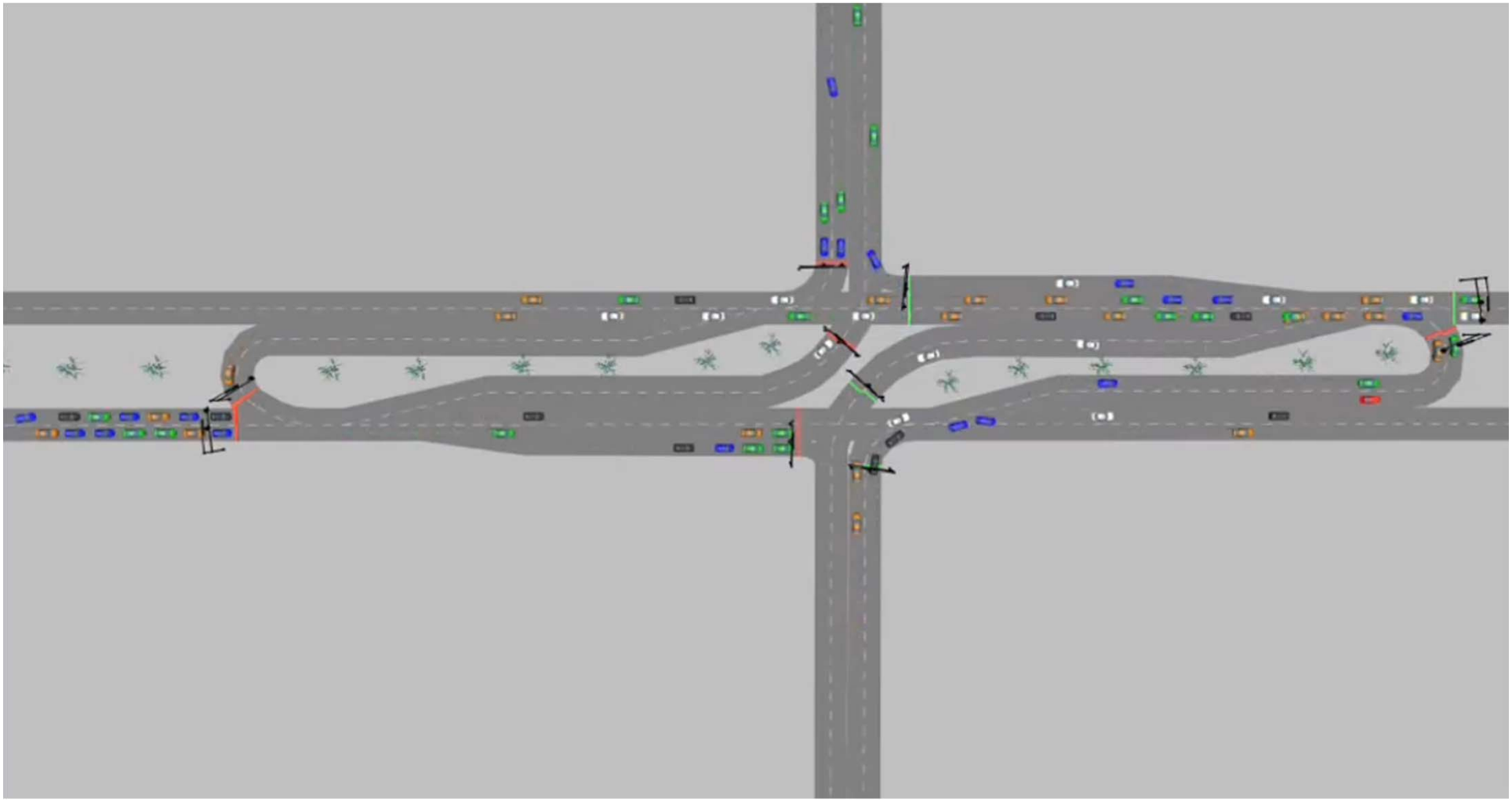
# Signalized RCUT Example




https://www.youtube.com/watch?time_continue=2&v=tnSETIn90hc

# Concept Development

## Signalized RCUT Example



# West End Evaluation Criteria

- Traffic Operations/Safety
- Access
- Property Impacts
- Cost

# Public Involvement Plan

- Steering Committee – February/Early March
- Property Owner Meetings – Early March
- Open House – March