



# Town of Morinville TMP Update to Council

January 21, 2020

# Outline

## TMP Overview

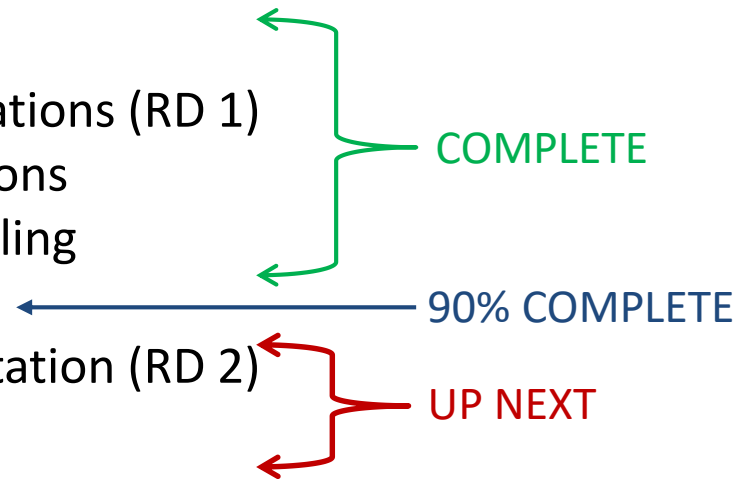
- Phase I – Strategic Framework
- Phase II – Consultation (RD 1)
- Phase III – Existing & Future Conditions
- Phase IV – Traffic Modeling & Forecasting
- Phase IV – Improvement Strategies

# Outline

## 100 Avenue (Roundabout v. Traffic Signals)

- Operations
- Access Management
- Benefits of Roundabouts
- Options
- Cost Comparison
- Accessibility Comparison
- Why Roundabouts?

# TMP Overview

- 7 Phase Project:
    - Strategic Framework
    - Consultation/Communications (RD 1)
    - Existing & Future Conditions
    - Traffic Forecasting/Modeling
    - Improvement Strategies ← 90% COMPLETE
    - Communications/Consultation (RD 2) ← UP NEXT
    - Reporting
- 
- The diagram illustrates the progress of a 7-phase project. A vertical list of phases is shown on the left. To the right of the list, three colored arrows indicate the status of each phase: a green bracket groups the first four phases (Strategic Framework, Consultation/Communications (RD 1), Existing & Future Conditions, and Traffic Forecasting/Modeling) with the label 'COMPLETE'; a blue arrow points to the fifth phase (Improvement Strategies) with the label '90% COMPLETE'; and a red bracket groups the last two phases (Communications/Consultation (RD 2) and Reporting) with the label 'UP NEXT'.

# Phase I – Strategic Framework

- Reviewed & summarized Morinville/Regional documents
- Gathered feedback from public/stakeholders
- Developed:
  - Vision Statement
  - 5 Strategic Goals
  - 16 Objectives

## Phase II – Consultation/Communications (RD 1)

- Online Survey (275 respondents)
- 2 Public Engagement Events (100 respondents)
- Asked questions around:
  - Mobility Strategy – Does it still resonate?
  - Issues w/ current transportation system
  - Top active transportation priorities

# Phase II – Consultation/Communications (RD 1)

## WHAT WE HEARD

<b>Big Ideas</b>	<b>Level of Agreement</b>
I want my kid to be able to walk and bike to school and be safe crossing Highway 642 / 100 Ave.	93%
I want roads that make drivers watch out for pedestrians as much as pedestrians have to watch out for drivers.	89%
I don't want to describe any of our streets as "dangerous" to my kids.	87%
I want walking and cycling to be practical, not just a leisure activity	84%
I want family bike rides that allow us to explore Morinville.	82%

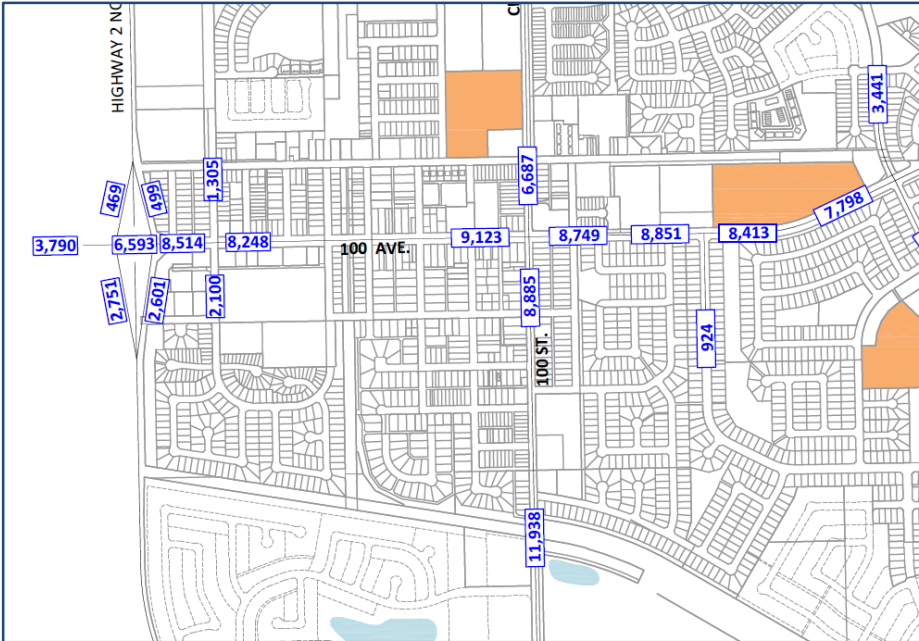
# Phase II – Consultation/Communications (RD 1)

## WHAT WE HEARD

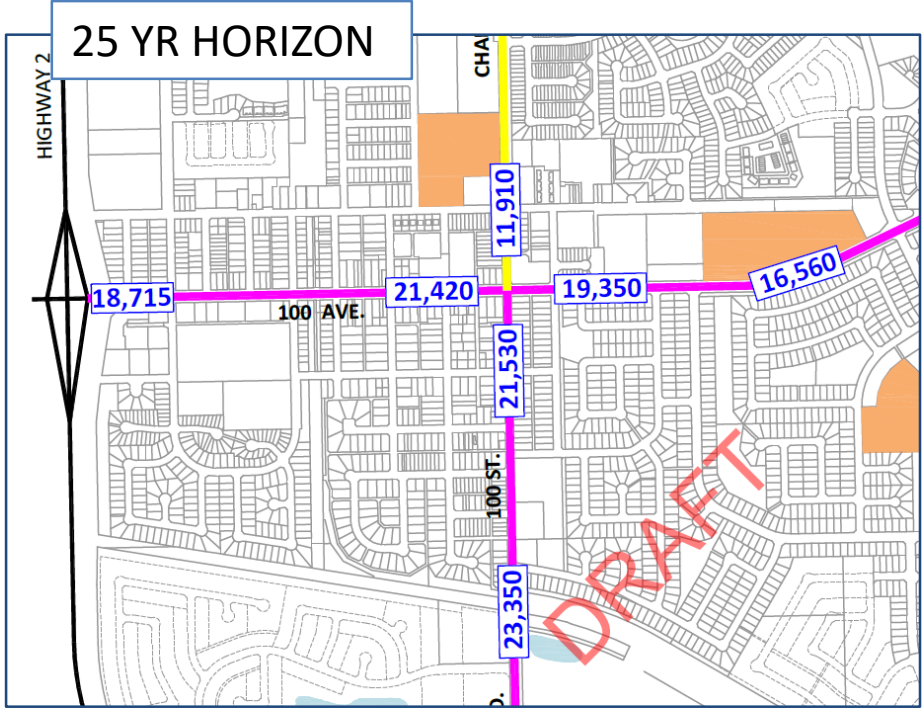
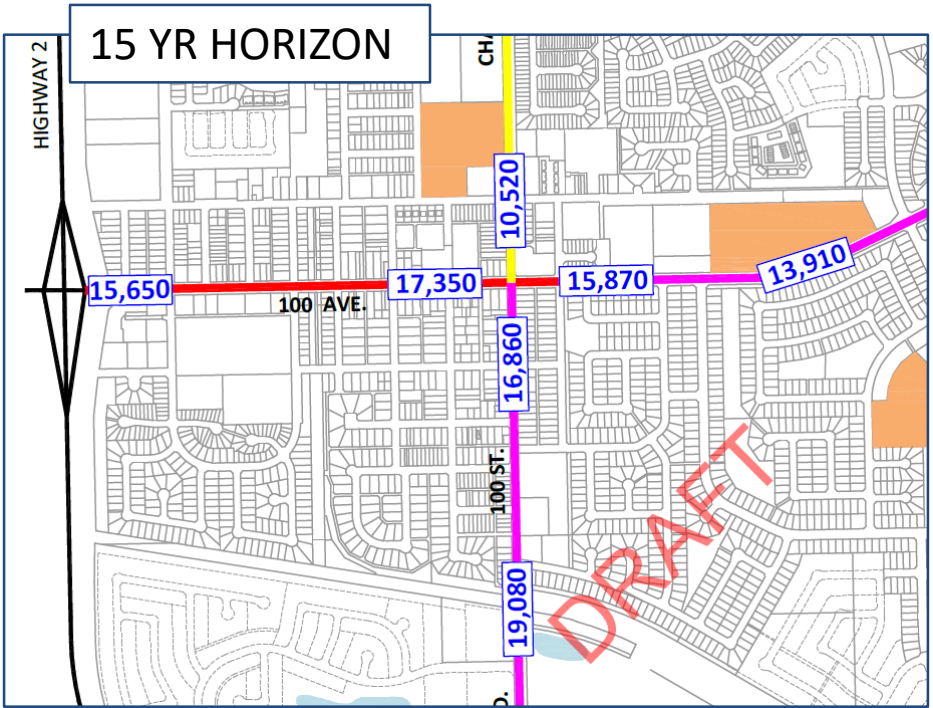
<b>Concern</b>	<b>Count</b>
Traffic and pedestrian safety – at key locations such as pedestrian crossings at Highway 642 / 100th Ave.	154
Traffic and pedestrian safety - in neighbourhoods and around schools.	127
The network of trails is limited with numerous gaps and missing segments.	121
Highway 2/Cardiff Road intersection operations.	83
Highway 642 (100 Avenue) operations.	74
100 Street operations.	36
Streets are not designed to support delivery and emergency vehicles.	22
A lack of on-street bicycle facilities.	21
Lack of clear direction on accessibility guidelines for streets and in public open spaces.	15
Streets are not designed to support events and celebrations.	10



# Phase III – Existing & Future Conditions

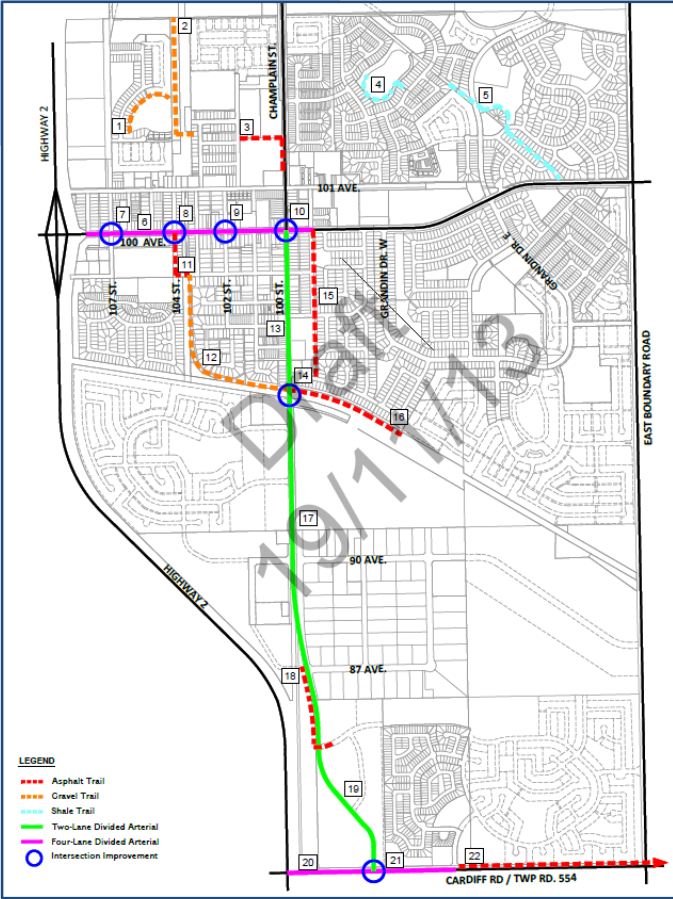


# Phase IV – Traffic Modeling & Forecasting



# Phase IV – Improvement Strategies

- Identified series of improvements for:
  - Short (0-5 years)
  - Medium (6-15 years)
  - Long (16-25 years)
  - Full Build-out (25+ years)



# 100 Avenue (Roundabouts v. Traffic Signals)

What is 100 Avenue?

- Provincial Highway
- Major E-W Arterial
- Main Street

# 100 Avenue Operations (W. of 99 Street)

## EXISTING

- 4-lane undivided roadway w/ on-street parking
- 9,000 vpd
- 30 accesses
- Highest collisions

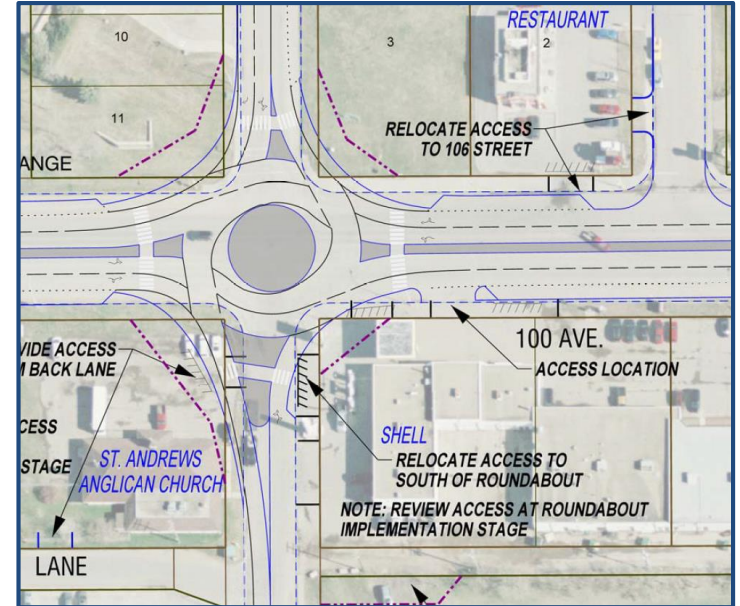


## 25-YR HORIZON

- 4-lane divided roadway w/ on-street parking
- 21,500 vpd
- Access Managed
- Traffic signals or roundabouts at key intersections

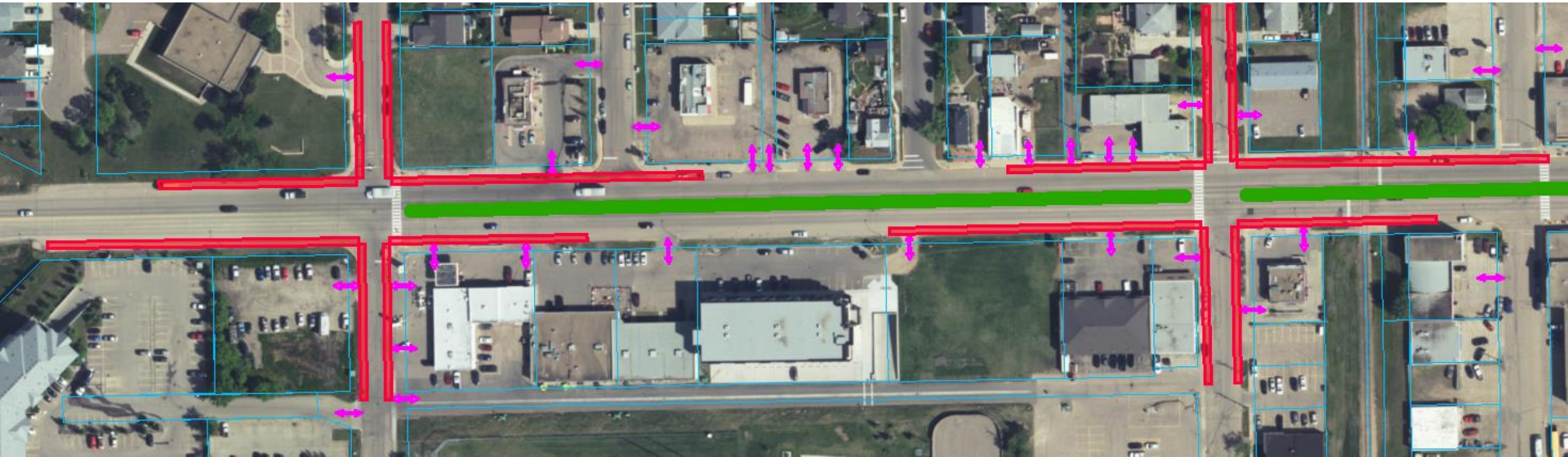
# Access Management

- All-directional access limited to key intersections (i.e. 107 ST, 104 ST, 102 ST, 100 ST)
- Access closure, consolidation, relocation required
- All other accesses right-in/right-out
- 2013 FPS developed access management strategy under roundabout option, but not traffic signal option



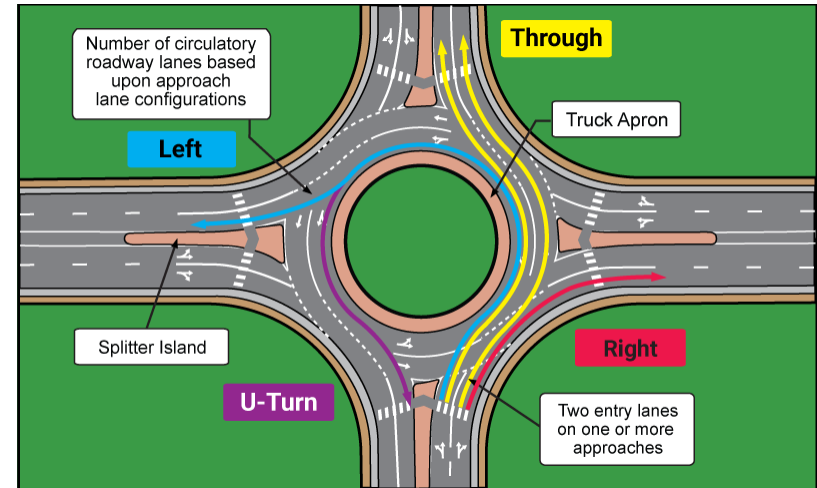
*Regardless of whether signals or roundabouts are installed at key intersections, access management along the corridor will be key to the overall performance & safety of the road.*

# Access Management



# Benefits of Roundabouts

- Traffic Safety
  - Reduces collisions
  - Reduces collision severity
- Operational Performance
  - Reduces vehicle delays
- Environmental Factors
  - Reduces noise & air quality impacts
  - Reduces fuel consumption
- Access Management
  - Facilitate legal U-turns
- Traffic Calming
  - Reduce vehicle speeds

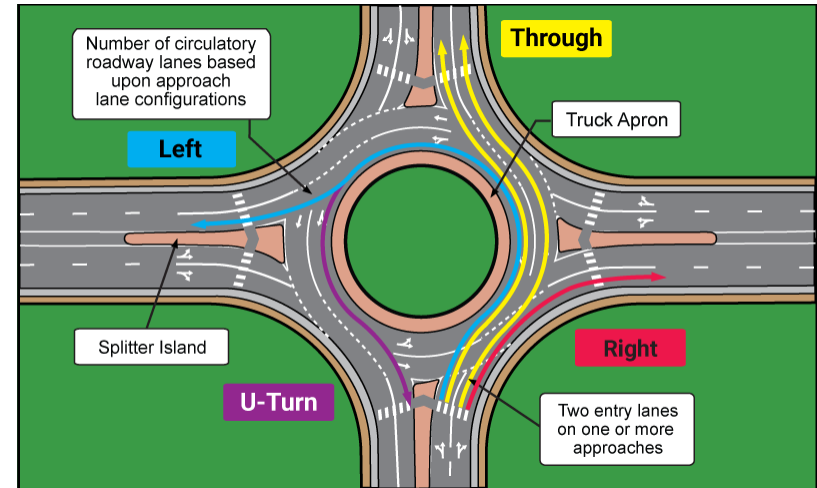


<https://dot.nebraska.gov/safety/driving/roundabouts/>



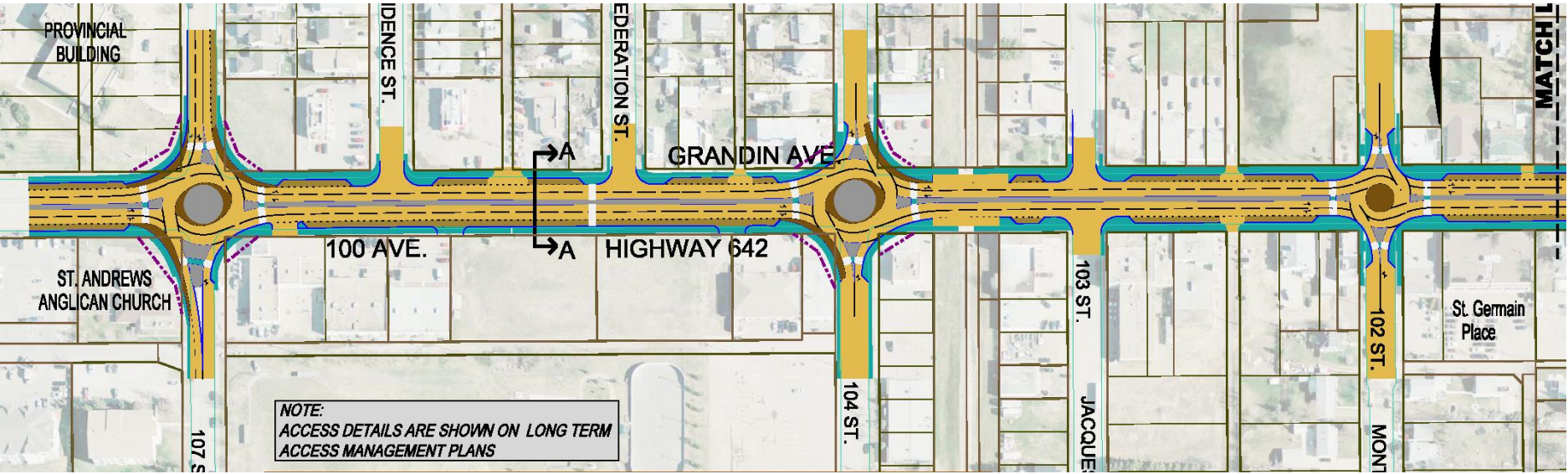
# Benefits of Roundabouts Cont'd

- Pedestrian Safety
  - Shorter crossing distances
  - Two stage crossing
- Aesthetics
  - Better landscaping opportunities
- Cost
  - Lower operating/maintenance cost
  - Societal cost savings
  - Lower life cycle costs
- Roadway Width
  - More consistent x-section
  - Less right-of-way required

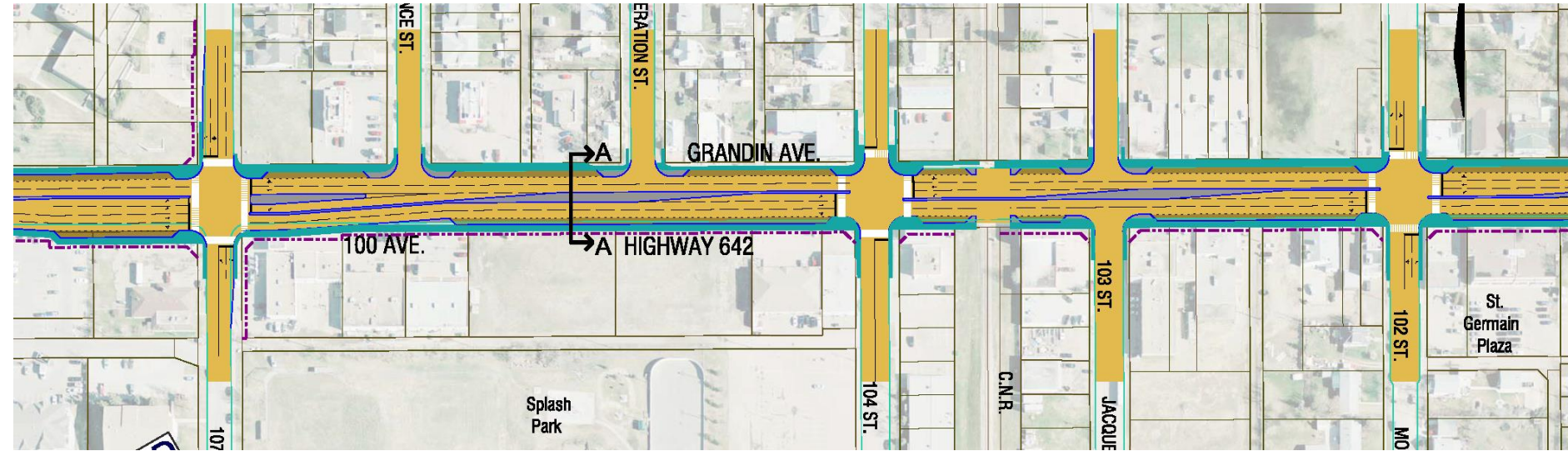


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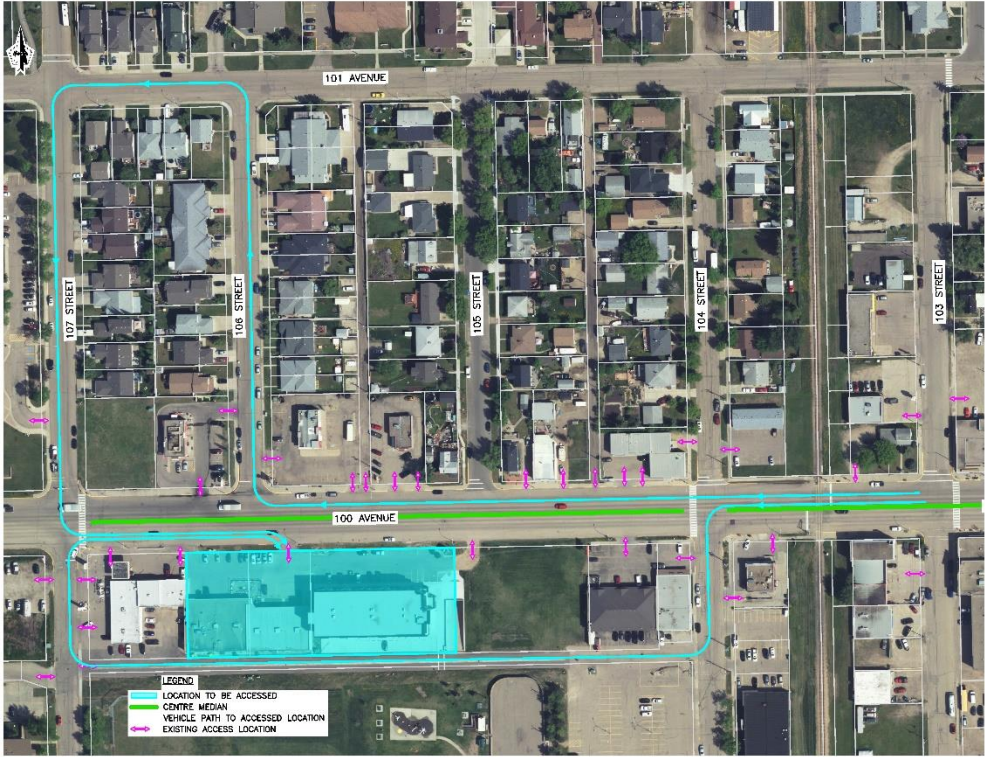
# Roundabout Option



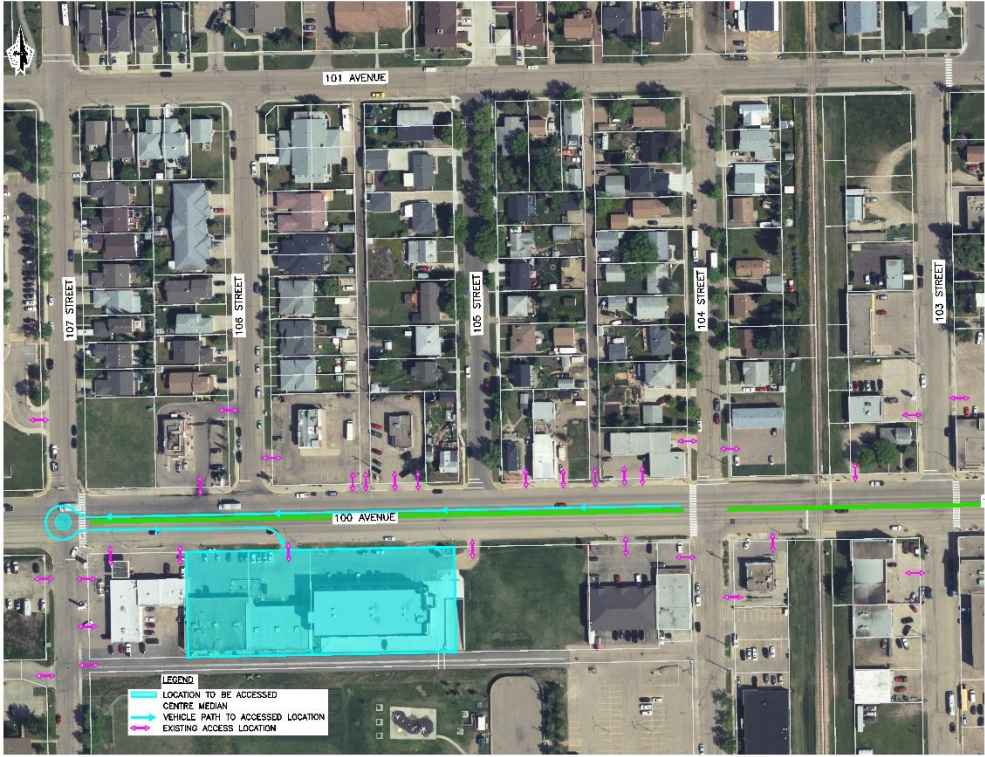
# Signalized Option



# Accessibility Comparison (Signals)



# Accessibility Comparison (Roundabouts)



# Cost Comparison

Item	Traffic Signals	Roundabout
Properties Impacted	30	16
ROW Cost (Estimated)	\$12.5M	\$6.0M
Construction Cost (Estimated)	\$5.2M – 6.6M	\$5.3M
Operations & Maintenance Cost (Estimated)	Extra \$3K-4K per year	-

# Why Roundabouts?

## More

- Sustainable
- Accessible
- Capacity
- Appealing Corridor
- Public Realm Space

## Less

- Right-of-way
- \$
- Maintenance
- Collision
- Collision Severity
- Noise
- Fuel Consumption

## Better

- Pedestrian Accommodation
- Beautification Opportunities
- Air Quality
- Performance

