Regular Meeting of Council
AGENDA

Tuesday, March 14, 2023
4:00 p.m.
Council Chambers
Morinville Civic Hall

Pages

1. **Call to Order**

2. **Adoption of Agenda**
   Presenter: Mayor S. Boersma

   2.1 **Notice of Identified Meal break: 6:30 - 7:00 pm**

   2.2 **Adoption / Additional Items**
   Recommended Motion:
   That Council approves the agenda as presented.

   2.3 **Consent Agenda** 4

3. **Adoption of Minutes**
   Presenter: Mayor S. Boersma

   3.1 **February 21, 2023, Committee of the Whole** 5
   Recommended Motion:
   That Council approves the February 21, 2023, Committee of the Whole minutes.

   3.2 **February 28, 2023, Regular Meeting of Council** 11
   Recommended Motion:
   That Council approves the February 28, 2023, Regular Meeting of Council minutes.

4. **Protocol Items**
   Presenter: Mayor S. Boersma

5. **Presentations**

   5.1 **Public Presentations**
   Presenter: Mayor S. Boersma

6. **Business**

   6.1 **Bylaws**

   6.1.1 Supplementary Assessment Bylaw 7/2023 20
   Presenter: R. Gilbert

Recommended Motion:
That Council approves 2nd Reading of the Supplementary Assessment Bylaw 7/2023.

Recommended Motion:
That Council approves 3rd Reading of the Supplementary Assessment Bylaw 7/2023.

6.1.2 Council & Administration Relations Committee Bylaw 8/2023 47
Presenter: R. Gilbert

Recommended Motion:
That Council approves 1st Reading of the Council & Administration Relations Committee Bylaw 8/2023.

Recommended Motion:
That Council approves 2nd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

Recommended Motion:
That Council considers 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

Recommended Motion:
That Council approves 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

6.2 New Business

6.2.1 CAO Performance Evaluation Policy and Directive 57
Presenter: R. Gilbert

Recommended Motion:
That Council approves the CAO Performance Evaluation Policy.

Recommended Motion:
That Council approves the CAO Performance Evaluation Directive.

6.2.2 2024 Budget Kick-Off and Budget Pressures 68
Presenter: T. Nosko

Recommended Motion:
That Council accept the 2023 Budget Kick-Off and Pressures Report for information.

6.2.3 Budget 2024 Public Engagement Plan 81
Presenter: R. Gilbert

Recommended Motion:
That Council accepts the Budget 2024 Public Engagement Plan report as information.

7. Council Correspondence

Presenter: Mayor S. Boersma

Recommended Motion:
That Council accepts the Correspondence as information.

7.1 Letter - Town of Morinville to Minister of Transportation and Economic Corridors re. Grandin Drive and Hwy 642 Intersection Improvements. 84

7.2 Letter - Town of Legal to Minister of Health re. Morinville X-Ray Machine 159

8. Notices of Motion

Presenter: Mayor S. Boersma

8.1 Councillor S. Dafoe

Recommended Motion:
That Council directs Administration to bring forward the Snow and Ice Control policy for Council to review at a meeting on or near the completion and presentation of the Snow and Ice Control Policy and Program Review.

9. Closed Session

As per Section 197(2) of the *Municipal Government Act*

Division 2 of Part 1 of the *Freedom of Information and Protection of Privacy Act, RSA 2000, Ch. F.25*

Recommended Motion:
That Council moves into Closed Session to discuss item 9.1 as per sections 19 and 24 of the *Freedom of Information and Protection of Privacy Act*, RSA 2000, Ch. F-25.

9.1 CAO Performance Evaluation

Presenter: T. Pretzlaw

FOIP s. 19 (Confidential Evaluations) and 24 (Advice from Officials)
of the *Freedom of Information and Protection of Privacy Act,* RSA 2000, Ch. F.25

9.2 Return to Open Session

10. Business Arising from Closed Session

11. Adjournment

Town of Morinville

March 14, 2023, Regular Meeting of Council

Items for consideration – Consent Agenda:

Agenda Item	**Subject /** Recommendation:	**Selected for Debate**
3.1	**Adoption of Minutes, February 21, 2023, Committee of the Whole** Motion to approve the February 21, 2023, Committee of the Whole minutes.	
3.2	**Adoption of Minutes, February 28, 2023, Regular Meeting of Council** Motion to approve the February 28, 2023, Regular Meeting of Council minutes.	
6.1.1	**Supplementary Assessment Bylaw 7/2023** Motion to approve 2nd Reading of Supplementary Assessment Bylaw 7/2023. Motion to approve 3rd Reading of Supplementary Assessment Bylaw 7/2023.	
6.1.2	**Council & Administration Relations Committee Bylaw 8/2023** Motion to approve 1st Reading of the Council & Administration Relations Committee Bylaw 8/2023. Motion to approve 2nd Reading of the Council & Administration Relations Committee Bylaw 8/2023. Motion to consider 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023. Motion to approve 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023.	
6.2.1	**CAO Performance Evaluation Policy and Directive** Motion to approve the CAO Performance Evaluation Policy. Motion to approve the CAO Performance Evaluation Directive.	
6.2.2	**Budget Kick-Off and Budget Pressures** Motion to accept the 2023 Budget Kick-Off and Budget Pressures report as information.	
6.2.3	**Budget 2024 Public Engagement Plan** Motion to accept the Budget 2024 Public Engagement Plan report as information.	
7.0	**Council Correspondence** Motion to accept Council Correspondence as information.	
8.1	**Notice of Motion – Councillor S. Dafoe** Motion to direct Administration to bring forward the Snow and Ice Control policy for Council to review at a meeting on or near the completion and presentation of the Snow and Ice Control Policy and Program Review.	

Town of Morinville

Committee of the Whole

Tuesday, February 21, 2023, 4:00 p.m.
Council Chambers
Morinville Civic Hall

Members Present:	Mayor S. Boersma Deputy Mayor R. White Councillor J. Anheliger Councillor R. Balanko Councillor S. Dafoe Councillor S. Richardson Councillor M. St. Denis
Staff Present:	N. Narayan, CAO S. Edwards, Acting General Manager, Community & Infrastructure Services M. Hay, General Manager, Administrative Services J. Betteridge, Manager, Infrastructure Services T. Dalzell-Heise, Manager, Communications & Legislative Services J. Potocnik, Acting Manager, Community Services T. Pretzlaw, Manager, Human Resources M. Steele, Legislative Officer R. Gilbert, Municipal Intern C. Longoz, Operations Supervisor P. Zallas, Youth Programmer

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1. Call to Order

Deputy Mayor R. White called the meeting to order at 4:00 p.m.

2. Approval of Agenda

2.1 Notice of Identified Meal Break: 6:30 - 7:00 p.m.

Deputy Mayor R. White provided notice of an identified meal break (if required) between 6:30 p.m. and 7:00 p.m.

2.2 Additional Items / Adoption

Moved by S. Dafoe

That Council approves the agenda as amended, reordering item 4.3, Pink Shirt Day presentation, ahead of item 4.2 Morinville Curling Club presentation.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

2.3 Consent Agenda

Moved by S. Boersma

That Council approves the following item as recommended on the Consent Agenda:

- 7.0 Action Tracking List

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

3. Protocol Items

- Council highlighted February and March proclamations and two major events held at the Morinville Leisure Centre: the 2023 Cheerific Western Cheer Challenge and Sturgeon Hockey Club's U7 Jamboree.
- Council expressed condolences and marked the passings of long-time municipal assessor Mr. Ray Crews and Town of Gibbons former Councillor Jean Woodger.

4. Presentation

4.1 Public Presentations

There were no public presentations.

4.2 Edmonton Metropolitan Region Board

Ms. K. Wichuk presented "Creating a Region by Design," including an overview of the Edmonton Metropolitan Region Board, the 2023-26 Board strategic priorities and an update on the regional growth plan interim review.

4.3 Pink Shirt Day

Mses. Charlotte Anheliger, Shayne Demchuk, Katey Rice and Clara Smith presented the Pink Shirt Day presentation.

4.4 Morinville Curling Club

Messrs. Gary Kearns, David Pinault, Steve Hutchings and Mses. Lisa St. Onge and Karen Lavallee presented an overview of the Morinville Curling Clubs financial position, and a request for operating grant funds from the Town of Morinville.

Moved by S. Dafoe

To refer the Morinville Curling Club presentation to a subsequent meeting of Council to be scheduled by the Agenda Review Committee for discussion.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

Deputy Mayor R. White recessed the meeting at 5:43 p.m.

Deputy Mayor R. White called the meeting back to order at 5:49 p.m.

5. Business

5.1 Waste Collection Services, 2023-024

Deputy Mayor R. White recessed the meeting at 6:25 p.m.

Deputy Mayor R. White called the meeting back to order at 6:56 p.m.

Moved by R. Balanko

That Council accepts the Waste Collection Services report as information.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

5.2 Municipal Engineering Standards, 2023-027

Moved by S. Dafoe

That Council accepts the Municipal Engineering Standards report as information.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

5.3 Intersection Planning Project Update, 2023-026

Moved by R. Balanko

That Council accepts the Intersection Planning Project Update report as information.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

5.4 Snow and Ice Control Policy Briefing

N. Narayan presented the Snow and Ice Control Policy Briefing:

- Summary of snow and ice conditions and administrative/operational response as at January 13, 2023;
- Summary of challenges faced by Town of Morinville employees while carrying out their assigned duties pursuant to the approved Snow and Ice Control Policy;
- Discussion with Council regarding steps taken and lessons learned.

- Comprehensive review of the Snow and Ice Control Policy and administrative recommendations to be brought forward to Council in May, 2023.

Moved by J. Anheliger

That Council accepts the Snow and Ice Control Policy Briefing verbal report as information.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

Moved by S. Dafoe

That Council extends the meeting past 8:00 p.m.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

5.5 Council & Administration Relations Committee Documentation, 2023-029

Moved by M. St. Denis

That Council accepts the Council & Administration Relations Committee Documentation report as information.

For (7): S. Boersma, R. White, J. Anheliger, R. Balanko, S. Dafoe, S. Richardson, and M. St. Denis

Carried (7 to 0)

6. Council Boards / Committees / Commission Reports

Council provided updates on the Boards, Committees and Commissions on which they represent the Town of Morinville.

7. Action Tracking List

Approved on Consent Agenda
That Council accepts the Action Tracking List as information.

_____ Deputy Mayor _____ Recording Secretary

8. Adjournment

Councillor S. Richardson moved to adjourn the meeting at 8:12 p.m.

_____

Deputy Mayor

_____

Recording Secretary

_____

Date Approved by Council

Town of Morinville

Regular Meeting of Council

Tuesday, February 28, 2023, 4:00 p.m.
Council Chambers
Morinville Civic Hall

Members Present: Mayor S. Boersma
Deputy Mayor S. Richardson
Councillor J. Anheliger
Councillor R. Balanko
Councillor S. Dafoe
Councillor M. St. Denis
Councillor R. White

Staff Present: N. Narayan, CAO
S. Edwards, General Manager, Community & Infrastructure Services
M. Hay, General Manager, Administrative Services
T. Auer, Manager, Planning & Economic Development
T. Dalzell-Heise, Manager, Communications & Legislative Services
J. Potocnik, Acting Manager, Community Services
T. Pretzlaw, Manager, Human Resources
M. Steele, Legislative Officer
R. Gilbert, Municipal Intern

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1. Call to Order

Mayor S. Boersma called the meeting to order at 4:00 p.m.

2. Adoption of Agenda

2.1 Notice of Identified Meal break: 6:30 - 7:00 pm

Mayor S. Boersma provided notice of an identified meal break between 6:30 and 7:00 p.m.

_____ Mayor _____ Recording Secretary

2.2 Adoption / Additional Items

52/2023
Moved by R. Balanko

That Council approves the agenda as presented.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

2.3 Consent Agenda

53/2023
Moved by S. Dafoe

That Council approves the following items as recommended on the Consent Agenda:

- 3.1 Adoption of Minutes, February 14, 2023, Regular Meeting of Council
- 9.0 Council Correspondence

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

3. Deputy Mayor Appointment

3.1 Deputy Mayor Appointment

54/2023
Moved by R. White

That Council appoints Councillor Scott Richardson as Deputy Mayor for the period of February 28, 2023, to October 24, 2023.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

_____ Mayor _____ Recording Secretary

4. Adoption of Minutes

4.1 February 14, 2023, Regular Meeting of Council

Approved on Consent Agenda:
That Council approves the February 14, 2023, Regular Meeting of Council minutes.

5. Protocol Items

- Council expressed thanks to Councillor Ray White for his service as Deputy Mayor for the past 8 months.
- Council expressed well-wishes to Legislative Officer Melodie Steele on her future career endeavours.
- Council highlighted International Women's Day and the karate sporting achievements of Morinville Community High School student Dylan Weiss at the 2023 Canada Winter Games.

6. Presentations

6.1 Public Presentations

There were no public presentations.

7. Public Hearing

7.1 Disposal of Municipal Reserve Land

Mayor S. Boersma declared the public hearing open at 4:12 p.m.
T.J. Auer, Manager, Planning & Economic Development, provided a brief summary of the Disposal of Municipal Reserve Land item.
Two pieces of Correspondence were received from Mses. H. Royen and S. Cartier with questions for Administration in relation to the proposal.
No one came forward to speak in favour or opposition to the Disposal of Municipal Reserve Land proposal.
Mayor S. Boersma declared the public hearing closed at 4:26 p.m.

55/2023
Moved by R. Balanko

That Council refer the Disposal of Municipal Reserve Land item to the Regular Meeting of Council for consideration.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

8. Business

8.1 Business Arising from Public Hearing

8.1.1 Heritage Village-Removal of Municipal Reserve Designation and Land Disposal

56/2023
Moved by J. Anheliger

That Council directs a designated officer within Administration to notify the Registrar of the Northern Alberta Land Titles Office that the provisions of the *Municipal Government Act, R.S.A. 2000, c. M-26* have been complied with and request the Registrar to remove the designation of the Municipal Reserve from the Southern 35.01-metre strip of land measuring ~4.0m in width of Plan 072 8989; Block 10; Lot 40MR identified in Attachment 3 as Area A.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

8.2 Bylaws

8.2.1 Community Services Advisory Committee Bylaw

57/2023
Moved by S. Dafoe

That Council approves 1st Reading of the Community Services Advisory Committee Bylaw 9/2023.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

8.2.2 Operating Borrowing Bylaw

58/2023
Moved by S. Dafoe

That Council approves 2nd Reading of Operating Borrowing Bylaw 6/2023.

Mayor S. Boersma passed the chair to Deputy Mayor S. Richardson at 5:01 p.m.

59/2023
Moved by S. Boersma

That Council amends the Operating Borrowing Bylaw 6/2023, section 4.2, replacing "$2,000,000.00" with "$1,500,000.00".

Motion withdrawn.

60/2023
Moved by R. White

That Council amends Operating Borrowing Bylaw 6/2023 to include a provision for Council to vote on any use of additional capacity for unforeseen circumstances.

61/2023
Moved by S. Dafoe

That Council refers the Operating Borrowing Bylaw 6/2023 to the March 28, 2023, Regular Meeting of Council for consideration.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

Mayor S. Boersma resumed chairing the meeting at 5:09 p.m.

62/2023
Moved by S. Dafoe

That Council reconsiders motion 53/2023, the approval of items remaining on the Consent Agenda.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

63/2023
Moved by S. Dafoe

That Council approves the following item as recommended on the Consent Agenda:

- 3.1 February 14, 2023, Regular Meeting of Council minutes.

8.3 New Business

8.3.1 Closed Session – Second Trial Period Results

64/2023
Moved by S. Richardson

That Council accepts the Closed Session – Second Trial Period Results report as information and directs Administration to schedule Closed Sessions at the end of the Council Meeting agendas.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

8.4 Policy

8.4.1 Morinville Advantage Council Policy

65/2023
Moved by S. Richardson

That Council directs Administration to bring forward a revised Morinville Advantage Policy for Council's consideration where section 3.2 includes residents of Morinville and Sturgeon County, and allows for 8 tickets per household.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

8.4.2 Video Surveillance in Public Areas Policy

66/2023
Moved by S. Dafoe

That Council rescinds the Video Surveillance in Public Areas Policy CFS153/2019, effective when the CAO signs the replacement Administrative Policy.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

9. Council Correspondence

9.1 Email - Sturgeon Victim Services re. Council Representation

67/2023
Moved by S. Dafoe

That Council refers the Sturgeon Victim Services correspondence to the Agenda Review Committee to schedule consideration at a future meeting of Council, and direct Administration to investigate logistics and considerations of the proposed Committee opportunity.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

68/2023
Moved by R. Balanko

That Council accepts the Correspondence as information.

For (7): S. Boersma, S. Richardson, J. Anheliger, R. Balanko, S. Dafoe, M. St. Denis, and R. White

Carried (7 to 0)

9.2 Letter - Town of Bon Accord to Minister of Health re. Ambulance Crisis

9.3 Letter - Town of Morinville Library Board re. Letter of Thanks

10. Notices of Motion

10.1 Councillor S. Dafoe

Councillor S. Dafoe provided notice that at the March 14, 2023, Regular Meeting of Council, he will move:

"That Council directs Administration to bring forward the Snow and Ice Control policy for Council to review at a meeting on or near the completion and presentation of the Snow and Ice Control Policy and Program Review.

11. Adjournment

Deputy Mayor Richardson moved to adjourn the meeting at 5:55 p.m.

_____

Mayor

_____

Recording Secretary

_____

Date Approved by Council

Report to Council

☒ For Council Decision ☐ For Council Direction

☐ For Council Information

TOPIC:	Supplementary Assessment Bylaw 7/2023	March 14, 2023
PRESENTER:	Rachelle Gilbert, Municipal Intern	**ATTACHMENTS:** • Supplementary Assessment Bylaw Presentation • Amended Draft Supplementary Assessment Bylaw 7/2023
PREPARED BY:	Rachelle Gilbert, Municipal Intern	
CLEARANCES:	Travis Nosko, Manager, Financial Services Michelle Hay, General Manager, Administrative Services Naleen Narayan, CAO	**RELEVANT BYLAWS / POLICIES / LEGISLATION:** *Municipal Government Act, RSA 2000, Ch. M-26*

RECOMMENDATION:

That Council approves 2nd Reading of the Supplementary Assessment Bylaw 7/2023.

That Council approves 3rd Reading of the Supplementary Assessment Bylaw 7/2023.

PREVIOUS COUNCIL ACTION:

At the February 14, 2022, Regular Meeting of Council, Council approved the 1st reading of the Supplementary Assessment Bylaw and asked Administration to bring back additional information about previous Supplement Assessment Bylaws and feedback regarding assessment thresholds from the Municipal Assessor.

At the October 11, 2022, Regular Meeting of Council, Council approved the Taxation Policy. During the discussion on the Taxation Policy, Administration presented information regarding supplementary assessment and taxation and committed to bringing forward a Supplementary Assessment Bylaw to Council for review in T1 of 2023.

BACKGROUND SUMMARY:

The following provides updates and information on concerns identified by Council during first reading of the draft Supplementary Assessment Bylaw:

_____ _____

Submitted by: Approved by:

_____ _____

R. Gilbert N. Narayan

Title CAO

Assessment Thresholds for Renovations:

1) *How would the Supplementary Assessment Bylaw tax property owners for doing renovations (aka improvements)?*
2) *What are the thresholds for renovations/improvements increasing the assessed value and thereby a supplementary assessment/tax?* Council wants to avoid taxing property owners to the extent that they would not want to renovate/improve their properties to avoid additional taxes.

The Town of Morinville's contracted assessor, the Municipal Assessment Services Group Inc., provided the following feedback for Council consideration:

- The Assessor's interpretation of section 314 of the *Municipal Government Act (MGA)* is it excludes all renovations and is strictly for the purpose of new builds such as garages, single-family dwelling, and commercial buildings.
- Typically, a municipality introduces a supplementary assessment bylaw to capture the substantial increases in value of properties during the tax year (i.e., new building on vacant land).
- Larger scale improvements to land will ultimately have the greatest impact on values. This includes:
    - Garages (attached or detached), additions to homes or new construction (Improvements fixed to the land).
    - The Assessor would exclude improvements like sheds, decks, windows, painting, and concrete pads as they are "valued with the land". These improvements are of considerable small-scale value and not fixed to the land.
    - The Assessor would exclude interior improvements such as basement renovations as it is difficult to determine if completed or not and is smaller-scale value.
- Most property owners understand that with any major renovations comes an increase in value. In many cases, the increase in value is part of the motivation to renovate.

The Assessor confirmed there was no need to define improvement thresholds in the Supplementary Assessment Bylaw as this should be left to the professional discretion of the Assessor and the *MGA.* Including specific thresholds could hinder the Assessors' ability to follow the *MGA* requirements for preparing supplementary assessments. In our municipal comparison, no other municipality defined improvement thresholds in their bylaws.

Administration also confirmed with Municipal Affairs that the *MGA* does not explicitly define assessment thresholds for improvements – this is the discretion of the Municipal Assessor. However, the *MGA* does require supplementary assessments to be prepared in the same manner as assessments are prepared. As such, improvements assessed in the annual assessment would be the same for supplementary assessment.

Review of Supplementary Assessment and Taxation

A vacant lot is assessed at $100,000 as of Dec. 31, 2021. If a home is completed on Jul. 1st, 2022, and the completion of the home increases the value of the property to $400,000 for the new home, only the increase in value ($300,000) would be subjected to supplementary assessment/tax.

The property was completed with 6 months remaining in the year, only 6/12 of the assessment applies. In this example, the 2023 assessed value would be: $300,000 x (6/12) = $150,0000.

Annual Tax Notice = $100,000 x 2022 Tax Rate = $796.97

Supplementary Tax Notice = $150,000 x 2022 Tax Rate = $1195.46

Total Taxes Paid (Annual + Supplementary) = **$1992.43**

Previous Supplementary Assessment/Tax Bylaws

1) *Has the Town of Morinville had a Supplementary Assessment/Tax Bylaw in previous years?*
2) *Why or why not?*

Administration's research has uncovered the following previous bylaws related to Supplementary Assessment/Tax and it appears these bylaws may not have been properly repealed by Council. For example:

Bylaw 36/94 – Supplementary Assessment of Mobile Units

- Authorizes the supplementary assessment of mobile units (also known as designated manufactured homes).
- References older versions of the *MGA.*
- This Bylaw was approved before the *MGA* was updated to require all municipalities to complete supplementary assessments of designated manufactured homes without needing a bylaw in place.
- Administration could not confirm if this bylaw had been properly repealed, as such the repeal of this Bylaw is included as an amendment to the Supplementary Bylaw before Council.

Bylaw 1/98 – Supplementary Assessment Bylaw

- Authorizes the preparation of supplementary assessment, the same purpose as the Supplementary Assessment Bylaw 7/2023 presented to Council.
- References older versions of the *MGA.*
- Administration could not confirm if this bylaw had been properly repealed, as such the repeal of this Bylaw is included as an amendment to the Supplementary Bylaw before Council.

In addition, the Town of Morinville passed a yearly Supplementary Property Tax Bylaw from 2006 to 2010. Because these bylaws were specific to the year of taxation, they do not need to be repealed by Council. For the purpose of the new Supplementary Bylaw, property taxation of supplementary assessment will be included in the annual Property Tax Bylaw (a common and best practice), thereby eliminating the need for a separate supplementary tax bylaw.

Bylaw 11/2011 – Supplementary Tax Bylaw 2011- Not Approved

- On Feb. 1, 2011, Regular Meeting of Council, Council discussed whether they should implement Supplementary Tax Bylaw for 2011 after receiving Council Correspondence from a developer.
- The developer believed supplementary taxes were an unfair penalty.

- Administration reported that supplementary taxes raised varied from year to year and ranged from $12,000 to $50,000 per year.
- Council moved that Administration does not implement a Supplementary Tax Bylaw for 2011, 2012, and 2013.

Supplementary Assessment Process/Timeline from 2006-2010

1) The Town Assessor reassessed all properties where building permits were issued, and final inspection reports have been requested.
2) Reassessments were completed in October, properties requiring final inspection reports after September 30th were not reassessed and tax bills were issued late October/November.
3) The property owner has until December 31 to pay the supplementary tax without penalty.

The Administration Team in 2011 confirmed the bylaw cannot address only certain types of improvements (such as commercial improvements or owner-occupied improvements)

Bylaw Amendments

Administration has amended the Supplementary Assessment Bylaw 7/2023 to include a generalized statement repealing all bylaws related to supplementary assessment and the specific bylaws for repeal as discussed above to create the needed clarity and for legislative housekeeping. The Bylaw contains the following verbiage to effect this intent:

> COMING INTO FORCE
>
> That this Bylaw shall come into full force and effect upon the final passing thereof.
>
> That Bylaw 36/94 and Bylaw 1/98 are hereby repealed.
>
> That any other Town of Morinville Bylaws pertaining to the preparation of supplementary assessment and imposing supplementary tax prior to January 1, 2023, are hereby repealed.

BUDGET/RESOURCE IMPLICATIONS:

Budget

Municipal property taxes are by far the largest and most important revenue source for any municipality. Council's direction on the types of taxes to levy and incentives to offer will have a significant impact on all subsequent budgets and the fiscal capacity of the organization.

Revenue generated from the supplementary assessment will be entirely dependent on the number and value of new builds and additions/renovations completed throughout the year. This is why, initially, Administration proposes to treat any revenue from supplementary assessment as surplus and direct it to capital reserves rather than rely on it to fund operational expenditures. As the Town gains experience with the use of supplementary assessment, estimates for annual revenue will increase in accuracy, allowing for the inclusion of estimated supplementary assessment revenue in the annual budget if Council so chooses. Council could also continue to dedicate any supplementary assessment revenue to capital reserves as a matter of policy to assist in addressing funding deficiencies for capital investment going forward.

In discussions with the Town's assessors, it's estimated that supplementary assessment would have generated approximately $32,000 had it been in place for 2022. The 2022 fiscal year was one of modest growth that saw the addition of 47 taxable residential properties, the loss of 2 commercial properties and the conversion of 2 vacant industrial properties to improved industrial properties. There were also a number of properties that made additions/improvements. While revenue from the supplementary assessment would have been modest in 2022, having the bylaw in place ensures the Town is not missing out on significant revenue from potential future commercial investment. In addition, including supplementary assessment as an annual process, rather than implementing it only when a large amount of growth is expected ensures that the Town's approach to taxation is consistent and equitable in the treatment of all taxpayers.

Resource Implication

The Town will incur additional expenses from the contracted assessor to perform the supplementary assessment. However, the additional expenses are anticipated to be significantly outpaced by the increase in revenue, resulting in a net benefit to the Town.

Additionally, the workload for the tax/utility clerks will increase in the fall when issuing supplementary tax/assessment notices, however, the 2023 budget provided a small increase of 0.4 FTEs to the Finance Department, ensuring the department has sufficient resources to handle the increased workload with negligible impact to other responsibilities.

LINKAGE TO BUSINESS PLAN/STRATEGIC PRIORITIES:

Strategic Plan:

- Goal 3
- Outcomes 3.1, 3.2 and 3.3

Operating Budget
Capital Budget

FOLLOW-UP ACTION:

Upon approval of the Bylaw, Administration will:

- Bring forward for Council's review and approval the 2023 Property Tax Bylaw, inclusive of supplementary property tax prior to May 1, 2023.
- Update the Morinville website to include Council-approved bylaws.
- Update the Morinville website to include public information about Supplementary Assessment and Tax (what is it, timelines, process, etc.) on the existing Tax and Assessment pages.

Supplementary Assessment Bylaw

March 14, 2023
Regular Meeting of Council

Presented by:
Rachelle Gilbert
Municipal Intern

Morinville
Growing Together

Recall:
Feb. 14, 2023, Regular Meeting of Council

01 What is Supplementary Assessment/Tax?

02 Why introduce Supplementary Assessment?

03 How Supplementary Assessment/Tax works?

04 Annual & Supplementary Assessment/Tax Timeline

05 Municipal Comparison

Date	Item
January 1st, 2023	9% penalty applied on all outstanding taxes.
February 20th, 2023	Annual assessment notices mailed to property owners.
February 28th, 2023	Annual notice of assessment date.
February 28th – May 1st, 2023	60-day review/appeal period.
May 1st, 2023	Final date to file a complaint for annual assessment.
May 30th, 2023	Annual property tax bills mailed.
June 30th, 2023	Annual property tax payments due.
July 1st, 2023	7.5% penalty applied on all outstanding 2023 taxes.
October 20th, 2023	Supplementary assessment notices and tax bills mailed.
October 30th, 2023	Supplementary notice of assessment date.
October 30th – December 29th, 2023	Supplementary assessment 60-day review period.
December 29th, 2023	Final date to file a complaint for supplementary assessment.
December 31st, 2023	Supplementary property tax payments due.
January 1st, 2024	9% penalty applied on all outstanding taxes.

Municipal Comparison

Town of Blackfalds	Yes
Town of Coaldale	Yes
Town of Devon	Yes
Town of Innisfail	No
Town of Olds	Yes
Town of Peace River	No
Town of Ponoka	No
Town of Redcliff	Yes
Town of Slave Lake	Yes
Town of Taber	Yes

Direct Comparison Group (70%)

Regional Comparison Group (88%)

City of Beaumont	Yes
Town of Devon	Yes
City of Fort Saskatchewan	Yes
Town of Gibbons	No
City of Leduc	Yes
City of Spruce Grove	Yes
City of St. Albert	Yes
Town of Stony Plain	Yes

Recall:
Feb. 14, 2023, Regular Meeting of Council

06 Impact to Non-Residential Property Tax Incentive

07 Budget/Resource Implications

08 Connection to Strategic Plan

09 Administration Action Items

10 Questions from Council

Strategic Plan Alignment

GOAL

Morinville improves its financial health while demonstrating value for money

OBJECTIVES

- Operational **spending** and service levels reflect the principles of relevance, efficiency and effectiveness
- Manage Morinville's current and future **infrastructure** needs with diligent planning and affordable spending
- Continue to seek and obtain additional sources of **revenue** to mitigate the financial impact on residents and businesses

Questions

Has the Town of Morinville had a Supplementary Assessment/Tax Bylaw in previous years? Why or why not?

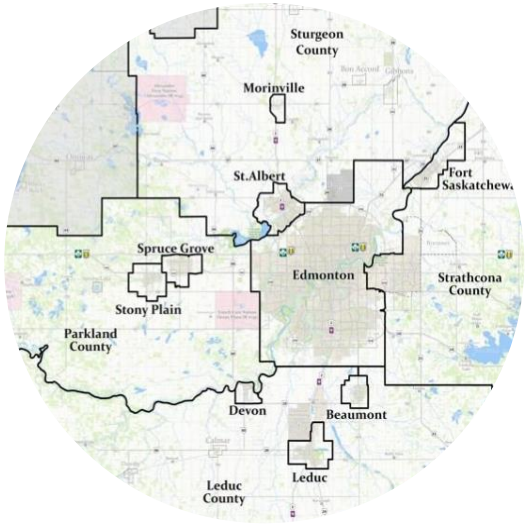
How would the Supplementary Assessment Bylaw tax property-owners for doing improvements?

Does Council have any concerns with how the Bylaw is written in addition to the amendments?

Stakeholder Feedback & SME

Municipal Assessment Services Group

Municipal Affairs Advisor



Regional Municipalities

Recall Previous Example

A vacant lot is assessed at $100,000 as of Dec. 31, 2021. If a home is completed on July 1, 2022, and the completion of the home increases the value of the property to $400,000 for the new home, only the increase in value ($300,000) would be subjected to supplementary assessment/tax.

The property was completed with 6 months remaining in the year, only 6/12 of the assessment apply. In this example the 2023 assessed value would be: $300,000 x (6/12) = $150,0000.

Annual Tax Notice = $100,000 x 2022 Tax Rate = **$796.97**

Supplementary Tax Notice = $150,000 x 2022 Tax Rate = **$1195.46**

Taxes Paid Comparison – Without Supplementary Assessment/Tax

Existing Property

Annual Tax Notice
= **$3187.89**

Assessment Value:
$400,000

New Property

Annual Tax Notice
= **$796.97**

New Assessment Value:
$400,000

Taxes Paid Comparison – With Supplementary Assessment/Tax

Existing Property

Annual Tax Notice
= **$3187.89**

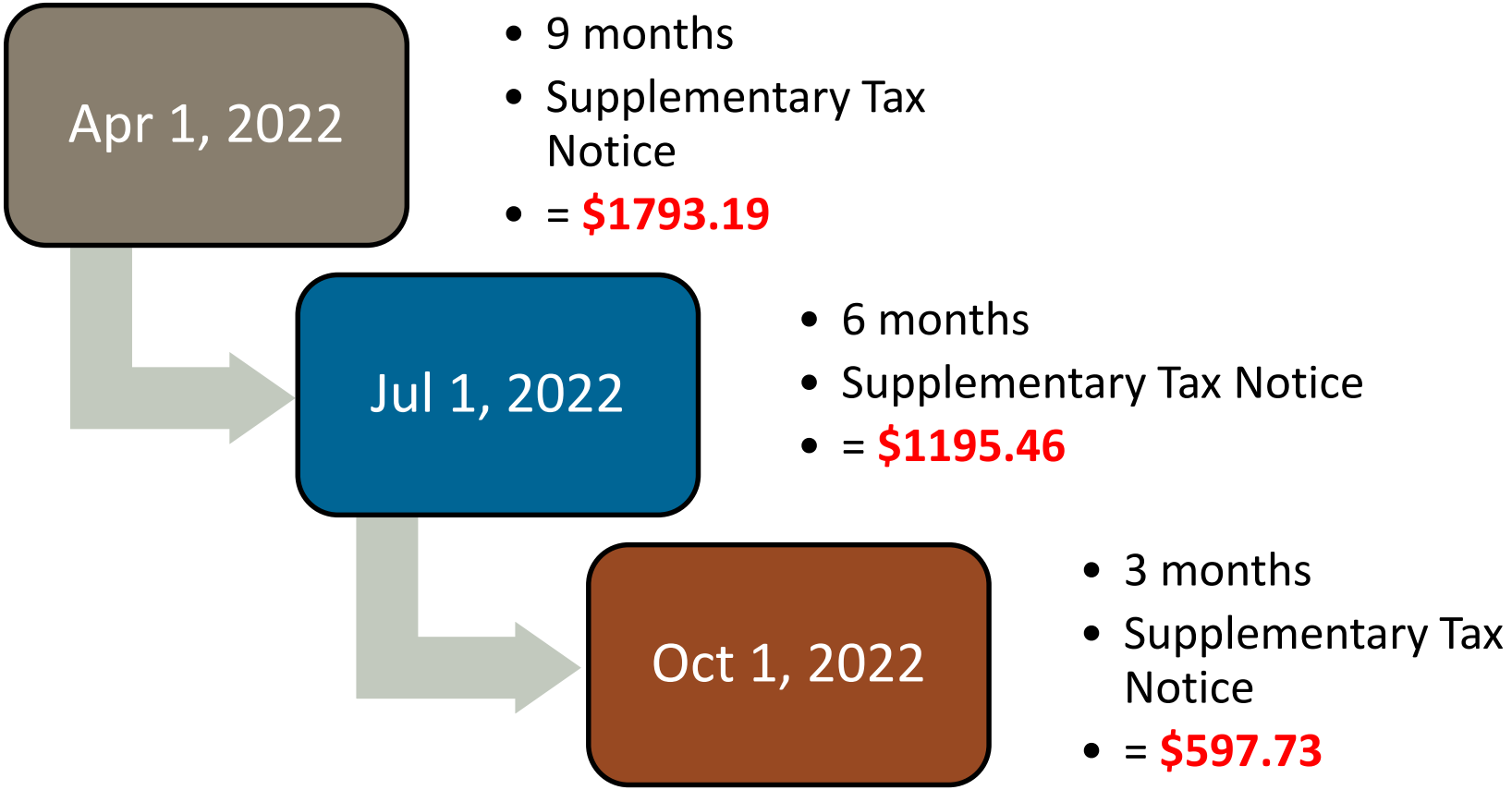
Assessment Value:
$400,000

New Property

Total Taxes Paid
(Annual + Supplementary)
= **$1992.43**

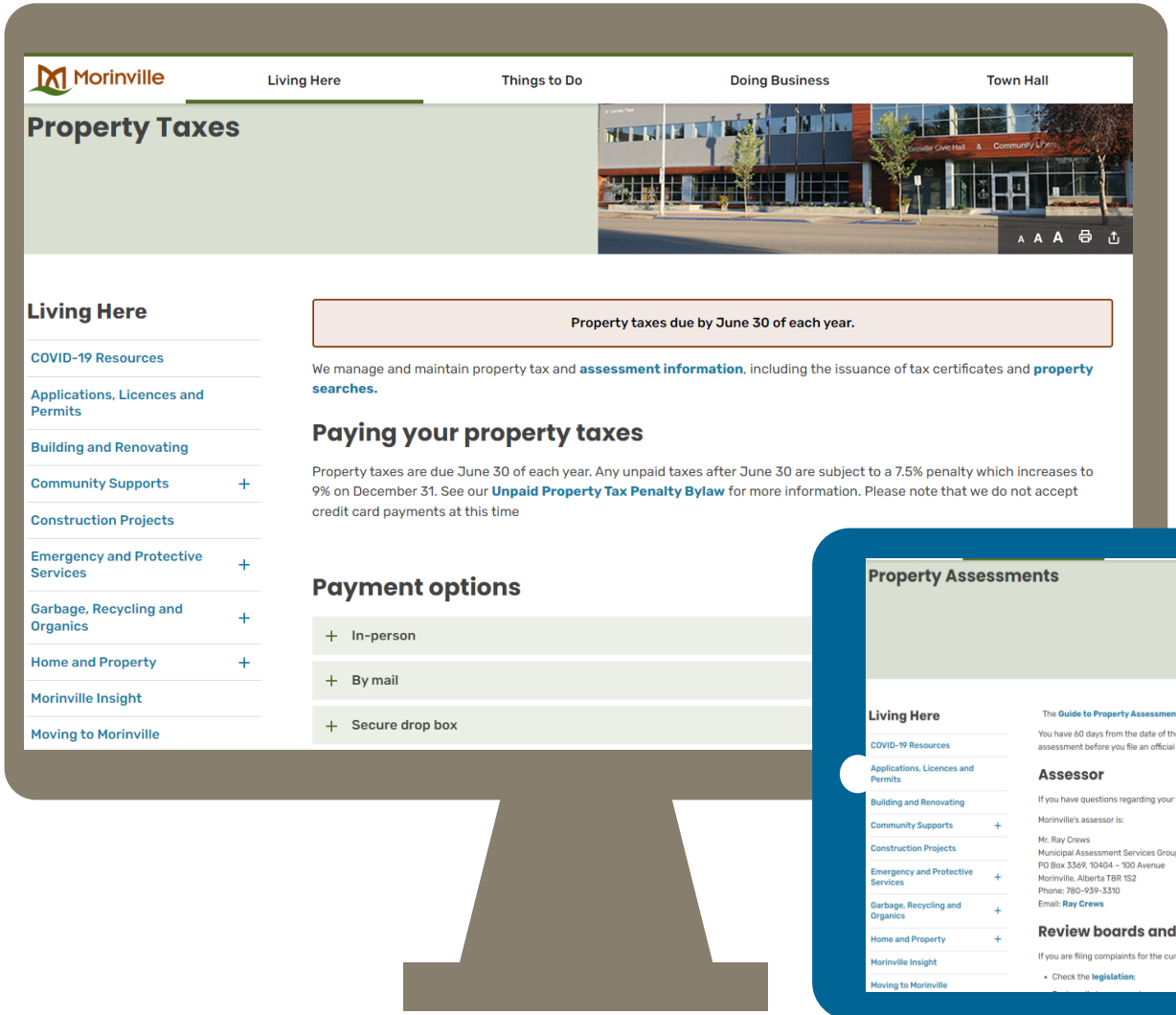
New Assessment Value:
$400,000

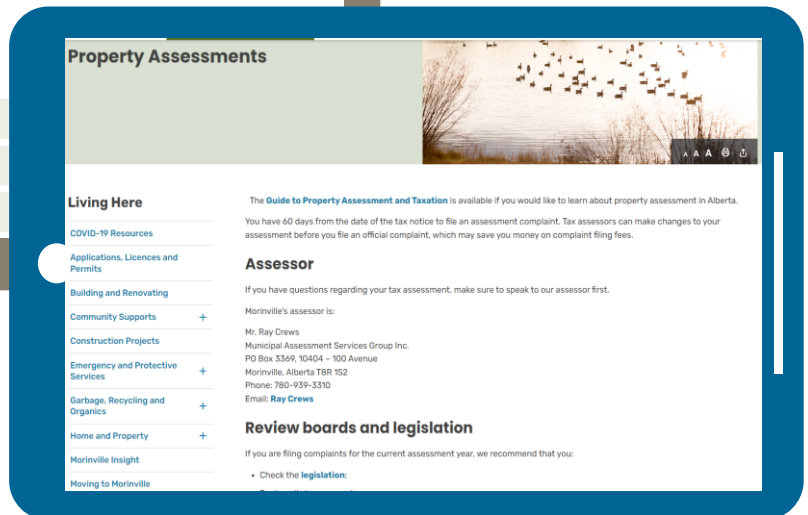
Supplementary Tax Notice



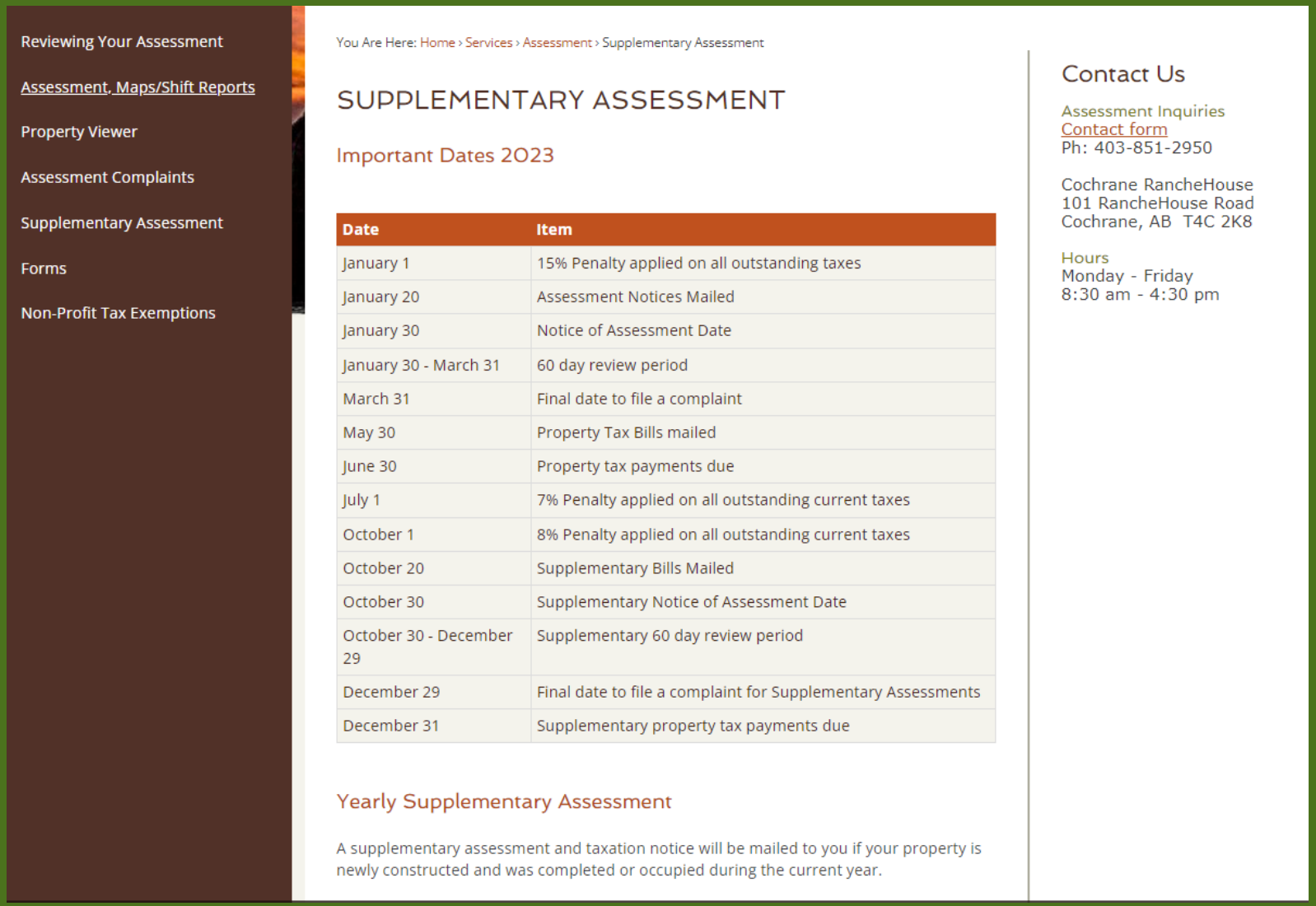
Occupied/Completed Dates

Current Webpage





Click here to open our current tax and assessment webpage.



- Reviewing Your Assessment
- Assessment, Maps/Shift Reports
- Property Viewer
- Assessment Complaints
- Supplementary Assessment
- Forms
- Non-Profit Tax Exemptions

You Are Here: Home › Services › Assessment › Supplementary Assessment

SUPPLEMENTARY ASSESSMENT

Important Dates 2023

Date	Item
January 1	15% Penalty applied on all outstanding taxes
January 20	Assessment Notices Mailed
January 30	Notice of Assessment Date
January 30 - March 31	60 day review period
March 31	Final date to file a complaint
May 30	Property Tax Bills mailed
June 30	Property tax payments due
July 1	7% Penalty applied on all outstanding current taxes
October 1	8% Penalty applied on all outstanding current taxes
October 20	Supplementary Bills Mailed
October 30	Supplementary Notice of Assessment Date
October 30 - December 29	Supplementary 60 day review period
December 29	Final date to file a complaint for Supplementary Assessments
December 31	Supplementary property tax payments due

Yearly Supplementary Assessment

A supplementary assessment and taxation notice will be mailed to you if your property is newly constructed and was completed or occupied during the current year.

Contact Us

Assessment Inquiries
Contact form
Ph: 403-851-2950

Cochrane RancheHouse
101 RancheHouse Road
Cochrane, AB T4C 2K8

Hours
Monday - Friday
8:30 am - 4:30 pm

Click here to view webpage

Amended Property Assessment

Supplementary Property Assessment Process

The supplementary property assessment process establishes the value added to your property from new construction during the current taxation year. This process makes sure that newly built properties pay their fair share of property taxes during this taxation year.

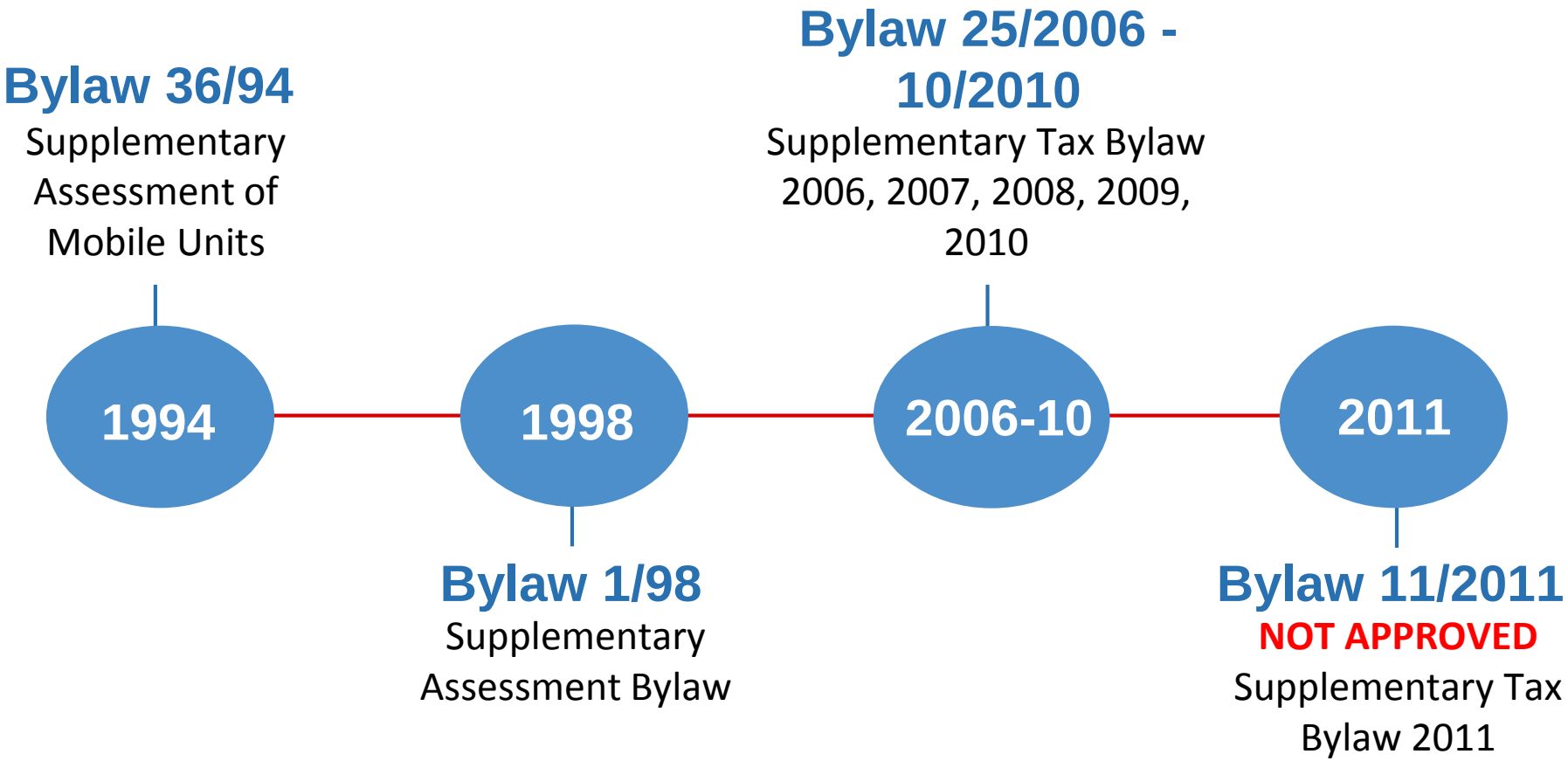
You would receive supplementary assessment and tax notices because the value of your property has increased during the current taxation year due to new construction. This added value was not included in the annual property assessment and tax notices.

Your supplementary property assessment notice indicates the amount your property assessment has increased as a result of new construction. Your notice also shows the number of supplementary months (months your property was completed or occupied).

Your supplementary property tax notice indicates the additional amount of **property taxes** you are required to pay this taxation year. You must **pay this amount** by the deadline date indicated on the notice.

Click here to view webpage

Previous Supplementary Assessment/Tax Bylaws



Previous Supplementary Assessment/Tax Bylaws

"Council moved that Administration does not implement a Supplementary Tax Bylaw for 2011, 2012, and 2013"

- *Feb. 8, 2011, Regular Meeting of Council*

Bylaw Amendments

COMING INTO FORCE

That this Bylaw shall come into full force and effect upon the final passing thereof.

That Bylaw 36/94 and Bylaw 1/98 are hereby repealed.

That any other Town of Morinville Bylaws pertaining to the preparation of supplementary assessment prior to January 1, 2023, are hereby repealed.

Recommendation

That Council approves 2nd and 3rd Reading of the Supplementary Assessment Bylaw 7/2023 as presented.

Questions?

Morinville
Growing Together

TOWN OF MORINVILLE
PROVINCE OF ALBERTA
SUPPLEMENTARY ASSESSMENT BYLAW
Bylaw 7/2023
Page 1

A BYLAW OF THE TOWN OF MORINVILLE, IN THE PROVINCE OF ALBERTA, TO AUTHORIZE THE PREPARATION OF SUPPLEMENTARY ASSESSMENTS OF ALL IMPROVEMENTS WITHIN THE TOWN OF MORINVILLE.

WHEREAS, section 313 of the *Municipal Government Act*, *R.S.A. 2000, Chapter M-26,* and amendments thereto, provides that Council may pass a Bylaw to authorize Supplementary Assessments of all Improvements within the municipality for the purpose of imposing a tax under Part 10 of the *Act* in the same year.

AND WHEREAS, section 314 of the *Act* authorizes the Municipal Assessor of the Town of Morinville to prepare Supplementary Assessments during the taxation year.

AND WHEREAS, section 325.1 of the *Act* provides that bylaws enacted under section 313 remain in force after the year in which they are enacted and apply in subsequent years until they are repealed.

NOW THEREFORE, the Council of the Town of Morinville, Alberta, duly assembled, hereby enacts as follows:

1.0 **BYLAW TITLE**

1.1 This Bylaw shall be cited as the "Supplementary Assessment Bylaw".

2.0 **DEFINITIONS**

2.1 "**Act"** means the *Municipal Government Act, R.S.A 2000, Chapter M-26*, and amendments thereto.

2.2 **"Assessed Person"** means a person who is named on the Assessment roll in accordance with section 304 of the *Act*.

2.3 "**Assessment"** means the value of property determined pursuant to Part 9, Division 4 of the *Act*, and regulations, as consolidated and amended.

2.4 **"Municipal Assessor"** means the designated officer appointed under section 284.2 of the *Act*.

2.5 **"Bylaw"** means the Supplementary Assessment Bylaw established by the Town of Morinville.

2.6 **"Council"** means the Council for the Town of Morinville.

2.7 **"Improvement"** means:

a) A structure;
b) Anything attached or secured to a structure that would be transferred without special mention by a transfer or sale of a structure;
c) A designated manufactured home and;
d) Machinery and equipment.

2.8 **"Supplementary Assessment"** means the Assessment of all new Improvements which are occupied or completed during the current year but were not assessed at 100% completion

on the current year's annual Assessment. Valuations are pro-rated from the point of completion to December 31st of the current year.

3.0 **APPLICATION**

3.1 Supplementary Assessments shall be prepared for the purpose of imposing tax under Part 10 of the Act in the same year.

3.2 The Municipal Assessor shall prepare Supplementary Assessments for all Improvements in accordance with Section 314 of the Act.

3.3 A Supplementary Assessment roll shall be prepared in accordance with section 315 of the Act.

3.4 A Supplementary Assessment notice shall be prepared and issue to the Assessed Person in accordance with sections 316 and 316.1 of the Act.

4.0 **SEVERABILITY**

4.1 If any Section or parts of this Bylaw are found in any court of law to be illegal or beyond the power of Council to enact, such Section or parts shall be deemed to be severable and all other Sections or parts of this Bylaw shall be deemed to be separate and independent there from and to be enacted as such.

COMING INTO FORCE

That this Bylaw shall come into full force and effect upon the final passing thereof.

That Bylaw 36/94 and Bylaw 1/98 are hereby repealed.

That any other Town of Morinville Bylaws pertaining to the preparation of supplementary assessment prior to January 1, 2023, are hereby repealed.

READ a first time in Council this 14th day of February, 2023.

READ a second time in Council this _____ day of _____, 2023.

READ a third time in Council and finally passed this _____ day of _____, 2023.

_____
Simon Boersma
Mayor

_____
Naleen Narayan
Chief Administrative Officer

Report to Council

☒ For Council Decision ☐ For Council Direction

☐ For Council Information

TOPIC:	Council & Administration Relations Committee Bylaw	March 14, 2023
PRESENTER:	Rachelle Gilbert, Municipal Intern	**ATTACHMENTS:** • Proposed Council & Administration Relations Committee Bylaw 8/2023 • Council & Administration Relations Committee Terms of Reference
PREPARED BY:	Rachelle Gilbert, Municipal Intern Trish Pretzlaw, Manager, Human Resource Services	
CLEARANCES:	Naleen Narayan, CAO Michelle Hay, General Manager, Administrative Services	**RELEVANT BYLAWS / POLICIES / LEGISLATION:** • *Municipal Government Act*, RSA 2000, Ch. M-26 • Chief Administrative Officer Bylaw 11/2019 • Procedure Bylaw 6/2021 • CAO Performance Evaluation Policy CP122/2022 • CAO Performance Evaluation Directive CD122/2022

RECOMMENDATION:

That Council approves 1st Reading of the Council & Administration Relations Committee Bylaw 8/2023.

That Council approves 2nd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

That Council considers 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

That Council approves 3rd Reading of the Council & Administration Relations Committee Bylaw 8/2023.

PREVIOUS COUNCIL ACTION:

At the February 21, 2023, Council Committee of the Whole Meeting, Council accepted information about the Council & Administration Relations Committee Bylaw and required no further information from Administration.

At the February 8, 2022, Regular Meeting of Council, Council approved the Council & Administration Relations Committee Terms of Reference and, appointed Mayor Simon Boersma, Councillor Scott Richardson, and Councillor Maurice St. Denis to the Council & Administration Relations Committee.

Submitted by:

R. Gilbert
Municipal Intern

Approved by:

N. Narayan
CAO

BACKGROUND SUMMARY:

During the February 8, 2022, Regular Meeting of Council, Council replaced the CAO Performance Evaluation Committee with the Council & Administration Relations Committee (CARC) and expanded the scope of the CARC to include:

- CAO performance evaluation
- CAO recruitment
- Complaints related to the Council Code of Conduct
- Other Council and Administration interpersonal and relational matters

Administration was directed to develop the attached CARC Terms of Reference that included the expanded scope.

Purpose of the Council & Administration Relations Committee Bylaw

The CARC Bylaw formally establishes this Council committee and its mandate and functions and meets the requirements of the *Municipal Government Act* (MGA) to establish a council committee, as per:

> Section 145 (bylaws – council and council committees):
>
> *"(3) Where a council establishes a council committee or other body, the council may, by bylaw, establish the functions of the committee or body and the procedures to be followed by it."*

The draft CARC Bylaw was based on and will replace the CARC Terms of Reference, creating alignment with the *MGA* establishing the Committee and providing overarching direction on general CARC functions.

Stakeholder Engagement

To ensure effective collaboration between Council and Administration, the draft Council & Administration Relations Committee Bylaw was reviewed at the February 8, 2023, CARC Meeting and subsequently referred by CARC to the February 21, 2023, Committee of the Whole Meeting for fulsome review and feedback.

BUDGET/RESOURCE IMPLICATIONS:

N/A

LINKAGE TO BUSINESS PLAN/STRATEGIC PRIORITIES:

Morinville 2025 Municipal Sustainability Plan – Governance:

- Sound Management – municipal management including fiscal responsibility and effective asset, human resources and financial management practices.
- Accountable Leadership – municipal leadership including the quality, transparency, accessibility and accountability of elected officials, municipal staff, and community leaders in developing and carrying out effective policy and priority actions.

FOLLOW-UP ACTION:

- With Council's approval of 3rd Reading, Administration will implement Council & Administration Relations Committee Bylaw 8/2023.

TOWN OF MORINVILLE
PROVINCE OF ALBERTA
COUNCIL & ADMINISTRATION RELATIONS COMMITTEE BYLAW
BYLAW 8/2023
Page 1

A BYLAW OF THE TOWN OF MORINVILLE, IN THE PROVINCE OF ALBERTA, TO ESTABLISH AND DEFINE THE FUNCTIONS OF THE COUNCIL & ADMINISTRATION RELATIONS COMMITTEE.

WHEREAS, Section 145 of the *Municipal Government Act,* R.S.A. 2000, Chapter M-26, and amendments thereto, provides that Council may pass bylaws in relation to the establishment and functions of council committees and other bodies;

AND WHEREAS, Section 145 of the *Municipal Government Act*, R.S.A. 2000, Chapter M-26, and amendments thereto, a council committee may consist of a combination of councillors and other persons;

AND WHEREAS, Section 203 of the *Municipal Government Act*, R.S.A. 2000, Chapter M-26, Council may by bylaw, delegate its powers, duties or functions to a Council committee, Chief Administrative Officer or designated officer unless any other enactment or bylaw, provides otherwise;

AND WHEREAS, the Town of Morinville wishes to establish a Council committee that acts in an advisory capacity by making recommendations and providing strategic advice to Council on matters pertaining to Council and Administration relations;

NOW THEREFORE, the Council of the Town of Morinville, Alberta, duly assembled, hereby enacts as follows:

1.0 BYLAW TITLE

1.1 This Bylaw shall be cited as the “Council & Administration Relations Committee Bylaw”.

2.0 DEFINITIONS

2.1 “**Administration”** means the operational arm of the Town of Morinville, comprised of the various departments and business units, including all employees who operate under the leadership and supervision of the CAO.

2.2 **“Bylaw”** means the Council & Administration Relations Committee Bylaw established by the Town of Morinville.

2.3 **“Chief Administrative Officer” or “CAO”** means the Chief Administrative Officer of the Town of Morinville appointed pursuant to s. 205 of the *Municipal Government Act*, R.S.A. 2000, Chapter M-26 or the designate of the Chief Administrative Officer; delegate thereof.

2.4 **“CAO Bylaw”** means the Chief Administrative Officer Bylaw as amended from time to time, duly enacted by the municipal council of the Town of Morinville.

2.5 **“Committee”** means the Council & Administration Relations Committee established by this Bylaw.

2.6 **“Council”** means the municipal council of the Town of Morinville.

2.7 “**Council Code of Conduct”** means the Council Code of Conduct Bylaw as amended from time to time, duly enacted by the municipal council of the Town of Morinville.

2.8 **“Mayor”** means the Chief Elected Official of the Town of Morinville.

2.9 **“Morinville”** means the municipal corporation of the Town of Morinville.

3.0 ESTABLISHMENT AND MANDATE

3.1 A council committee is hereby established and will be referred to as the Council & Administration Relations Committee.

3.2 The Committee shall act in an advisory capacity to Council on matters pertaining to:

- 3.2.1 Recruitment of the Chief Administrative Officer (CAO);
- 3.2.2 Council and CAO relations including performance evaluation and management;
- 3.2.3 Relational matters between Council and Administration; and
- 3.2.4 Matters pertaining to the Council Code of Conduct including complaint management inclusive of appointment of an independent third-party adjudicator or investigator as may be required in accordance with the Council Code of Conduct Bylaw.

3.3 Guiding Principles: All Committee work will be carried out in accordance with:

- 3.3.1 The *Municipal Government Act* and other governing legislation;
- 3.3.2 The CAO Bylaw;
- 3.3.3 The Council Code of Conduct Bylaw;
- 3.3.4 Council policies and procedures including those related to CAO Performance Evaluation; and
- 3.3.5 Administrative policies and directives as applicable.

4.0 MEMBERSHIP

4.1 Committee Structure: The Committee shall be comprised of members as follows:

- 4.1.1 Voting Members:
  - 4.1.1.1 The Mayor; and
  - 4.1.1.2 Two members of Council appointed annually by Council.
- 4.1.2 Non-voting Members:
  - 4.1.2.1 Morinville's CAO;
  - 4.1.2.2 Manager of Human Resource Services; and
  - 4.1.2.3 Legislative Officer.

5.0 ROLES & RESPONSIBILITIES

5.1 Committee Scope: The Committee shall oversee, make recommendations and report to Council on matters pertaining to the Committee mandate.

5.2 The following Committee roles and responsibilities are recognized:

- 5.2.1 Committee Chair: The Mayor will be designated as the Chair and specific roles and responsibilities include:
  - 5.2.1.1 Work with Administration to coordinate all Committee matters related to the Bylaw;
  - 5.2.1.2 Work with Administration to ensure the confidentiality of material distributed to the Committee and Council; and
  - 5.2.1.3 Preside at all Committee meetings and decide all points of order that may arise.

5.2.2 Committee Members:

5.2.2.1 Serve as a conduit for:

5.2.2.1.1 Council and Administration to bring forward, review, and vet concerns associated with interpersonal and relational matters; and

5.2.2.1.2 Any person to submit complaints in accordance with the Council Code of Conduct.

5.2.2.2 Read all agenda material and seek clarification from the Chair on any matters prior to meetings in order to make the most effective use of the Committee's time.

5.2.2.3 Attend meetings and participate fully in all Committee work.

5.2.3 CAO: Provide guidance and advice to the Committee and Council as required.

5.2.4 Manager of Human Resource Services: Provide guidance and advice to the Committee, Council and the CAO as required.

5.2.5 Legislative Officer: Provide legislative advice and administrative support including agenda creation and minute-taking to the Committee as required.

6.0 MEETINGS

6.1 The Committee will determine the meeting schedule required to fulfill the responsibilities identified in the Bylaw.

6.2 Meetings shall be established by the Committee Chair in consultation with the Committee.

6.3 Items or topics for meeting agendas may be submitted in writing to the Committee members. The written request shall include sufficient detail and/or documentation to provide the Committee with enough information to consider the request.

6.4 The Committee will review each proposed agenda and may:

6.4.1 assign items to an agenda for an upcoming Committee meeting;
6.4.2 recommend an item be postponed or directed to a different meeting; and/or
6.4.3 do any other thing necessary to appropriately manage upcoming agendas.

6.5 A quorum shall consist of more than 50% of the voting membership of the Committee.

7.0 REVIEW

7.1 This Bylaw shall be brought forward for review at the midpoint of each Council term. Any recommended changes shall be brought forward to Council for consideration and approval.

7.2 This Bylaw shall remain in effect if the review date passes prior to formal review.

8.0 SEVERABILITY

8.1 If any Section or parts of this Bylaw are found in any court of law to be illegal or beyond the power of Council to enact, such Section or parts shall be deemed to be severable and all other Sections or parts of this Bylaw shall be deemed to be separate and independent there from and to be enacted as such.

TOWN OF MORINVILLE
PROVINCE OF ALBERTA
COUNCIL & ADMINISTRATION RELATIONS COMMITTEE BYLAW
BYLAW 8/2023
Page 4

COMING INTO FORCE

That this Bylaw shall come into full force and effect upon the final passing thereof.

READ a first time in Council this _____day of _____, 2023.

READ a second time in Council this _____ day of _____, 2023.

READ a third time in Council and finally passed this _____ day of _____, 2023.

_____
Simon Boersma
Mayor

_____
Naleen Narayan
Chief Administrative Officer

Council and Administration Relations Committee

Morinville
Growing Together

Terms of Reference

Resolution Number: 122/2022 (Consent)
Type: Standing Committee of Council
Approval Date: April 26, 2022
Supersedes Resolution: 41/2022

1.0 Purpose

1.1 The Council and Administration Relations Committee ("Committee") shall act in an advisory capacity to Council on matters pertaining to:
- 1.1.1 Recruitment of the Chief Administrative Officer ("CAO").
- 1.1.2 Council and CAO relations including performance evaluation and management.
- 1.1.3 The nature of business interactions between Members of Council and Administration.
- 1.1.4 Council Code of Conduct issues and complaints.

1.2 The Committee serves as a conduit for:
- 1.2.1 Council and Administration to bring forward, review and vet concerns associated with interpersonal and relational matters.
- 1.2.2 Any person to submit complaints in accordance with the Council Code of Conduct Bylaw.

2.0 Membership

2.1 Committee Structure: The Committee shall be of comprised of Council members as follows:
- 2.1.1 The Mayor, and
- 2.1.2 Two members of Council appointed annually by Council.

2.2 Resources: Administration shall provide advisory and administrative resources as follows:
- 2.2.1 Morinville's Manager of Human Resource Services will be designated as the representative to assist the Mayor, Committee and Council in guiding activities related to this Committee.
- 2.2.2 Morinville's CAO, Manager of Human Resource Services and other specialists may be called upon to conduct research or other Committee identified requirements. Given that Council has delegated authority to the CAO for the administration of Town affairs in accordance with decisions adopted by Council, under the direction of the CAO, staff have the responsibility and the authority to provide consultation, advice and recommendations to Council.
- 2.2.3 Morinville's Legislative Services section will provide administrative support including agenda creation and minute taking for this Committee.

3.0 Meetings

3.1 The Committee will determine the meeting schedule required to fulfill the responsibilities identified in the Committee Terms of Reference.

3.2 A quorum shall consist of more than 50% of the membership of the Committee.

4.0 Roles and Responsibilities

4.1 Guiding Principles: All Committee work will be carried out in accordance with:
- 4.1.1 The Municipal Government Act and other governing legislation.
- 4.1.2 The CAO Bylaw.
- 4.1.3 Council's Code of Conduct Bylaw.
- 4.1.4 Council Policies and Procedures including those related to CAO Performance Evaluation.
- 4.1.5 Administrative Policies and Directives as applicable.

4.2 Committee Scope: In consultation with the CAO and/or the Manager of Human Resource Services, the Committee shall oversee, make recommendations and report to Council on:
- 4.2.1 Matters pertaining to CAO relations including:
  - 4.2.1.1 Recruitment and selection of the CAO.
  - 4.2.1.2 Establishing annual performance objectives for the CAO.
  - 4.2.1.3 Annual CAO Performance Evaluation processes and outcomes.
  - 4.2.1.4 Interpersonal matters between the CAO and Council.
- 4.2.2 Relational matters by serving as a conduit for both Council and Administration to bring forward, review and vet concerns.
- 4.2.3 Matters pertaining to Council Code of Conduct including:
  - 4.2.3.1 Complaint management inclusive of appointment of an independent third-party adjudicator or investigator as may be required in accordance with the Council Code of Conduct Bylaw.

4.3 Stakeholder Roles: The following stakeholders and respective roles are recognized:
- 4.3.1 Committee Chair: The Mayor will be designated as the "Chair" and specific roles and responsibilities include:
  - 4.3.1.1 Working with the Manager of Human Resource Services to ensure the coordination of all Committee matters related to the Terms of Reference.
  - 4.3.1.2 Working with Administration, ensuring the confidentiality of material distributed to the Committee and Council.

- 4.3.2 Committee Member: Specific roles and responsibilities include:
  - 4.3.2.1 Consulting with the CAO and developing an annual work plan.
  - 4.3.2.2 Reading all agenda material and seeking clarification from the Chair on any matters prior to meetings in order to make the most effective use of the Committee's time.
  - 4.3.2.3 Attending meetings and participating fully in all Committee work.

4.3.3 CAO: Specific roles and responsibilities include:

4.3.3.1 Providing advice to the Committee as required.

4.3.3.2 Preparing a summary of accomplishments based on the approved performance objectives for the evaluation period.

4.3.3.3 Preparing objectives for the approval of Council for the coming evaluation period.

4.3.3.4 Attending meetings at the request of the Chair.

4.3.4 Manager of Human Resource Services: Specific roles and responsibilities include:

4.3.4.1 Guidance and coordination of all Committee matters related to the Terms of Reference.

4.3.4.2 Providing advice, guidance and assistance to the Mayor, Council and Committee as required.

4.3.4.3 Attending meetings at the request of the Chair.

4.3.5 Legislative Services: Specific roles and responsibilities include:

4.3.5.1 Providing advice and administrative support including agenda creation and minute taking to the Committee as required.

4.3.5.2 Attending meetings at the request of the Chair.

5.0 Expiry Date

5.1 The Committee shall review the Terms of Reference at the mid-point of each Council term. Recommended changes shall be brought forward to Council for consideration and approval.

5.2 The Terms of Reference shall remain in effect if the review date passes prior to formal review.

Simon Boersma
Mayor

Michelle Hay
Interim Chief Administrative Officer

Report to Council

☒ For Council Decision ☐ For Council Direction

☐ For Council Information

TOPIC:	CAO Performance Evaluation Policy and Directive	March 14, 2023
PRESENTER:	Rachelle Gilbert, Municipal Intern	**ATTACHMENTS:** • Draft CAO Performance Evaluation Policy • Draft CAO Performance Evaluation Directive
PREPARED BY:	Rachelle Gilbert, Municipal Intern Trish Pretzlaw, Manager, Human Resource Services	
CLEARANCES:	Naleen Narayan, CAO Michelle Hay, General Manager, Administrative Services	**RELEVANT BYLAWS / POLICIES / LEGISLATION:** • *Municipal Government Act*, RSA 2000, Ch. M-26 • Chief Administrative Officer Bylaw 11/2019 • Procedure Bylaw 6/2021 • CAO Performance Evaluation Policy CP122/2022 • CAO Performance Evaluation Directive CD122/2022

RECOMMENDATION:

That Council approves the CAO Performance Evaluation Policy.

That Council approves the CAO Performance Evaluation Directive.

PREVIOUS COUNCIL ACTION:

At the February 21, 2023, Committee of the Whole Meeting, Council accepted information about the amendments to the CAO Performance Evaluation Policy CP122/2022 and CAO Performance Evaluation Directive CD122/2022.

At the April 26, 2022, Regular Meeting of Council, Council approved the CAO Performance Evaluation Policy CP122/2022 and CAO Performance Evaluation Directive CD122/2022.

BACKGROUND SUMMARY:

In 2019, Council established the CAO Performance Evaluation Committee to guide responsibilities related to the CAO performance evaluation process. As part of their mandate, the Committee developed the CAO Performance Evaluation Policy, Procedure, and Evaluation Tool.

Submitted by:

R. Gilbert
Municipal Intern

Approved by:

N. Narayan
CAO

At the February 8, 2022, Regular Meeting of Council, Council replaced the CAO Performance Evaluation Committee with the Council & Administration Relations Committee (CARC). The CARC maintains oversight of the CAO Performance Evaluation process including administering and assessing the effectiveness of related policies, directives and tools.

Purpose of the CAO Performance Evaluation Policy & Directive

The CAO Performance Evaluation Policy and Directive define the governing principles and process for CAO performance evaluation in accordance with the *MGA*:

> Section 205.1 (performance evaluation):
>
> *"A council must provide the chief administrative officer with an annual written performance evaluation of the results the chief administrative officer has achieved with respect to fulfilling the chief administrative officer's responsibilities under section 207."*
>
> Section 207 (chief administrative officer's responsibilities):
>
> *"The chief administrative officer*
> *a) is the administrative head of the municipality;*
> *b) ensures that the policies and programs of the municipality are implemented;*
> *c) advises and informs the council on the operation and affairs of the municipality; and*
> *d) performs the duties and functions and exercises the powers assigned to a chief administrative officer by this and other enactments or assigned by council."*

The CAO Performance Evaluation Policy and Directive are supporting documents to the Council & Administration Relations Committee Bylaw providing specific direction regarding CAO performance evaluation, one of the key mandates of the Committee. Both documents have been consistently reviewed by Council including a recent revision in April 2022; however, having surpassed their review date of October 31, 2022, are due for further review.

Stakeholder Engagement

To ensure effective collaboration between Council and Administration, amendments to the CAO Performance Evaluation Policy CP122/2022 and CAO Performance Evaluation Directive CD122/2022 were reviewed at the February 8, 2023, CARC Meeting and subsequently referred by CARC to the February 21, 2023, Committee of the Whole Meeting for fulsome review and feedback.

BUDGET/RESOURCE IMPLICATIONS:

N/A

LINKAGE TO BUSINESS PLAN/STRATEGIC PRIORITIES:

Morinville 2025 Municipal Sustainability Plan – Governance:

- Sound Management – municipal management including fiscal responsibility and effective asset, human resources and financial management practices.

- Accountable Leadership – municipal leadership including the quality, transparency, accessibility and accountability of elected officials, municipal staff, and community leaders in developing and carrying out effective policy and priority actions.

FOLLOW-UP ACTION:

Upon approval of the CAO Performance Evaluation Policy and Directive, Administration will update the Town of Morinville website to include Council-approved policies and directives.

Council Policy

CAO Performance Evaluation

Policy Number: **CP__/2023**
Approval Date:
Supersedes Policy: **CP122/2022**

SECTION A

1.0 Policy Purpose

The Town of Morinville (the Town) recognizes the need to evaluate the performance of its Chief Administrative Officer (CAO) to ensure the ongoing success of the Town. The performance of the CAO will be monitored at a frequency as outlined in the *MGA* and by a method determined by Council.

2.0 Policy Statements

In an environment characterized by change due to the municipal election process, this policy will ensure consistency in CAO Performance Evaluation Directive over time. A key role of Council is to evaluate the performance of the CAO. To be effective, this evaluation needs to be carried out on a regular basis, and in a planned and thoughtful manner.

3.0 Responsibilities

3.1 The CAO

The CAO is responsible for their own performance and development within the context of the organization's business needs. More specifically, those responsibilities are:

- Set challenging but achievable performance objectives based on the strategic direction of the Town.
- Prioritize issues that concern the Town of Morinville in alignment with Council's strategic documents.

- Evaluate and assess their progress and develop strategies to overcome obstacles.
- Deliver on their objectives and plans.

3.2 Council

Council represents the community and outlines what is expected of the CAO as leader of the Town Administration. More specifically, Council will:

- Ensure the goals and objectives of the CAO and the organization are aligned with the strategic direction of the Town.
- Support the CAO and the organization, so they get the resources they need to achieve success.
- Recognize the progress and achievements of the CAO through informal discussions, Mid-Year Check-In (optional) and/or Performance Evaluations.
- Review and approve any revisions to this policy.
- By motion of Council, appoint members to the Council & Administration Relations Committee.

3.3 Council & Administration Relations Committee

The Council & Administration Relations Committee (CARC), in accordance with the Council & Administration Relations Committee Bylaw, represents Council in the implementation of the CAO Evaluation process. CARC shall:

- Make recommendations to Council regarding the annual performance goals and performance results of the CAO.

3.4 Human Resources

Human Resources is the custodian of the process. Human Resources' responsibilities are to:

- Integrate related formal systems and procedures, like the CAO Performance Evaluation Directive and related processes and documents into the professional development and compensation processes.
- Provide assistance to Council, CARC and the CAO throughout the process.
- Monitor, evaluate, and improve the performance review processes on a regular basis.

4.0 Expiry Date

4.1 For the purpose of ensuring this Policy is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, this policy expires on October 31, 2024.

4.2 This policy shall remain in effect if the expiry date passes prior to formal review.

SECTION B

1.0 Reference to other Policy and Legislation

Municipal Government Act, RSA 2000, Chapter M-26
Chief Administrative Officer Bylaw
Council & Administration Relations Committee
CAO Performance Evaluation Directive

2.0 Persons Affected

CAO
Council
Council & Administration Relations Committee

3.0 Divisional/Departmental Responsibility

Administrative Services / Human Resource Services

4.0 Review/Revision History and Author

CP122/2022 – April 26, 2022
CA93/2019 – April 9, 2019
March 2019 – Initial Draft; CAO Performance Evaluation Committee

Simon Boersma
Mayor

Naleen Narayan
Chief Administrative Officer

Council Directive

CAO Performance Evaluation

Directive Number:
Approval Date: TBD
Supersedes Directive: CD122/2022

SECTION A

1.0 Performance Review Timelines

The CAO Performance Evaluation process is scheduled to commence in May of each year. All components of the evaluation, including any salary adjustment, will be completed by July 31.

For Election Years / End & Start of Council Term:

In an election year, both the outgoing and incoming Councils will contribute to the overall evaluation of the Chief Administrative Officer's (CAO) performance. Performance feedback will be gathered from the current Council prior to the end of their term and will be combined with the next Council's feedback upon completion of the overall performance evaluation period of May 1 – April 30.

Evaluation will be based on CAO performance objectives that will combine areas of focus that span the end of the outgoing Council's term and the beginning of the next Council's term along with certain objectives specific to either pre- or post-election.

2.0 Chief Administrative Officer Evaluation Process

STEP 1: Objectives and Goal Setting

The purpose of this step is for the CAO and Council to jointly decide on any personal development goals and establish key performance objectives that are tied to the annual performance evaluation feedback. These objectives should be established within the overall context of the Strategic Plan for the Town.

Goals are established based on annual performance evaluation feedback, Town priorities, initiatives and direction for the coming year.

STEP 2: Mid-Year Check-In (optional)

Council and the CAO meet to discuss progress on the achievement of key objectives and determine if there are any impediments to success or if objectives need to change as a result of a shift in strategic direction or priority. Council may also complete periodic review of CAO progress on key objectives through strategic objectives meetings.

STEP 3: Annual Performance Evaluation (see detailed schedule below for more details).

CAO

The CAO prepares a self-assessment of goals, key performance objectives and accomplishments for the year as well as gathers data from community surveys/feedback and employee surveys/feedback that reflect the satisfaction and well-being of the community and workforce and provides it to the Mayor.

Mayor/Council

Each Council member completes the CAO Performance Evaluation form individually and forwards it to Human Resources. Human Resources then collates all feedback into a summary document.

Council & Administration Relations Committee

The Council & Administration Relations Committee (CARC) makes recommendations to Council regarding the annual performance goals and performance results of the CAO.

Human Resources

Human Resources provides support and assistance to Mayor and Council, CARC and the CAO throughout the process. Human Resources prepares and administers confidential surveys of the Executive Leadership Team, Senior Leadership Team and any other members of the Town's workforce identified if being used in the performance evaluation process. If a 360 tool is to be used in the performance evaluation, HR sources and organizes it. Results of these surveys and the 360 (if used) are provided to CARC.

Pre-Performance Review Meeting

Human Resources collates all information gathered from the CAO and Council and will hold a formal meeting with Council to discuss the results of the review and the level of success in achieving the key objectives. Council feedback is documented for provision to the CAO. Council also determines any salary adjustment (merit increase) based on overall performance.

Performance Review Meeting

The Council & Administration Relations Committee meets with the CAO to provide formal, documented feedback as gathered above and to communicate Council's compensation adjustment decision.

STEP 4: Cycle repeats from Step 1.

Detailed Annual Performance Evaluation Schedule

DELIVERABLE	WHO	DUE DATE
Send reminder of CAO review timelines to Council & Administration Relations Committee	HR	April 1
The Council & Administration Relations Committee meets to evaluate and confirm components of evaluation, i.e. 360 feedback, survey of direct reports, etc.	HR	April 15
Source and implement a 360 process/tool for CAO (if being used)	HR	April 21
Advise CAO to complete self-assessment	HR	May 1
Advise Council members to complete the performance evaluation document for CAO	HR	May 1
Each Council member completes the performance evaluation document for the CAO and submits to HR	Council Members	May 21
Complete self-assessment of goals, key performance objectives and accomplishments and submit to HR	CAO	May 21
Gather 360 data from employee or community surveys or feedback (if being used)	HR	May 21
Collate and summarize Council feedback; collate all other information gathered and send to Council for review	HR	May 31
Meet to discuss CAO review and provide overall feedback; decide on salary adjustment	CARC with support from HR	June 7
Summarize all feedback from Council & Administration Relations Committee into aggregated CAO performance evaluation document	HR	June 15
Meet with CAO to deliver feedback and advise of salary adjustment	CARC	June 30
Advise HR to process salary adjustment for the CAO.	CARC	July 7

Process salary adjustment for CAO, retroactive to CAO May 1	HR	July 31
Develop initial key performance objectives for coming year and provide to Council & Administration Relations Committee for recommendation to Council for approval	CAO	July 31
Share and discuss key performance objectives for coming year with Council; finalize	CAO, Mayor and Council	September 15
Meet to debrief and evaluate the Performance Evaluation process	CARC	September 30
Mid-Year Check-In (if used).	CAO, Mayor and Council	November 30

3.0 Expiry Date

3.1 For the purpose of ensuring this directive is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, this directive expires on October 31, 2024.

3.2 This directive shall remain in effect if the expiry date passes prior to formal review.

SECTION B

1.0 Reference to other Policy and Legislation

Municipal Government Act, RSA 2000, Chapter M-26
Chief Administrative Officer Bylaw
Council & Administration Relations Committee Bylaw
CAO Performance Evaluation Policy

2.0 Persons Affected

CAO
Council
Council & Administration Relations Committee

3.0 Divisional/Departmental Responsibility

Administrative Services / Human Resource Services

4.0 Review/Revision History and Author

CD122/2022, April 26, 2022
CP259/2021, September 13, 2021
Procedure CA9/2020, January 14, 2020 - CAO Performance Evaluation Committee
Procedure CA94/2019, April 9, 2019 - CAO Performance Evaluation Committee
March 2019 – Initial Draft; CAO Performance Evaluation Committee

Simon Boersma
Mayor

Naleen Narayan
Chief Administrative Officer

Report to Council

☐ For Council Decision ☐ For Council Direction

☒ For Council Information

TOPIC:	2024 Budget Kick-Off and Budget Pressures	March 14, 2023
PRESENTER:	Travis Nosko, Manager, Financial Services	**ATTACHMENTS:** • 2024 Budget – Council Timelines • Budget Kick-Off PowerPoint Slides
PREPARED BY:	Travis Nosko, Manager, Financial Services	
CLEARANCES:	Naleen Narayan, CAO Michelle Hay, General Manager, Administrative Services	**RELEVANT BYLAWS / POLICIES / LEGISLATION:** - **Budget Principles and Guidelines Policy** - **Taxation Policy**

RECOMMENDATION:

That Council accept the 2023 Budget Kick-Off and Pressures Report for information.

PREVIOUS COUNCIL ACTION:

N/A

BACKGROUND SUMMARY:

2024 Budget Process

As Council is aware, Administration is continuously working to improve the budget process to ensure it meets the needs of Council, Administration and the public. Significant improvements are planned for 2024, as noted below:

- Budgeting Software
  - Financial Services is moving forward with the upgrade of the Town's budgeting software.
  - This upgrade will improve the processes for managing, developing, and approving Administration's draft budget as well as provide additional capacity to manage revisions from Council.
  - Cost associated are included in the current 2023 budget.

Submitted by:

T. Nosko
Manager, Finance Services

Approved by:

N. Narayan
CAO

- Budget Calendars/Timelines
    - Formal calendars for both Council and Administration.
    - Clearly articulates expectations, timelines and milestones for the 2024 budget cycle.

- Enhanced Public Engagement
    - To be discussed with Communications later on at tonight's meeting.

- Administrative Improvements
    - Budget Handbook for managers
    - Improved Administrative processes for budget development and approval
    - Improved forecasting processes

2024 Timelines

Council will note that the attachments include a 2024 Council Budget Timeline. This calendar/milestone document highlights key dates for Council and identifies when Council can expect discussions on the budget to commence, when public engagement will take place, and high-level information on key Administration targets and dates.

While the timeline is flexible enough to accommodate unforeseen circumstances (a 6-week "safety net" is included prior to year-end), it is Administration's intent to adhere to the identified targets and milestones as closely as possible to ensure there is sufficient time for budget development, engagement, deliberation and approval.

2024 Pressures and Considerations

External Influences

While expected to cool somewhat, inflation remains a concern going into 2024. As of the time of the writing of this report, year-over-year inflation sits at 5.9%, far above historic levels but below that of last year. This means that Council can expect the costs of all goods and services to once again increase substantially for the 2024 budget. To combat these rising costs, the options open to Council remain the same as those discussed during the 2023 budget process, decrease services or increase tax revenue.

As Council is aware, to combat inflation the Bank of Canada instituted a historically aggressive set of interest rate hikes over the course of 2022 and 2023. Higher central interest rates create higher costs of borrowing, particularly for long-term debentures. While this has no direct impact on the Town's expenses (all current debt is locked-in and low rates and no new debt is planned for the short term) interest rate hikes will have an impact on the local housing market and, in turn, tax revenue. Higher interest rates put downward pressure on housing prices and may also delay investment in new builds. This puts downward pressure on the growth of assessment in the Town and therefore Council's ability to generate tax revenue. Administration is projecting a conservative 0.5% growth in assessment for 2024, meaning increases in revenue to keep pace with inflation will not be mitigated in any meaningful way by natural growth in tax revenue through increased assessment. Any revenue increases will almost entirely rely on tax increases.

Capital Funding

The primary concern with Town finances in recent years has been a lack of adequate capital funding. The construction and operation of the Morinville Leisure Centre have had the dual impact of utilizing a significant portion of Town reserves and capital grant funding while simultaneously increasing operational costs beyond the capacity of current revenue streams. Plainly stated, the MLC used up a large portion of the Town's fiscal capacity and is now a barrier to re-establishing those funds. Further compounding the challenges presented by the MLC has been the COVID-19 pandemic, supply chain issues, inflation and the lasting impact of all three on the current economy. Even without the MLC, these are difficult and challenging times.

The 2023 Budget includes minimal investment in capital reserves, with $317,000 in budgeted transfers. Put into perspective, that is less than 10% of capital expenditures for 2023, and less than 5% of the 2022 amortization expense. Funded capital reserves are approximately $6.5 million (prior to any additions from 2022), meaning the Town has two years of capital spending at current levels in reserve. Alarmingly, this does not tell the whole story as not only is funding scarce, but current spending levels are also inadequate, with the Town investing less than half of the annual amortization expense back into new infrastructure.

As noted in the presentation to Council on the Municipal Measurement Index, current infrastructure spending is far below provincial benchmarks and the spending levels of comparator municipalities, both those in the Edmonton Metropolitan Region and across the province. Failure to meet the provincial benchmark will result in communication from the province and an expectation that the Town is working to achieve compliance. Continued failure to meet the benchmark may be viewed as a concern for the long-term viability of the Town and could lead to intervention from Alberta Municipal Affairs.

As Council is aware, the 2023/2024 Provincial Budget is the last that will include funding to municipalities from the Municipal Sustainability Initiative. It is expected that a new program will be unveiled shortly. (Note: this report was prepared prior to the release of the provincial budget, as such details on the new funding program may be available by the time the Council meeting takes place). The new Local Government Fiscal Framework (LGFF) is intended to bring increased consistency and predictability to provincial grant funding for municipalities which will aid in preparing long-term capital budgets. The level of funding, however, is not known at this time as a funding model or formula has not been announced and rumours continue to swirl that the current government is considering changes to overall funding commitments. Based on current formulas and previously announced funding levels, Morinville can expect approximately $1.7 million annually. While this is a significant increase to what has been received in 2022 and 2023, it represents only 26% of the Town's amortization expense, meaning the Town would still need to invest $4.8 million annually in order to meet the minimum provincial benchmark for infrastructure investment.

The Town **must** address the lack of capital funding, otherwise, it will be unable to fund necessary investments to core municipal infrastructure essential not only to maintaining adequate service delivery, but also to the health and safety of Town residents. Council can anticipate further discussion on the state of capital investment during 2024 Capital Budgeting Discussions in the coming weeks.

Operational Revenue

Funding for reserves comes from the net revenue of operations – that is revenue in excess of operational expenses. Some misconstrue municipal surpluses as unnecessary or "extra" revenue that isn't actually required by the Town and is therefore unfairly collected through taxes. This could not be

further from the truth – operational surpluses are the way in which a municipality generates revenue for reserves and capital expenditures. If a municipality were to only collect enough revenue to support operations, that municipality would be entirely reliant on federal and provincial grant funding for any and all capital expenditures. By definition, this would not be a sustainable community as it would be unable to make the necessary investments in municipal infrastructure to provide core municipal services, let alone anything discretionary.

Since the introduction of the MLC, the Town of Morinville has not made significant contributions to reserves. This is because tax-supported operations have incurred deficits in every year since 2019, meaning rather than generating a surplus to contribute to reserves, tax-supported operations use up utility reserves to fully fund operations and balance the consolidated budget. From 2019 to 2021, tax-supported deficits amounted to $1.77 million. During the same time, utility supported surpluses of $4.22 million were collected. Combined this resulted in a total three-year net contribution to reserves of only $2.45 million. As noted above, annual amortization is approximately $6.5 million meaning that **over the past 3 years,** the Town has put into reserves **only 38%** of the provincial benchmark for infrastructure investment for **a single year**. As noted above this is not sustainable and must be addressed.

While the problem may be easy to articulate, there are, unfortunately, no easy solutions. Municipalities have very limited revenue sources: taxes, fees/charges, utility rates and grants. As has been discussed at length, Morinville suffers from low commercial assessment, meaning the Town is highly reliant on residential taxes as a revenue source – this puts significant upward pressure on residential tax rates. Administration has been working to ensure that wherever possible services are funded with appropriate fees and charges to lessen the burden on property taxes. However, the impact that has made on the overall budget is limited as much of the cost of operating a municipality is related to general services of benefit to all, and even where there are individual services, many must be subsidized in order to make them competitive and/or affordable.

Council is understandably hesitant to raise taxes and is rightfully focused on cost control and the efficient use of Town resources. However, the fact remains that costs continue to rise and not only are revenues not keeping pace with those increases, but they have not accounted for or offset MLC operations. As Morinville is a community without a commercial assessment to rely on, the Town generates 58% less non-residential tax revenue per capita than the regional average, we have no choice but to rely primarily on residential taxes. Because of this, Morinville necessarily must have an above-average tax rate compared to our neighbouring municipalities if we are to provide similar services. However, Morinville generates residential tax revenue per capita of only 4% more than the average. When combined with far below average non-residential revenue this equates to 14% less revenue per person than average, equivalent to $1.83 million per year – equivalent to the tax-supported deficit.

Comparative analysis has shown that Morinville has lower expenses per capita than the average comparative municipality. It has also shown that Morinville has **much lower** revenues per capita than our comparators. Council must now choose how to deal with the challenging financial situation, raise taxes, cut services, or the likely answer – a combination of both. Regardless of the approach, Council can expect that there will be pushback from residents to either tax increases or service level reductions, but the reality is that the Town cannot continue the way it has in recent years.

Service Levels

The type and level of services provided in municipalities vary considerably from one to the next. That said, there are a core set of services that all municipalities must provide (legislated or regulated), services that would be considered common or expected (largely based on the size and/or type of municipality) that are considered expected, and those that are truly discretionary (those focused on quality of life and social supports).

Administration is working to better define both the inventory of services provided in Morinville as well as the level at which those services are provided. These efforts will assist Administration in identifying potential options for Council to consider if there is the direction to reduce service levels or eliminate services altogether. This information will also help Council better understand the interconnectedness between many services and the challenges in finding reductions.

One of the questions posted to Administration with respect to investing in services is often what the ROI or return on investment is. It's important to remember while there may be some similarities between a business and a municipality, they are fundamentally different in what their core purpose is. Businesses are created, for the most part, to earn a profit. As such investments by a business are often measured by what the return on that investment is, whether it be a direct financial return or an indirect return (such as increased efficiency, leading to increased profitability). While some activities of a municipality can provide direct financial returns, the vast majority of operational activities and capital investments of a municipality have an ROI that is difficult to quantify. This is because fundamentally a municipality's purpose is not to create wealth for its stakeholders but to provide them with services to support quality of life. For example, an investment in road rehabilitation does not yield a financial return for the municipal organization, but it does increase the level of transportation services available to those residents who make use of that particular section of the road.

BUDGET/RESOURCE IMPLICATIONS:

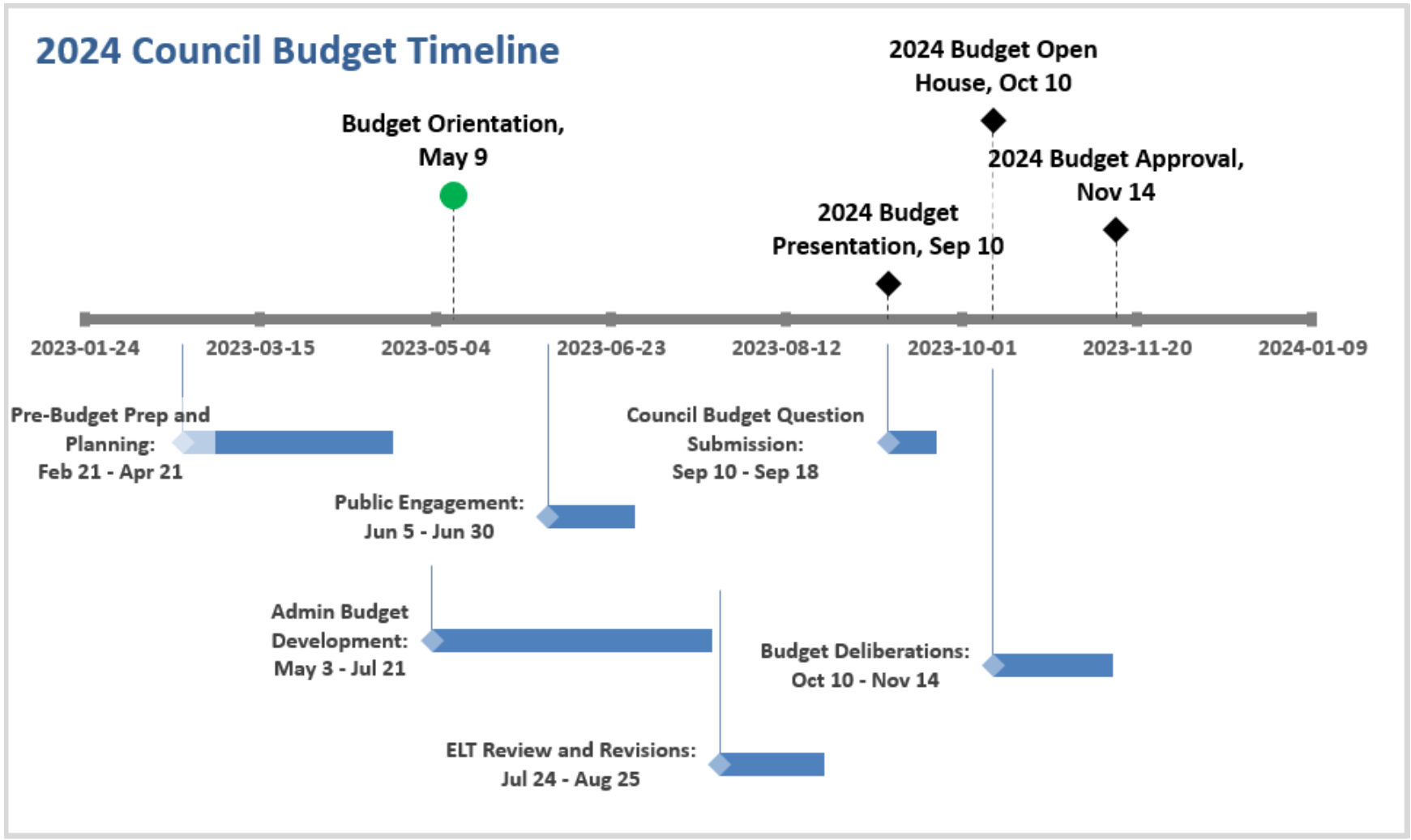
N/A

LINKAGE TO BUSINESS PLAN/STRATEGIC PRIORITIES:

- Goal 3: Financial Stewardship
  - Objectives 3.1, 3.2, and 3.3

FOLLOW-UP ACTION:

- Administration will be providing Council with a presentation on the Long-Term Capital Plan at the April 18, 2023 Committee of the Whole.
- Administration will re-engage with Council on the Operating Budget at the May 9th regular meeting of Council.
  - The focus of the May 9th discussion will be to establish Council's expectations for the 2024 Budget, provide an overview of progress to date, and update Council on any specific budget issues.


2024 Council Budget Timeline
2024 Budget Open House, Oct 10
Budget Orientation, May 9
2024 Budget Approval, Nov 14
2024 Budget Presentation, Sep 10
2023-01-24
2023-03-15
2023-05-04
2023-06-23
2023-08-12
2023-10-01
2023-11-20
2024-01-09
Pre-Budget Prep and Planning: Feb 21 - Apr 21
Council Budget Question Submission: Sep 10 - Sep 18
Public Engagement: Jun 5 - Jun 30
Admin Budget Development: May 3 - Jul 21
Budget Deliberations: Oct 10 - Nov 14
ELT Review and Revisions: Jul 24 - Aug 25

2024 Budget

Kick-Off and Pressures Report

Presenter: Travis Nosko

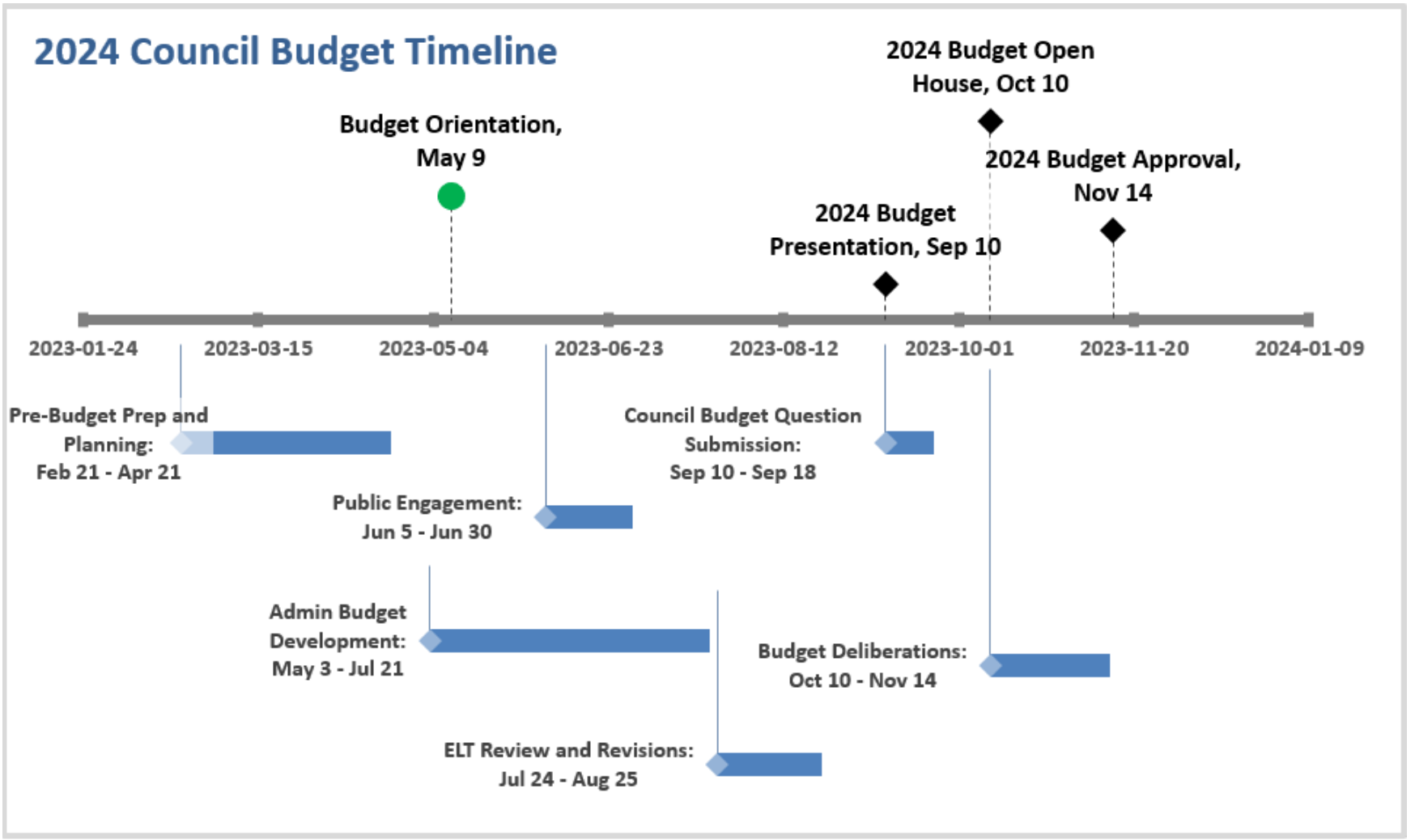
Morinville
Growing Together

Budget 2024

Process Improvements

- Budget Software
- Calendars and Timelines
- Enhanced Public Engagement
- Administrative Improvements
  - Handbook
  - Approval and development process
  - Forecasting

Budget 2024 Timelines/Milestones



Budget 2024 Pressures

External

- Inflation
- Interest Rates

Capital Funding

- Continued MLC impact
- Limited recent investment in reserves
- Insufficient infrastructure investment
- Low reserve balance
- Provincial funding uncertainty

Budget 2024 Pressures

Operational Revenue

- Continued tax-supported deficits
- Insufficient net revenue for reserve transfers
- High reliance on residential tax revenue
- Limited alternatives to tax revenue

Service Levels

- Improved information
- Determining appropriate levels
- Tax/service level trade-off
- ROI vs Service Delivery

Budget 2024 Pressures

Next Steps

- Long-Term Capital Plan presentation
  - April 18, 2023 COW
  - Review of updated 10-year Capital Plan
  - Opportunity for questions and discussion
- Council Budget Engagement
  - May 9, 2023
  - Update of relevant issues
  - Council to provide initial direction to Admin for budget development
  - Intended to inform the Admin 1st draft and ensure better alignment with Council expectations

Budget 2024 Pressures

Questions?

Report to Council

☐ For Council Decision ☐ For Council Direction

☒ For Council Information

TOPIC:	Budget 2024 Public Engagement Plan	March 14, 2023
PRESENTER:	Rachelle Gilbert, Municipal Intern	**ATTACHMENTS:**
PREPARED BY:	Rachelle Gilbert, Municipal Intern	
CLEARANCES:	Naleen Narayan, CAO Michelle Hay, General Manager, Administrative Services Tracy Dalzell-Heise, Manager, Communications & Legislative Services	**RELEVANT BYLAWS / POLICIES / LEGISLATION:** Public Engagement Policy CP284/2021

RECOMMENDATION:

That Council accepts the Budget 2024 Public Engagement Plan report as information.

PREVIOUS COUNCIL ACTION:

At the September 13, 2022, Regular Meeting of Council, Council accepted the Budget 2023 - Public Engagement Survey Results report as information.

At the May 24, 2022, Regular Meeting of Council, Council approved the procurement of a public engagement platform within the current budget in support of Council's commitment and direction to improve outreach, engagement, and decision-making.

BACKGROUND SUMMARY:

The 2024 Budget Public Engagement is scheduled for Spring 2023. The results of the public engagement will assist Council and Administration with understanding the priorities and service levels residents and business owners value most. This will allow Council and Administration to build a budget that considers stakeholder needs while balancing what's possible given the current economic realities.

Submitted by:

R. Gilbert
Municipal Intern

Approved by:

N. Narayan
CAO

Administration has brought forward information for the 2024 Budget – Public Engagement Plan, including some improvements from the 2023 Budget Public Engagement Plan for Council review and feedback.

RECAP: 2023 Budget – Public Engagement Plan

The 2023 Budget Engagement Survey was officially launched through EngageMorinville.ca on July 20, 2022, and was open for public input until August 15, 2022. The intent of the survey was to provide Morinville residents and business owners the opportunity to engage in the municipal financial planning process as the Town Administration prepared a budget proposal and long-term financial plan for Council's review and consideration.

A wide variety of methods were used to communicate the Budget 2023 Public Engagement Survey. The communications were designed to reach people from across the community in approachable and creative ways. Communication tools included:

- Town website
- Town social media and digital platforms
- Paid digital and print advertising
- Media release
- Posters
- On-street signage
- Budget engagement business cards
- Utility bill insert
- Displays/banners
- Participation at the Farmer's Market
- Printed surveys distributed to senior's housing and accommodation
- Participation in Town run events
- Printed surveys available at Town facilities
- Mayor and Council engagement

This survey was also available in paper copy with a self-addressed stamped envelop.

2024 Budget – Public Engagement Plan

Administration recommends the 2024 Budget Engagement Survey officially launch through EngageMorinville.ca on June 1, 2023, and open to the public for input until June 30, 2023. The launch of the 2024 Budget Engagement Survey will be supported by an in-person Information Session with Council and Administration on Thursday, June 1, 2023, at the MCCC.

Why have the 2024 Budget Engagement Survey in June?

- Administration is currently planning a Snow and Ice Survey for March 2023 – the Town should avoid overlapping engagement initiatives.
- There is a pending provincial election to be held on or before May 31, 2023. The Town would be competing for engagement with the provincial government.
- Engagement levels are anticipated to be higher in June than during the summer months.
- Property taxes and municipal matters are on residents' minds as property taxes are due June 30 every year. Administration could include engagement materials in annual property tax notices.
- Administration can leverage exposure from the Town of Morinville's annual Festival Days event to promote the survey and engage with residents. Attendance is typically 2500+.

Administration will continue to use the communication tools from the 2023 budget public engagement plan, with a few recommended improvements. Last year, Administration had a budget engagement booth at the Town's weekly Farmer's Market to promote and engage with residents. Administration received valuable feedback from residents at the Town's Farmer's Market. This year we will be utilizing this booth for three weekends in June, and inviting two members of Council, along with the Mayor to be present on each of the dates.

BUDGET/RESOURCE IMPLICATIONS:

The cost of online and in-person engagements, supporting materials and communications/marketing costs were included in the approved 2023 budget.

LINKAGE TO BUSINESS PLAN/STRATEGIC PRIORITIES:

Council's 2022 – 2025 Strategic Plan identifies their commitment to ensuring residents, and businesses are actively engaged in and aware of decision-making and planning our future. To support this objective, an in-depth public engagement plan was developed to inform and consult residents and business owners about small and large projects that may be short or long-term. This public engagement plan is our commitment to meaningful engagement for the 2024 Operating and Capital Budget that is under development.

Strategic Plan:

- Goal 1 – Community Building
  Objective 1.2 - Residents and businesses are actively engaged and aware of decision-making and planning our future.

FOLLOW-UP ACTION:

With Council feedback, Administration will begin implementing the 2024 Budget Public Engagement Plan.

February 24, 2023

The Honourable Devin Dreeshen
Minister of Transportation and Economic Corridors

Sent Via Email

Dear Minister Dreeshen:

RE: Grandin Drive and Hwy 642 Intersection Improvements

The Grandin Drive / Highway 642 intersection was identified as a priority intersection in the transportation master plan for improvements within the Town of Morinville. This intersection is currently configured as a 4-way stop and has high vehicular and pedestrian traffic in the AM and PM periods. There are four nearby schools, one that is 350m to the west of the intersection (Morinville Community High School), one 600m to the north (École Georges H. Primeau Middle School), and two about 550m to the south (École Notre Dame Elementary School and Four Winds Public School). The schools' proximity is directly correlated to the high volume of children walking between their homes and their schools, including the need to cross this 4-way stop intersection. This intersection also faces a high volume of traffic from our daily commuters. There are ten incoming lanes of traffic at this intersection spread out between the four legs of the intersection. This requires drivers to pay close attention to ensure they know their turns to proceed. When a pedestrian crosses the road, it causes delays in some vehicle movements and creates confusion about "whose turn it is." This intersection frustrates drivers; when they are frustrated or confused, they are more likely to press their luck and take on riskier maneuvers. It also leads to safety issues for those crossing. The safety of all our residents is paramount and Morinville is exploring all options to mitigate the risk for residents who have to cross this intersection

In 2022, Morinville undertook a planning study to determine how to upgrade the intersection at Grandin Drive and Highway 642 to make it more operationally effective and safer.

In Fall 2022, a child got hit by a vehicle on Highway 642 while crossing the road to get to one of the schools. This rallied the community and reaffirmed that pedestrian safety is at the forefront of our priorities. In winter 2022, the Town installed flashing pedestrian crossing beacons at the location where the child was struck. Morinville intends to continue to identify, prioritize and action safety improvements as part of our strategic plan

As of today, Morinville has prepared a draft copy of the planning report, which was vetted through our Council on February 21, 2023. Our Town Administrative team will be submitting the reports to Alberta Transportation's technical department for their review and comment. With this intersection being located on Alberta's Provincial Highway system, we understand that Alberta Transportation will have the final decision-making authority in what improvements will be supported.

The recommended improvement at this intersection was signalization. This is a very typical intersection treatment, and for this location, it comes with substantially lower costs to implement than a roundabout option – making it much more feasible to progress.

If Alberta Transportation's technical team supports the planning reports and recommendations, Morinville is looking to begin the design and construction stages imminently.

The technical group we have been working with at Alberta Transportation has been very supportive through this planning project to date. They made time to attend the public open house in October 2022 and have stayed actively engaged and responsive with our staff through this project. However, as these intersections are a joint responsibility of the Province and Municipality, and improvements benefit both parties, we are concerned that only one party – the Municipality, would be responsible for 100% of the costs to make the upgrades. In addition, this intersection improvement supports the growth of local traffic generated by the Town and facilitate the safe mobility of users on this essential transportation corridor connecting Highway 2 and 28.

Morinville is requesting financial support from the Province to assist with moving this project forward. The cost estimates for the signalization project range from $600,000 to $650,000, which include construction, engineering, and contingency.

The Town and its residents are facing issues with high inflation, increased costs of groceries and utilities, and the downloading of costs previously borne by other levels of government. Morinville also heavily relies on taxation from residential properties since our commercial and industrial base is very low.

The Town would appreciate any budgetary support the Province could provide to keep this project moving forward. Please understand it is not our intention to delay this project in anticipation of the Province of Alberta's support; we are looking to partner to share these costs, just like we share the responsibility of maintaining this highway. We know you are committed to ensuring resident access to safer roads and community. This project would provide the community with a tangible benefit for many years. Any support from the Province will help show intergovernmental commitment to what our community cares about most – safety.

I am attaching *DRAFT* versions of the planning report, with the caveat being that they still require circulation to Alberta Transportation's technical departments for review and comment.

I look forward to discussing this opportunity with you soon.

Sincerely,

Simon Boersma
Mayor

Cc. Dale Nally, MLA Morinville – St. Albert

Integrated Expertise. Locally Delivered.
islengineering.com

Intersection Planning Study: 100th Avenue and Grandin Drive East

Town of Morinville

Draft Report

January, 2023

ISL Engineering and Land Services Ltd. Is an award-winning full-service consulting firm dedicated to working with all levels of government and the private sector to deliver planning and design solutions for transportation, water, and land projects.

Proudly certified as a leader in quality management under Engineers and Geoscientists BC's OQM Program from 2014 to 2021.

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APPENDICES

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1.0 Introduction

1.1 Background

Grandin Drive East and 100 Avenue has been identified as a busy intersection within Morinville that requires improvements to accommodate increased traffic growth and to improve levels of service and safety for existing users. The current configuration of the intersection is a 4-way stop. Both the addition of signals and the conversion of the intersection to a roundabout are being considered as potential options. The Town of Morinville has requested a full planning exercise to understand which intersection improvement option is recommended.

1.2 Scope of Work

ISL Engineering and Land Services has conducted the following tasks as part of the review of converting the study intersection to either signalized control or roundabout geometry.

- Site walkthrough and discovery.
- Determination of the needs of the study site for improvements.
- Conceptual planning, evaluation and cost estimation for both solutions.
- Public consultation through an open house and on-line survey collection.
- Comparison of design elements and scored against categorical criteria.

1.3 Study Outline

This report will present the context necessary for deciding whether a signal control and/or roundabout geometry is desired, necessary, wanted and warranted for the site of 100 Avenue and Grandin Avenue (East).The study is outlined as follow:

- **Section 2.0 - Background Reviews:** This report commences by reviewing establishing past decisions and reports for the study site. This includes reviewing and summarizing the Town of Morinville's Transportation Master Plan (2020), the Town's Highway 642 (100 Avenue) Functional Planning Study (2012-2013), the Town's Grandin Heights Area Structural Plan (ASP) and it's accompanying Traffic Impact Assessment (TIA)(2016), and finally Alberta Transportation's Design Bulletin #68/2010. All four documents establish the background for evaluating the need for intersection improvements.
- **Section 3.0 and 4.0 – Existing and Future Operational Reviews:** This report continues by examining the operational performance of both a signal controlled and a roundabout design. Both designs are examined under current (2022) operation conditions and a future scenario (2042) in which the Town of Morinville has expanded to 50% of it's 2013 boundaries.
- **Section 5.0 – Comparative Analysis:** Based on the traffic operation assessments, a comparative analysis assigns numerical scores to both design options based on categorical criteria, such as cost, safety, public response and operations. The design option which performs best in each criteria is assigned a maximum score of 10 with the alternative option receiving a reduced score based on relative performance. Scores are then weighted for relative importance of each criteria before summing to a final score for each option.
- **Section 6.0 – Engagement Summary:** Furthermore, this report describes responses received from outside stakeholders, which include members of the public and other regional regulatory bodies.

2.0 Previous Studies

A review of previous studies relating to intersection control at 100 Avenue and Grandin Drive was completed to understand the context surrounding this intersection. Studies reviewed include:

- Town of Morinville Transportation Master Plan (TMP) (2020)
- Highway 642 (100 Avenue) Functional Planning Study (FPS)
- Grandin Heights Transportation Impact Assessment (TIA) (2017)
- Alberta Transportation Design Bulletin 68/2010

2.1 Town of Morinville Transportation Master Plan

The Town of Morinville 2020 Transportation Master Plan (TMP) is a comprehensive planning document that supports the town's sustainability, development, and mobility planning goals through growth and change over the next 25 years. The TMP forms an integral part of the town's regulatory framework, providing guidance on land use, transit, active transportation, complete streets, accessibility, parking, and roadway upgrade planning for the short, medium, and long-term.

2.1.1 Intersection Operations Standards

The Town of Morinville follows the TAC Traffic Signal Warrant Analysis for determining the need for a traffic signal. The TMP also states that where future roundabouts are planned and the traffic signal warrant is met (an analysis score higher than 100 and the six-hour side street traffic is above 75 vehicles), this would indicate that construction of the roundabout is warranted.

The Town of Morinville does not currently have local design thresholds, and generally uses the thresholds from the City of St. Albert for comparison purposes. The guidelines for the City of St. Albert state that an overall LOS D for intersections, overall LOS E for individual movements at intersections, and v/c <0.90 is acceptable.

2.1.2 Existing Conditions

The following is a summary from the 2020 TMP at the intersection of 100 Avenue and Grandin Drive.

Table 2.1: 2019 AM and PM Intersection Operations (Table 3-1, Morinville TMP 2020)

Peak Hour	EB LOS (Max v/c)	WB LOS (Max v/c)	NB LOS (Max v/c)	SB LOS (Max v/c)	Intersection LOS
AM	B (0.29)	B (0.36)	C (0.53)	C (0.46)	B
PM	B (0.34)	B (0.25)	B (0.43)	B (0.27)	B

2.1.3 Implementation Plan

This intersection was identified as a short term (0-5 years) and a long-term (16-25 years) intersection improvement in the 2020 TMP. The improvements are summarized in the table below.

Table 2.2: Transportation Master Plan (2020) Construction at 100 Avenue and Grandin Drive East

Timeline	Priority	Improvements
Short-term (0 – 5 years)	Medium (2 – 4 years)	• Barricade eastbound/westbound left turn bays (all-directional but with simplified geometry); or • Install a traffic signal (when warrant is met).
Long-term (16 – 25 years)	As warranted	• Construct a two-lane roundabout; or • Install a traffic signal/intersection upgrades.

2.2 Highway 642 (100 Avenue) Functional Planning Study

A roundabout is the recommended ultimate intersection treatment at 100 Avenue and Grandin Drive in the Highway 642 (100 Avenue) FPS completed in 2013. The FPS was commissioned by the Town to understand the short and long term needs for 100 Avenue, considering adjacent land use, access management, right-of-way requirements, street cross-section, and intersection treatments. The study had a secondary goal to provide a technical foundation for the Coeur de Morinville Areas Structure Plan (ASP).

Relevant excerpts from the study are provided in **Appendix A**.

2.2.1 Study Horizon

Analysis was completed for two study horizons:

- **50% build-out**, representing when half of the land undeveloped lands within the Town's 2013 boundary are developed. This is assumed to be reached in 30-35 years (2043 – 2048). The study notes this is consistent with the Municipal Development Plan projections for year 2044.
- **Full build-out**, representing when all the lands within the Town's 2013 boundary are fully developed based on current and projected plans. The study assumes this will be reached in 70 – 75 years time (2083 – 2088). This is based on the Town's population and growth rate of approximately 2.0% at the time of the study. The study notes this is consistent with the Capital Region Board's (now Edmonton Metropolitan Region Board) projected growth for the Town.

2.2.2 Traffic Volumes

The following sections provide a summary of the FPS as related to Grandin Drive and 100 Avenue.

Existing Conditions

The 2013 FPS conducted traffic counts in May 2012; an excerpt for 100 Avenue and Grandin Drive is included in Appendix A. Counts were only performed during peak hour periods from 6:00 – 9:00 AM and from 3:30 – 6:30 PM. No Pedestrian counts were included.

2.2.3 Traffic Operations Assessment

Existing Conditions Analysis Results

Existing analysis results found 100 Avenue performs well from a vehicle perspective as a four-way stop controlled intersection.

50% Buildout

The study noted delays on Grandin Drive during peak hours as a concern for the 50% build-out horizon. The analysis results for the 50% build-out horizon at 100 Avenue and Grandin Drive is summarized in the table below.

Table 2.3: Highway 642 Functional Study 50% Build-out Traffic Analysis Results for 100 Avenue and Grandin Drive

LOS during AM(PM) Peak					
Intersection Control	Eastbound	Westbound	Northbound	Southbound	Intersection
Four Way Stop (existing geometry)	C(B)	D(B)	C(B)	C(B)	C(B)
Two-lane Roundabout	A(A)	A(A)	A(A)	B(A)	A(A)

The study shows that the four-way stop will operate reasonably well to 50% build out.

Full Build-Out

The full build-out horizon was modelled with a two-lane roundabout option and signalized option at the intersections.

- Roundabout: Roundabout continues to perform well.
- Signals: Operations are worse for a signal, but the intersection geometry used in the analysis may not be the most optimal. The AM and PM peak analysis uses a different geometry. The AM peak assumes a northbound left turn is provided, but this is not carried into the PM peak analysis.

LOS during AM(PM) Peak					
Intersection Control	Eastbound	Westbound	Northbound	Southbound	Intersection
Traffic Signal	B(B)	B(B)	B(F)	B(B)	B(B)
Two-lane Roundabout	A(A)	A(A)	B(A)	C(A)	B(A)

2.2.4 Right-of-Way Requirements

The FPS includes right-of-way requirements for both options for the entire corridor and is discussed as follows.

Signal Option

The Highway 642 Functional Study indicates no additional land is needed for geometric improvements and traffic signal installation at 100 Avenue and Grandin Drive East. Right-of-way land requirements are identified on 100 Avenue and/or side streets:

- between 108 Street and 100 Street, and
- at the East Boundary Road intersection.

Roundabout Option

The Highway 642 Functional Study (FPS) identifies 465 m^2 (5,000 ft^2) of land required for the roundabout option at 100 Avenue and Grandin Drive East. The right-of-way requirements are shown in the figure below.

Figure 2.1: Roundabout Land Requirements at 100 Avenue and Grandin Drive East (Highway 642 Functional Study)

2.2.5 Total Cost Estimates

The signal option was anticipated to cost $312,000 less than the roundabout option at 100 Avenue and Grandin Drive. The estimated cost for construction and right-of-way for the two options from the Highway 642 Functional Study are summarized in the tables below.

Table 2.4: Cost Comparison of the Signal and Roundabout Options at 100 Avenue and Grandin Drive (Highway 642 Functional Planning Study)

Cost Item	Signal Option	Roundabout Option
Construction	$1,433,000	$1,690,000
Right-of-way	N/A	$55,000[1]
Total	$1,433,000	$1,745,000

*Costs rounded to the nearest $1,000 for ease of comparison
[1]Total of 5,000 sq ft of land at $11/sq ft

2.2.6 Options Evaluation

Within the 2013 FPS, an evaluation criterion was developed to assess the viability of the roundabout and signal options across the entire corridor of 100 Avenue. The evaluation noted whether the options 'does not meet,' 'partially addresses,' 'mostly addresses', or 'fully addresses' the requirements of each criteria. The study's evaluation matrix for the options is provided along with detailed descriptions of the evaluation criteria used are provided in the Appendix A.

The roundabout option is shown to better address the policy, implementation, Downtown, and technical criteria in the matrix. The greatest differences between the two options are the technical

criteria, in which the signal option only scores higher on accommodating large vehicles. The signal option scores higher in the public criteria, although the scores are close.

The study recommends the roundabout option (at a corridor-level assessment)based on the evaluation matrix, noting the following:

- The right-of way costs for the roundabout option is estimated to be 50% lower (overall) than the signalized option because roundabouts only require additional right-of way at the intersections.
  - Note: A significant portion of the land requirements for the signalised option are from a strip of land along the south side of 100 Avenue from 107 Street to 100 Street and the impacted buildings.
    - 100 and Grandin Drive (East) does not require additional land for the traffic signal option nor any geometric changes based on the option's drawings.
- The roundabout option permits legal U-turns which makes it possible to convert minor intersections to right-in right/out.
- The roundabout option provides traffic calming on 100 Avenue while not necessarily increasing travel time.

2.2.7 Implementation Plan

There is no formal implementation plan for intersection improvements. The study notes it is difficult to predict the timing of the improvements but estimates some may be required within five to ten years. Possible triggers for implementation are listed as:

- Warrant for signalization at any of the proposed roundabout intersections-based tolerance of the community and a target LOS D for Morinville.
- Streetscaping projects which involve redevelopment or beautification.
- The need to address safety or operations concerns.

2.3 Grandin Heights TIA

This was completed in 2016 to support changes to the Grandin Heights Area Structure Plan (ASP). The plan area is provided in the Figure below.

Figure 2.2: Grandin Heights ASP Plan Area (Source: Grandin Heights TIA)

The purpose of the study was to identify geometry requirements and improvements needed to accommodate the anticipated additional traffic generated by the development of the ASP lands. 100 Avenue (Grandin Avenue in the TIA) and Grandin Drive East is one of external study intersections.

2.3.2 Study Horizon

Analysis was completed for two horizons:

- 2028: This represents the short-term horizon in which the full build-out is anticipated.
- 2048: This represents the long-term horizon. Alberta Transportation requires any infrastructure improvements on the highway network be able to accommodate future traffic volumes for the expected life of the infrastructure, which is approximately 20 years.

2.3.3 Traffic Volumes

Existing Conditions

Traffic volumes were collected at 100 Avenue and Grandin Drive in October 2015 from 7:00-9:00 AM, 11:30 AM – 1:30 PM, and 4:00 – 6:00 PM. Pedestrian volumes were also recorded. A total of 89 pedestrian movements were observed, with 70 of those pedestrians crossing 100 Avenue. The 2015 counts obtained in this TIA are included in Appendix B.

Background Traffic Volumes

The existing conditions traffic counts serves as the basis for the background traffic volumes. The 50% build-out traffic volumes from the Highway 642 Functional Study were interpolated assuming linear growth to estimate the background traffic growth in 2028. The 50% full build-out volumes from the Functional Study were used for the 2048 scenario as the timings are similar. Traffic anticipated to be generated by the ASP lands were removed from the network for both scenarios. Traffic anticipated because of a Mac's convenience store being developed nearby was also added to both scenarios.

Site Generated Traffic

Trip generating land uses within the ASP include low density residential (LDR), Semi-Row housing, medium density residential (MDR), and neighbourhood commercial. The Highway 642 Functional Study rates were used for low density residential and semi-row housing. ITE trip generation rates were used for medium density residential (220) and neighborhood commercial (826). A 0.15 floor area ratio was assumed for neighbourhood commercial.

Total Traffic

The background and site generated traffic volumes were combined to create the total traffic volumes for the 2028 and 2048 horizons.

2.3.4 Network Operations Assessment

Several factors were considered in the TIA for the ASP transportation network:

- Alberta Transportation (AT) Highway Geometric Design Guide (HGDG) Review
- Traffic Signal Warrant Analysis
- Capacity Analysis
- Pedestrian Considerations

Traffic Signal Warrant Analysis

The signal warrant assessment was completed using the Transportation Association of Canada (TAC) Canadian Traffic Signal Warrant Matrix Procedure and spreadsheets from the Traffic Signal Warrant Handbook. Signalization is warranted if the side street has a peak hour volume higher than 75 and the warrant score is higher than 100. The table below provides a summary of the warrant analysis results for 100 Avenue and Grandin Drive East.

Table 2.5: Summary of Signal Warrant Results at 100 Avenue and Grandin Drive East (Grandin Heights TIA)

	Warrant Results (warranted Y/N)	
Horizon	Background	Total
2015 (Existing)	-	43 (N)
2019 (Phase 1)	-	121 (Y)
2022 (Phase 2)	-	128 (Y)
2025 (Phase 3)	-	141 (Y)
2028 (full build-out)	104 (Y)	157 (Y)
2048	130 (Y)	193 (Y)

The TIA found that traffic signals are projected to be warranted by the time Phase 1 is completed (2019) or sooner.

Capacity Analysis

Traffic operations at the intersections were assessed using Synchro to model traffic operations. LOS and volume to capacity (v/c) ratio were the two primary operation indicators. The v/c ratio represents the proportion of a road's capacity being used, where a v/c ratio over 1.0 indicates the traffic on the road exceeds its capacity. The TIA indicates a v/c ratio of 0.9 or lower is acceptable.

The TIA analysis results for the four-way stop control is as follows:

- the northbound approach is anticipated to operate at LOS F during the AM peak hour with full build-out in both horizons. The approach is anticipated to have a v/c ratio of 0.96 in 2028 and be over capacity with a v/c ratio of 1.05.
- All other movements at 100 Avenue and Grandin Drive are projected to operate at LOS D or better for the 2028 and 2048 horizon full-buildout AM Peak hour.
- All movements operate at acceptable LOS and v/c during the AM peak hour 2028 background traffic conditions.
- The eastbound through/right movement is anticipated to operate at LOS F for the PM total traffic conditions in both horizons. The movement is anticipated to have a v/c ratio of 0.99 in 2028 and be over capacity with a v/c ratio of 1.09 in the 2048 horizon.
- The northbound approach is anticipated to operate at LOS E for the 2028 full build-out horizon and LOS F for the 2048 full build-out horizon. The approaches' v/c ratio is anticipated to remain below 0.9 for both horizons.
- The eastbound and northbound approach are anticipated to operate at LOS C for the background scenario with both scenarios.

The four-way stop was analyzed during the AM and PM peak hours for Phase 1 (2019), Phase 2 (2022) and Phase 3 (2025). A summary of the unacceptable results is provided below.

Table 2.6: Phased Intersection Analysis Results Summary of Failing Movements (Grandin Heights TIA)

Phase (Peak Hour)	Unacceptable Movement	LOS	V/C
2025 (AM)	Northbound LTR	E	0.85
2028 (AM)	Northbound LTR	F	0.96
2025 (PM)	Eastbound T/TR	E	0.89
	Northbound LRT	E	0.76
2028 (PM)	Eastbound T/TR	F	0.99
	Northbound LRT	E	0.85

The full operational analysis results table from the Grandin Heights TIA is provided in Appendix B

The TIA notes that the Highway 642 Functional Study recommends roundabouts and proceeds to analyze roundabouts for the failing intersection. No alternate geometric configurations or signalized scenarios were tested in the TIA study.

Should a roundabout be implemented, the intersection of 100 Avenue and Grandin Drive was found to operate at LOS A or B for all approaches and analysis scenarios. Based on these results, the TIA recommends a roundabout to improve intersection operations.

2.3.5 Timing of Improvements

The TIA notes that while traffic signals are warranted by Phase 1 using the Signal Warrant Matrix, the traffic analysis indicates that all movements are anticipated to operate at LOS D or better under 2022 total traffic conditions and LOS E or better under 2025 total traffic conditions. Additionally, it considers that the Warrant Matrix may not be intended to assess four-way stops. The Canadian Traffic Signal Warrant Matrix Procedure indicates less restrictive forms of intersection control including replacing a two-way stop with a multi-way stop should be considered before adopting a signal. A table is provided to compare the two assessment results, as shown below.

Table 2.7: Signalization Warrants and Traffic Analysis Results (Grandin Heights TIA)

Horizon and Scenario	Signalization Warrant Score	Intersection Capacity Analysis			
		Analysis Period	Intersection LOS	Lowest LOS	Max v/c
2015 Existing	43	AM Peak Hour	B	B	0.46
		PM Peak Hour	C	C	0.54
2019 (Phase 1) Total	121	AM Peak Hour	C	D	0.73
		PM Peak Hour	C	D	0.78
2022 (Phase 2) Total	128	AM Peak Hour	C	D	0.75
		PM Peak Hour	C	D	0.80
2025 (Phase 3) Total	141	AM Peak Hour	C	E	0.85
		PM Peak Hour	D	E	0.89

The TIA recommends consideration be given to upgrade the intersection to a roundabout design as Phase 3 (2025) development proceeds. It notes that traffic conditions at 100 Avenue and Grandin Drive East should be assessed to determine whether signalization is warranted.

2.4 Alberta Transportation Design Bulletin #68/2010

100 Avenue is a Highway under Alberta Transportation's (AT's) control and must meet the Province's requirements. Design Bulletin #68/2010 provides policy and guidelines for the use of roundabouts on roadways under AT's jurisdiction or influence area. The Bulletin states that roundabouts shall be considered as a first option where it is determined by the Province that a greater degree of traffic control is required than a two-way stop.

Roundabouts shall be evaluated if:

- An intersection warrants a signal or four-way stop control within 10 years of a proposed project, or
- Operational and safety problems are occurring with the current traffic control for an existing four-way stop or signalised intersection.

The Bulletin states roundabouts may be preferred:

- Where there is a need for traffic calming,
- Where a consistent series of intersection layouts is desired along a corridor, and
- As a means of providing higher capacity at an intersection to defer road or structure widening.

2.4.1 Cases for Alternate Options

Traffic signals may be permitted, providing that engineering rationale is documented to show that a roundabout was considered and explains why a signal was chosen. Documentation that a roundabout was considered must include:

- Economic analysis,
- Capacity analysis, and
- Roadway design.

This analysis must be completed in accordance with the Technical Guidelines attached to the Bulletin. The relevant documentation necessary for the intersection of 100 Avenue and Grandin Drive are discussed in greater detail in the following sub-sections.

Economic Analysis

The Bulletin requires the most current version of the Benefit Cost Guide be used for the economic analysis. The Benefit Cost Guide accounts for all costs and benefits over the design period. The analysis shall also consider:

- Societal cost of vehicle collisions,
- Road user cost,
- Environmental cost, and
- Construction and operations cost.

The Bulletin does not specify the types of safety performance factors. The analysis documentation should provide rationale and justify the safety performance factors used in the analysis.

Capacity Analysis

The Province prefers the use of “average delay on a roundabout” and “the average delay at a signalized intersection” to assist in selecting the optimal intersection control. This is because the differing analysis methodologies for roundabouts and traffic signals make it difficult to directly compare the level of service (LOS) and capacity. Rather, the LOS and capacity analysis is used to optimize the number of lanes and assist in determining whether right-turn bypass lanes are required.

The Province’s preferred roundabout analysis software packages are SIDRA and ARCADY. SIDRA is noted generally to be used for planning level analysis and is the most appropriate software for assessing the performance of a roundabout at 100 Avenue and Grandin Drive.

Roadway Design

The Bulletin provides extensive geometric design guidelines and references for designing a roundabout. Key design principles are listed as:

- properly designed entries and exits,
- site specific design,
- truck capabilities,
- appropriate deflection and speed control,
- properly sized inscribed circle diameter (ICD),
- positive driving experience, and
- comfort for the public.

Most of the guidelines refer to specific parameters or references to be used for concept or detailed design of a roundabout. These are not listed in this report as no new roundabout designs are being made for this study. The Bulletin does, however, suggest some alternate roundabout designs that may be considered:

- A fully traversable centre island with removeable signs or other features that may be temporarily removed as needed for large vehicles is suggested as a strategy to lower roundabout construction costs. This would reduce the need for extra wide approaches and/or wide aprons.
- It is recommended that mini-roundabouts be considered where appropriate. These roundabouts are characterized by a smaller diameter and fully traversable island. Mini roundabouts are noted to be suited for low-speed environments where a larger roundabout with a raised centre island is not possible because of site constraints.

2.5 Summary

Both the Highway 642 Functional Study and Grandin Heights TIA recommend the intersection of 100 Avenue and Grandin Drive be upgraded to a roundabout in the future, however the Functional Study is the only one to compare the merits of roundabouts versus signals. Notable factors in the Functional Study include:

- Roundabouts scoring higher in all categories of the evaluation criteria except the public category,
- Roundabouts on 100 Avenue are noted to be a significantly less expensive option than traffic signals. This may not apply to 100 Avenue and Grandin Drive as an individual intersection; a large portion of the anticipated cost savings along the entire corridor is from the land requirements along

the south portion of 100 Avenue from 107 Street to 100 Street. No intersection or lane modifications are shown at 100 Avenue and Grandin Drive for converting to signalized control.

- All trips generated from undeveloped lands are assumed to be made by private vehicles. The study notes that the projected traffic volumes and timings of improvements may be conservative if:
  - more efficient routes are created
  - the Town implements public transit, and/or
  - the Town experiences a shift to more active modes.

The Grandin Heights TIA did not explore a traffic signal option as part of the operational analysis. It did, however, go into more detail regarding the timing for infrastructure improvements. The TIA compared Traffic Signal Warrant results to the capacity analysis conducted for all four buildout phases of the ASP. Ultimately, despite traffic signals being warranted by 2019 according to the Signal Warrant, the TIA recommended considering intersection improvements during Phase 3 (2025). It also recommends reassessing the traffic operations at Phase 3 to confirm if improvements are warranted based on current conditions.

3.0 Existing Conditions

3.1 Site Observations

On Friday June 10, 2022, ISL staff visited the study intersection during PM peak hours with a focus on observing the study and collecting relevant data, including the following:

- **General observations:** Non-technical observations of the corridor components (sightlines, pavement markings, traffic controls, grades, illumination etc.) for review and discussion in later sections of this report.
- **Traffic Operations:** Non-technical observations of traffic operations (delays, queueing, vehicle mix, stopping location, driver behaviour etc.) for review and discussion in later sections of this report.
- **Pedestrian Circulation:** Non-technical observations of pedestrian circulation (sidewalks, trails), pedestrian behaviours, demographics and pedestrian crossing control features.

North-east corner looking West

South-west corner looking North

3.1.1 General Observations

- **Sightlines:** Generally, very good.
- **Pavement markings:**
  - The stop lines for all approaches are located approximately 1m ahead of the stop signs.
  - Stop bar and pedestrian crossings were generally well marked and well visible. There was a minor amount of tire markings covering these features along 100 Avenue.
- **Traffic controls:**
  - 4-way stop control.
- **Grades:**
  - Generally flat in the area, with no obvious vertical grade changes.
- **Illumination:**
  - All stop signs are illuminated.
  - The streetlights seem positioned to supply sufficient light to the intersection.
- **Noise:** Vehicle noise was obvious due to braking and accelerating.

3.1.2 Traffic Operations

- **Delays:**
  - Drivers experienced minimal delay during the observation period.
- **Queueing:**
  - Queues from one to three vehicles on 100 Avenue, often no queues. Minimal queuing was observed on Grandin Drive.
- **Vehicle mix:**
  - Heavy vehicles were in higher proportion than might be anticipated, given the surrounding environment and land-use.
- **Stopping Location:**
  - Some drivers were observed stopping over the stop line and encroaching into the crosswalk.
  - Drivers seem to be unsure where to stop. Some stop in line with the stop sign while others were observed stopping in line with the stop line.
- **Driver behaviours:**
  - Drivers were generally compliant with the all-way stop, with few rolling stops observed.

3.1.3 Pedestrian Circulation

- **Sidewalk:**
  - Sidewalks appear to be in relatively good condition.
  - The north approach has a single curb ramp oriented towards the centre of the intersection at both corners. Each corner at the south approach includes two curb ramps oriented in the direction of the crosswalk.
- **Pedestrian behaviours:**
  - Pedestrians appeared to be very comfortable crossing 100 Avenue and Grandin Drive.
- **Pedestrian demographic:**
  - A large proportion of pedestrians were minors.
- **Pedestrian crossing controls:**
  - Pedestrians experienced minimal delay between arriving at a corner and being able to cross the street because vehicles in all directions must come to a complete stop.

3.2 Existing Operations (2022)

The following section provides an overview of the existing operations at the intersection.

Geometry

Currently, Grandin Drive is a two-lane undivided paved road. 100 Avenue is a four-lane undivided paved roadway with left turn bays at the intersection with Grandin Drive. The intersection is all-way stop-controlled.

Traffic Volumes

The 2021 volume data from Alberta Transportation provide reasonable estimates for existing traffic conditions at the intersection.

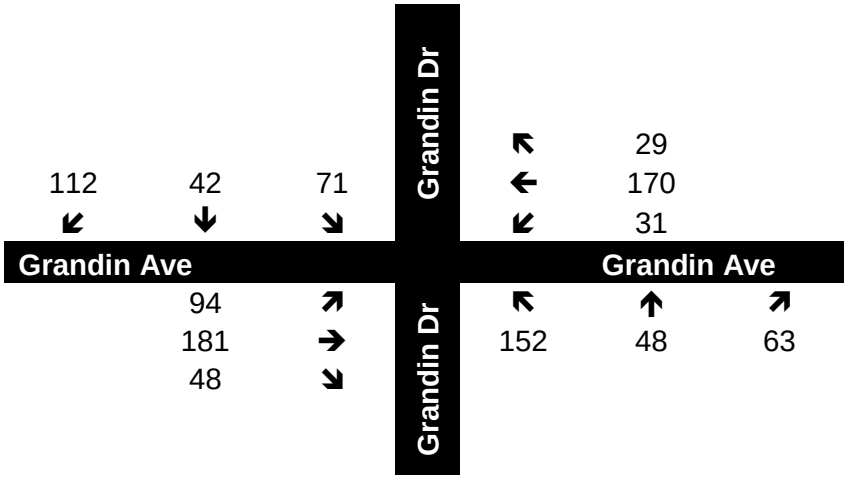


Figure 3.1: 2021 AM peak hour traffic volumes

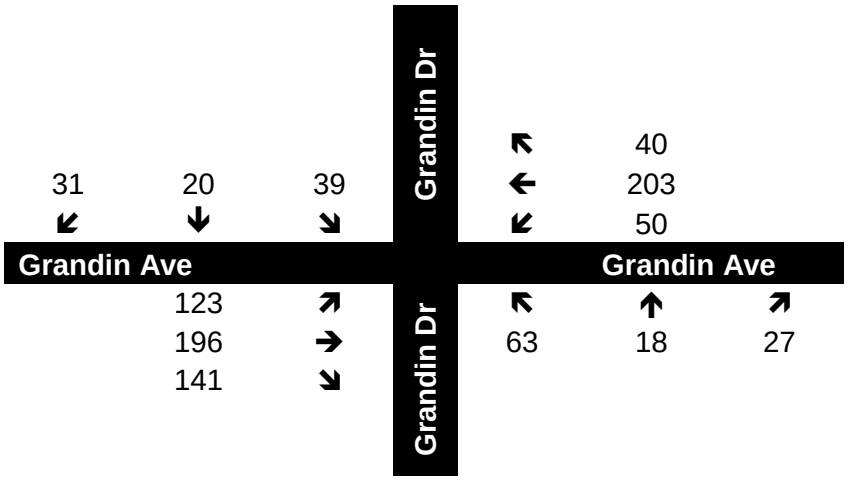


Figure 3.2: 2021 PM peak hour traffic volumes

Traffic Signal Warrant

Using the TAC TSW spreadsheet and the estimated 2021 volumes, a signal is warranted at this intersection, based on a score of 103/100.

Synchro Assessment

Using the 2021 volumes and existing geometry, a synchro analysis reveals the following about the intersection operations.

Table 3.1: 2021 AM and PM Operations – Existing Geometry (HCM 2010)

Peak Hour	EB LOS (Max v/c)	WB LOS (Max v/c)	NB LOS (Max v/c)	SB LOS (Max v/c)	Intersection LOS
AM	B (0.26)	B (0.25)	C (0.55)	C (0.46)	B
PM	B (0.33)	B (0.24)	B (0.22)	B (0.18)	B

4.0 Future Conditions (2042)

4.1 Traffic Volume Forecasts

The Grandin Heights TIA provides volume forecasts for the horizon year 2048. Background traffic volumes were estimated by adding the projected traffic volumes from the 50% build-out of the Town of Morinville, minus increases in traffic due to the development of the ASP lands, plus increases in traffic due to the development of the convenience store.

$$V_{TIA\ background} = V_{Town\ 50\%\ Built-Out} - \Delta V_{ASP\ Development} + \Delta V_{Store\ Development}$$

The background volume traffic conditions corresponds with the 50% build-out horizon selected in the Highway 642 FPS (which is estimated to be between 2043-2048). In the TIA, 2048 is assumed to be 20 years past the full ASP build-out scenario (to be fully built-out by 2028). The following table provides a summary of the land uses and estimated trip generation based on the assumptions of the TIA:

Table 4.1: Land Uses and Estimated Trip Generation from TIA

Land Use	TIA	TMP
Residential	811 du	343 du
Commercial	20,000 sqft	35,000 sqft
Elementary School	-	600 students

The TMP provides link volume forecasts for the horizon year 2045 (25-year horizon from time of publication). The TMP assumes that the year 2045 will precede the full build-out horizon.

The peak hour PM TIA volume forecasts for 2048 are within a reasonable range of the approximated hourly volume forecasts from the TMP for 2045 (approximated as 10% of the daily traffic volumes). Therefore, the TIA volumes will be carried forward as the design volumes for analysis.

The TIA volumes are considered to be more realistic of the rate of development in Morinville and will be carried forward for the operation assessment of signals versus a roundabout. Although the TIA forecasts the volumes for the years 2043 - 2048, it is reasonable to use these volumes for the year 2042 at the concept planning stage.

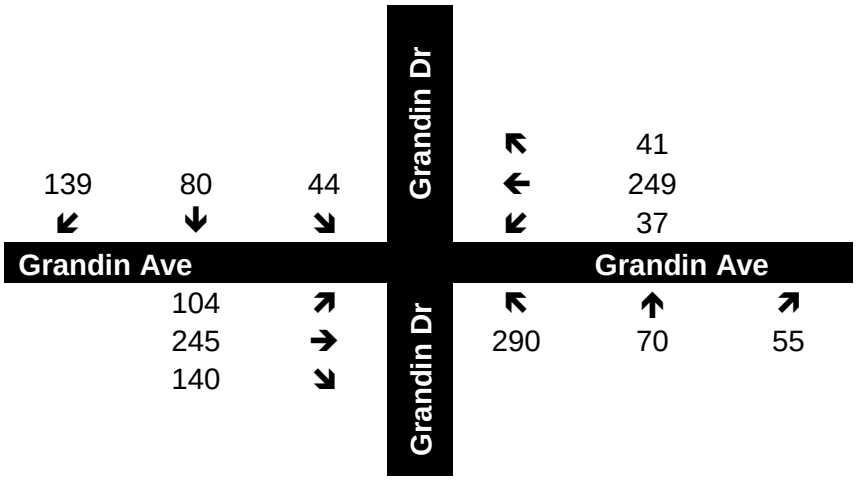


Figure 4.1: 2042 AM Peak Hour Design Volumes

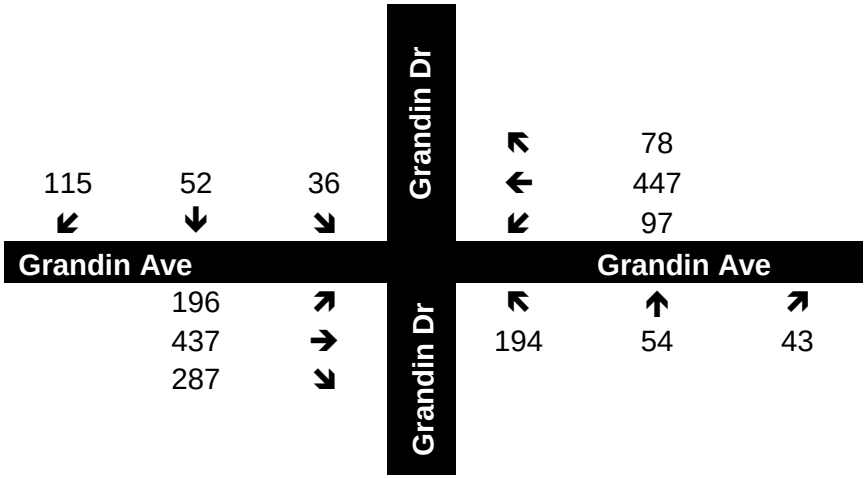


Figure 4.2: 2042 PM Peak Hour Design Volumes

4.2 Traffic Signal Warrant

With the existing intersection geometry and the 2042 design volumes, this intersection would warrant a signal, with an overall score of 312/100. The detailed results of the 2042 TSW can be found in Appendix C.

4.3 Traffic Operations Assessment

4.3.1 Signalized

The recommended geometry, based on achieving successful intersection operations, and the 2042 design volumes were also used to assess the operations of a signalized intersection. The results of the Synchro analysis are in the table below:

Table 4.2: 2042 AM and PM Intersection Operations – Future Geometric Conditions

Peak Hour	EB LOS (Max v/c)	WB LOS (Max v/c)	NB LOS (Max v/c)	SB LOS (Max v/c)	Intersection LOS
AM	A (0.42)	B (0.26)	C (0.72)	C (0.39)	B
PM	A (0.60)	C (0.61)	B (0.49)	A (0.27)	B

The intersection configuration needed with traffic signals is depicted in Figure 4.3: below. The figure demonstrates that the required lane geometry closely matches the current layout.

Figure 4.3: Future Intersection Configuration (Signalized – Preliminary)

4.3.2 Roundabout

The traffic operational analysis results for a roundabout are shown in the following table.

Table 4.3: 2042 AM and PM Roundabout Intersection Operations

Peak Hour	EB LOS (Max v/c)	WB LOS (Max v/c)	NB LOS (Max v/c)	SB LOS (Max v/c)	Intersection LOS
AM	A (0.20)	A (0.17)	A (0.31)	A (0.45)	A
PM	A (0.38)	A (0.32)	B (0.39)	A (0.27)	A

The intersection configuration used to produce the above operational analysis is based on the Functional Planning study shown in the following figure.

Figure 4.4: Future Intersection Configuration (Roundabout – Source: Functional Planning Study)

The effect of pedestrians on the operational performance of a roundabout is minimal or nearly none. The random arrival of pedestrians could potentially impact operations on approach entry and exit. The results are provided in Appendix D.

In summary, roundabout entry effects are calculated as a reduction factor on flow capacity; all calculated factors are 0.989 or greater. Roundabout exit effects are calculated as critical gaps for circulating flow, which can then be propagated into adjusted lane capacity. All exit vehicle flows are below 42% of pedestrian-adjusted exit lane capacity.

5.0 Comparative Analysis

5.1 Evaluation Framework

ISL was contracted to evaluate the suitability of two concept designs: a) Traffic Signal control and b) Roundabout control. The evaluation framework used to evaluate between these two options is summarized in the following table.

Table 5.1: Proposed Evaluation Framework (criteria and methodology for Town review)

Category	Criteria	Methodology
Financial	Capital costs	Comparison of estimated construction costs
	ROW/Land impact	Comparison of right of way costs and impacts on land
	Operational/Maintenance	Comparison of on-going costs
Safety	Collision Reduction/Vehicle Safety	Safety comparison based on published safety benefits.
	Pedestrian and Cyclist Safety	Similar to vehicle safety but for active transportation modes
User	User familiarity/public acceptance	Public acceptance from feedback received at the open house
Environmental	Environmental (noise, emissions, etc.)	Review of intersection delay ands stops. Also qualitative review of obvious potential impacts on the natural environment, wetlands.
Policy	Supports Town of Morinville goals/policies	Comparison with existing Town goals/policies
	Aligns with approved functional plans	Comparison with approved functional plans
	Aligns with AT policy	Comparison with AT Design Bulletins (specifically, design bulletin 28/2010)
Operational	Capacity, delay and traffic flow impacts.	Capacity to accommodate future volumes based on hourly delay.

The detailed assessment of each of the criteria is provided in the following sub-sections.

Analysis are scored based on their dominance relative to each option as follows:

- 10/10 = Relatively superior in comparison.
- 10 for Both = Relatively the same benefit between options.
- 7 – 9 out of 10 = Great in comparison, but other is superior.
- 4 – 8 out of 10 = Fair in comparison, but other is moderately superior.
- 1 – 3 out of 10 = Poor in comparison, and other is far superior.
- 0 out of 10 = Incomparable, Does not provide a benefit similar to other

Capital Costs

Capital costs for each option are extracted from the 2012 Functional Planning Study and inflated to May 2022 dollars by applying a 25% increase, as derived from comparing the Consumer Price Index (Total-CPI) for 2012 (averaged over the year) to the Total-CPI for May 2022 (CPI is sourced from the Bank of Canada website).

- **Roundabout:** Cost for roundabout improvements include items at and around the intersection including median modifications, roadway rehabilitation (425 mm depth), asphaltic concrete surface course (125 mm), paving (50 mm), curb/gutter, sidewalk replacements and storm drainage as needed to facilitate intersection changes. Cost exclude right-of-way, streetscaping and streetlighting but include 20% for miscellaneous/contingency and 15% for engineering and administration. No costs are carried for franchise utility relocates or modifications to the existing road profile. Costs for the roundabout are $1,689,562 in 2012 dollars and $2,111,952 in 2022 dollars.
- **Traffic Signals:** Cost for traffic signals include several rehabilitation items that may not necessarily be required including, roadway rehabilitation (425 mm depth), asphaltic concrete surface course (125 mm), paving (50 mm), sidewalk and curb/gutter, drainage upgrades and others. Cost for traffic signals, excluding rehabilitation items are $414,000 in 2012 dollars. Cost for traffic signals, including rehabilitation items are $1,432,880 in 2012 dollars. Adjusting for inflation, the costs in May 2022 dollars for traffic signals are $517,000 and $1,791,000 respectively for the exclusion and inclusion of rehabilitation.

Right-of-way and Land Impacts

Right-of-way costs and land impacts for each option are summarized as follows based on the Functional Planning Study.

- **Roundabout:** Right-of-way requirements are 5,001 ft^2 at a cost of $11/ ft^2 (as published in the FPS) for a total of $55,010 (indexed to 2012). The roundabout will impact driveways to the adjacent two residential properties.
- **Traffic Signals:** No additional right-of-way is needed for the traffic signals. A no parking zone is required on the north and south legs of the intersection to provide space for a left turn lane.

On-going Costs (Operational/Maintenance)

Operational costs for a traffic signal include on-call costs (for technical service), annual inspections assumed at approximately $5,000 to $10,000 per year (estimated for May 2022). Maintenance costs are assumed to be approximately similar for both options due to a similar amount of pavement for both.

Collision Reduction/Vehicle Safety

The number of conflict points is greatly reduced from 32 for a traffic signal and 8 for a single lane roundabout as illustrated in the following figure.

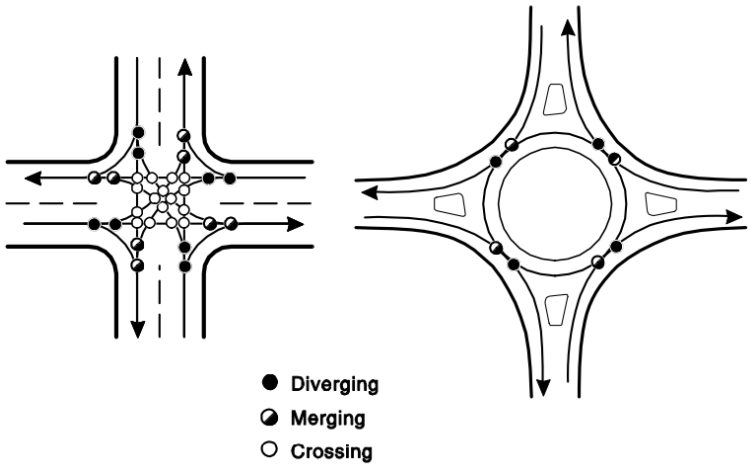


Figure 5.1: Conflict Points. Traffic Signal, Single Lane Roundabout (Source: NCHRP Report 672)

Multilane roundabouts have a greater number of conflict points due to additional entry and exit lanes along with the potential for lane positioning errors by drivers. These are described as follows and illustrated in the following figure.

- Left: Failing to maintain lane position
- Centre: Entering next to an existing vehicle.
- Right: Improper left and right turns.

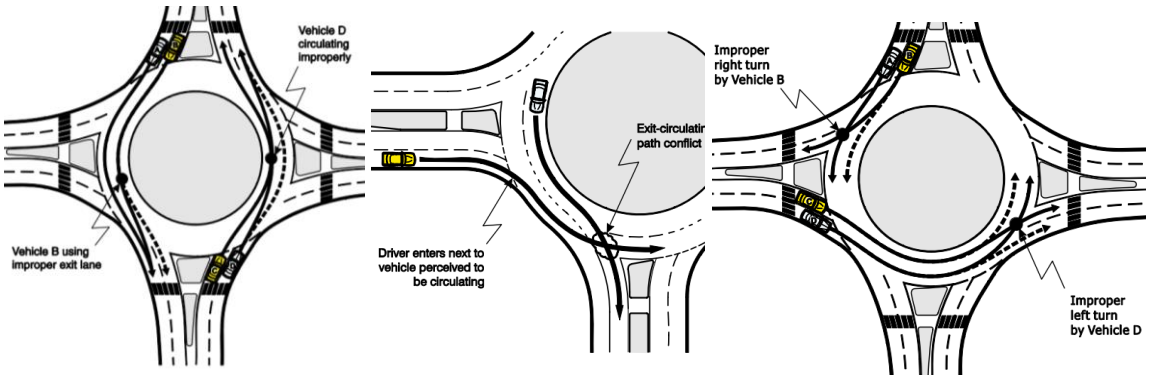


Figure 5.2: Additional Conflict Points for Multilane Roundabouts (Source: NCHRP 572)

With the proposed roundabout concept an additional six conflict points are expected for a total of 14 compared to a single lane roundabout. Although the number of conflicts increases compared to a single-lane roundabout, the overall severity and number of conflicts are less than other intersection types (NCHRP Report 672). For example, conversion from a signalized intersection to a multi-lane roundabout (4 sites, suburban settings) yielded a 67% reduction in all crashes (NCHRP Report 3-65)

Based on the above research, safety benefits for vehicles for the roundabout are preferred over the traffic signals.

Pedestrians and Cyclists Safety

Safety benefits for pedestrians and cyclists at multilane roundabouts is less understood in North America compared to single lane roundabouts as there have been limited number of before/after studies (Weber, Ourston Roundabouts, 2007). The main safety concern for pedestrians at multilane roundabouts is crossing multiple traffic lanes while vehicles routinely overtake others in queues entering the roundabout, through the roundabout and while exiting.

A 2000 study conducted in Sweden of vehicle-pedestrian crash data from 72 roundabouts (as compared with expected values for comparable intersections with signals) showed that single-lane roundabouts are very safe for pedestrian compared to conventional or signal controlled intersections (about a 78% reduction in injuries) and that multi-lane roundabouts are about as safe as other intersections, including traffic signals (Swedish VIT Transport Research, 2000). In the US, multilane roundabouts are not typically recommended at locations where there is a high number of pedestrians and cyclists (FHWA, 2022), although the FHWA does not define what comprises a high number.

In addition, roundabouts (both single and multilane), may be more difficult for visually impaired people to navigate because traffic is always moving, with minimal breaks in sustained noise. Signalized intersections offer explicit, audible guidance for visually impaired pedestrians, such that the decision process is much easier compared to a roundabout (Stone et. al, Effects of Roundabouts on Pedestrian Safety, 2002).

Based on the above discussion, either option provides a similar safety benefit for improving pedestrian/cyclists safety, unless additional measures are added to the FPS-specified roundabout layout, such as flashing crossing lights. Roundabouts are the preferred option for pedestrian safety, provided that sufficient design and controls are implemented at pedestrian crossings. Signals received a great grade but are not technically preferred on a measure of safety due to the higher speeds of vehicles travelling through a signalized intersection.

User Familiarity/Public Acceptance

Traffic signals typically have a higher level of user familiarity compared to multilane roundabouts and this was verified at the public open house. Further discussion on public response to both options is provided in section 6.2.

Environmental (Noise, Emissions)

Vehicle emissions and noise are compared for the roundabout and traffic signal option based on the average level of delay and number of stops per hour at the 2042 horizon, as follows:

- **Roundabout:** The number of stops and delay are 793 and 7.0 s for the AM peak and 1,319 and 10.3 s for the PM peak.
- **Traffic Signals:** The number of stops and delay are 790 and 10.9 s for the AM peak and 1,137 and 15.9 s for the PM peak.

The roundabout results in about 10 – 20% more stops but with approximately 30 to 50% less delay. The traffic signal control is slightly less favourable than the roundabout.

Supports Town Policy

Implementing a traffic signal aligns with the Town's Transportation Master Plan (2020) which indicated the need for traffic signals within the 0 – 5-year horizon. Implementing the roundabout as per the FPS or a traffic signal is also noted as alternative improvement but for the 16 – 25-year horizon. For this comparative evaluation, traffic signals are interpreted as the preferred option for supporting Town policy, based on the TMP since these are planned in both the short and long term horizons, compared to the roundabout which is planned as an alternative only in the long term.

Aligns with Approved Functional Plans

The roundabout option aligns with the FPS and for this study, the roundabout is the preferred option for aligning with the FPS.

Aligns with Alberta Transportation Policy

ISL contacted Alberta Transportation (AT) for input on the two control options. AT's preference is for a signalized control as it would require less land acquisition. AT believes that the pedestrian crossing concerns are better understood and better addressed under signalized control.
Alberta Transportation's mandate is to address the needs of the highway network across the province and this study site is along an AT designated provincial highway. It is AT's belief that the pedestrian and traffic operational concerns are a result of growth in local development which resulted in the increased traffic volumes. Under these scenarios, AT noted that local governance is typically tasked with the costs associated with infrastructure upgrades.

Operational Comparison

Operational impacts are reviewed for several aspects concurrently to avoid double counting similar impacts. These are as follows:

- **Capacity to Accommodate Future Volumes:** The capacity to accommodate future volumes is based on the spare capacity of each option taken from the operational analysis and is summarized as follows:
  - **Roundabout:** The intersection to volume/capacity for the roundabout is 0.45 (AM Peak) and 0.38 (PM Peak). The intersection LOS is A (AM Peak) and A (PM Peak).
  - **Traffic Signals:** The intersection volume to capacity ratio is not published by Synchro however, the maximum volume/capacity ratio is assumed as an indicator of space capacity and is 0.57 (AM Peak) and 0.62 (PM peak). The intersection LOS Is B for the AM and PM peak.

Hourly Delay: Hourly delay is based on the operational analysis for the ultimate 2042 conditions as follows:

- **Roundabout:** Results in an average delay of 7.0 sec/vehicle (AM Peak) and 6.8 sec/vehicle (PM Peak). This results in a total road user delay of 184 minutes (AM peak) and 243 minutes (PM peak) per analysis hour.
- **Traffic Signals:** Results in an average delay of 10.9 sec/vehicle (AM Peak) and 15.2 (PM Peak). This results in a total road user delay of 286 minutes (AM Peak) and 611 minutes (PM Peak) per analysis hour.

Based on the results, the roundabout shows a higher ability to accommodate future volumes with reduced hourly delay.

5.2 Evaluation Framework Summary

A summary of the evaluation results for both options is provided in the following table.

Table 5.2: Evaluation Framework Summary

Category	Criteria	Traffic Signals	Roundabout
Financial	Capital costs	$517,000	$2,111,952
	ROW/Land impact	$0, except requires a no parking area on north and south legs.	$55,010. Impacts access to adjacent properties to the south.
	Operational and Maintenance	$5,000 to 10,000/year for operation. Maintenance is assumed to be similar.	$0 for operational costs. Maintenance is assumed to be similar.
Safety	Collision Reduction/Vehicle Safety	32 conflict points, more frequent and severe collisions.	14 conflict points, less frequent and less severe collisions.
	Pedestrian and Cyclist Safety	More severe and frequent collisions. Higher speeds for movements receiving a green signal.	Vehicle speed at conflict points is reduced. Safer if additional measures at busier crossings (flashing lights) are added.
User	User familiarity/public acceptance	Preferred by the public due to familiarity and pedestrian concerns.	Not preferred by the public due to less familiarity and pedestrian concerns.
Environmental	Environmental (noise, emissions, etc.)	Slightly fewer total stops. Increased total delay, likely increasing vehicle idling time.	Increase in total number of stops but total delay is decreased. Less vehicle idling.
Policy	Supports Town of Morinville goals/policies	Aligned with the TMP in the short term.	Proposed as an alternative to the traffic signal in the long term.
	Aligns with approved functional plans	Not included in the approved functional plans.	Corridor functional plan is for roundabouts at every intersection along 100 Avenue
	Aligns with AT policy	AT preferred option.	Can be designed to AT standards.
Operational	Capacity, delay and traffic flow impacts.	LOS B for AM and PM peaks.	LOS of A for the AM and PM peaks.

The above qualitative assessment was converted into a numerical score which is summarized in the following table.

Table 5.3: Comparative Evaluation Summary

Category	Criteria	Rating		Weight	Score	
		Traffic Signal	Roundabout		Traffic Signal	Roundabout
Financial	Capital costs	10	3	35%	32.7	24.5
	ROW/Land impact	10	8			
	Operational / Maintenance	8	10			
	Total	28	21			
Safety	Collision Reduction / Vehicle Safety	5	10	20%	12	20
	Pedestrian and Cyclist Safety	7	10[1]			
	Total	12	20			
User Familiarity	User familiarity/public acceptance	10	3	10%	10	3
Environmental	Environmental (noise, emissions, etc.)	8	10	5%	4	5
Policy	Supports Town of Morinville goals/policies	10	6	10%	6.7	8.3
	Aligns with approved functional plans	0	10			
	Aligns with AT policy	10	9			
	Total	20	25			
Operational	Capacity, delay and traffic flow impacts.	8	10	20%	16	20
Total				**100%**	**81.4**	**80.8**

Note 1: Scored a 10 under presumption that flashing pedestrian lights are installed at the crosswalks.

The comparative analysis indicates that the scores are similar and that either improvement may be suitable. AT's preference for a traffic signal could be interpreted such that the approved plans are less influential on the preferred intersection improvement. If the criteria 'aligns with approved plans' is removed from the comparison because AT is showing preference for traffic signals, the score for a traffic signal would increase from 81.4 to 84.7 and roundabout would decrease from 80.8 to 80.

6.0 Engagement

6.1 Stakeholder Engagement

6.1.1 Pre-analysis Engagement

ISL met with Alberta Transportation and Sturgeon County early in the project, prior to completing any analysis. The following is a summary of key points discussed:

- **Sturgeon County:** ISL met with Sturgeon County on June 10, 2022. ISL presented a summary of the project scope, including the need to review existing and future traffic demands and compare different improvement options (roundabout and traffic signals). The County presented a recently roundabout for discussion location at Sturgeon Road and Starkey Road. This roundabout was installed within the existing footprint. The County explained that it is working well, but have had to add delineators to better help channelize traffic.
- **Alberta Transportation:** ISL met with AT on June 22, 2022. ISL provided similar information as the meeting with Sturgeon County. We discussed AT's cost/benefit guide for comparing options and AT indicated a desire for a simplified version of the analysis be provided. AT also indicated their requirement to ensure that improvements provide a 20-year service life.

6.1.2 Post-analysis Engagement

Alberta Transportation attended the October 26, 2022 Open House (described in the next section). In a follow up email from AT the indicated their preference for a traffic signal as it requires little to no new land for construction. They also felt that a pedestrian crossing is better address with a typical intersection compared to a roundabout. AT indicated their view that traffic issues at the intersection are a result of growth in local development and increasing traffic volumes and would expect improvement costs to be covered by the local municipalities.

6.2 Public Engagement

A single-phase engagement process was designed to gather public and stakeholder input to inform decision making. Two options for the study intersection were presented to the public through an open house on October 26, 2022, and through an online survey for feedback and summarized as follows:

- **Open House:** One open house was hosted at the Morinville Cultural Centre on October 26, 2022 from 6:30 p.m. to 8:30 p.m. 61 participants attended. The project team shared draft option designs through display boards and answered participant questions. Many town counselors also attended to speak with residents on their concerns and preferences for the intersections.
- **Survey:** A survey was primarily used to gather feedback on a roundabout option and traffic signal option for each intersection. Participants could rate their level of support for each option and provide an explanation. It also gave participants the opportunity to share any other information they felt needed to be taken into consideration by decision makers when selecting the final improvement options. The survey was administered online, with paper surveys available for use at the open house for those who preferred them. The survey was open between October 26 and November 9, 2022. More than 640 participants completed the survey.

The open house and online survey were promoted through the Town's Facebook account, billboards, local newspapers, and the Town website. At the open house, business cards with the QR code link to the online survey were distributed. The QR code link was also available on the display boards. The code could be scanned with a smart phone camera, which would take the participant to the survey link online.

Most participants on the online survey heard about the opportunities to engage through social media.

6.2.1 Survey Results

Residents were asked to rate improvement options on a scale from 1-5, 1 meaning "I am strongly against this option" and 5 meaning "I am strongly in favour of this option". The following provides a summary of survey results received.

- **Question 1:** What is your level of support for the roundabout option for the Grandin Drive and 100 Avenue intersection?
  - Strongly or somewhat in favour: 80 of 641 (12%)
  - Strongly or somewhat against: 504 of 638 (79%)
  - Neutral or unsure: 57 of 641 (9%)
- **Question 2:** What is your level of support for the traffic signal option for the Cardiff Road and 100 Street intersection?
  - Strongly or somewhat in favour: 526 of 638 (82%)
  - Strongly or somewhat against: 58 of 638 (9%)
  - Neutral: 57 of 641 (9%)

Additional feedback received that influenced choices are as follows:

- Support for traffic signals because they are felt to be good/best for pedestrian, cyclist and car safety.
- Support for traffic signals because they are felt to ease congestion and keep traffic flowing.
- Support for traffic signals because they are felt to provide clear direction on whose turn it is to go and when.
- Support for traffic signals, but concerns they could increase congestion.
- Against roundabout because they are felt to be dangerous for pedestrians.
- Against a roundabout because of concerns with drivers understanding how to use them properly.
- Support for traffic signals because they are most beneficial for those with limited mobility or other disabilities. Those users may be prevented from using an all-way cross walk with stop signs or a roundabout crossing safely.

As shown, the survey results indicate a majority (~80%) of survey responses are in support of traffic signals.

The detailed What We Heard Report is provided in Appendix F for reference.

7.0 Conclusions and Recommendations

In Morinville, the intersection of 100 Avenue (also known as Highway 642) and Grandin Avenue (East) is under pressure from increased traffic volumes to receive an updated traffic control measure. The site is currently under All-Way Stop Control (AWSC). ISL was contracted to review the need for traffic control measures and compare the options of signalized control and roundabouts as a solution. A Signalized traffic control is warranted for the site under both current (2022) and future (2042) conditions. Under Alberta Transportation (AT) Design Bulletin #68/2010, a roundabout may be considered on Alberta Highways where a signalized control is warranted or under consideration, however detailed analysis must be conducted.
Under the evaluation process conducted in this report, both a signalized control and roundabout control scored nearly equally, with a slight preference for a signalized control. Given the close scores, the Town of Morinville would be justified in selecting either option. Neither option should be discarded outright as strictly inferior or unsuitable for the study site.

It is ISL's opinion that the decision between signalized control versus roundabout control should be informed by the Town's long-term plan for the 100 Avenue corridor and the tolerance for "temporary" short-term infrastructure costs.

In Favour of Signalized Control:

- **Technical Observations:** Preserves the existing footprint and geometric layout. Lower construction costs and no land-acquisition costs expected. Aligns with 2020 Transportation Master Plan. Aligns with strong public support received through public survey. Aligns with Alberta Transportation preference.
- **Discussion**: Should a roundabout remain the preferred ultimate layout (for the scenario years of 2043-2048), a decision for signalized control must recognize the planned shelf-life of roughly 20-25 years for any installed signal devices. The Town should review its timelines for maintenance and replacement for such infrastructure and compare against the potential use life of 20-25 years. Effectively, a decision for signalized control is a decision to defer the larger costs for a roundabout to a later date by opting for a short-term cost in signalized hardware and associated utilities. A decision for signalized control may also be agnostic about the ultimate 2043-2048 configuration of the site by opting in to the preferred option for the needs of the immediate future.

In Favour of Roundabout Control:

- **Technical Observations:** Improved safety and operational delay measures. No ongoing operational costs for maintaining signal devices. Aligns with 100 Avenue corridor Functional Planning Study long-term recommendations. Would provide a consistent intersection design along the corridor if implemented with the other roundabouts from the Functional Planning Study. Would provide traffic calming effects within town limits.
- **Discussion:** A decision for a roundabout is an acceleration of the timetables for implementing the 100 Avenue FPS and is made in anticipation of future traffic volumes from the Grandin Heights ASP development. Selecting a roundabout will reduce the total infrastructure costs over a 50-60 year horizon by omitting a short-term signalized stage.

APPENDIX A

Excerpts from Highway 642 Functional Planning Study

HCM 2010 Signalized Intersection Summary
11: Grandin Drive E & 100 Avenue

Full Build Out - Signals Option
AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	124	425	70	177	448	37	169	22	114	33	29	252
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	2	0	1	1	0	0	1	1
Cap, veh/h	343	1112	182	337	1209	99	238	132	682	355	289	583
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.07	0.50	0.50	0.37	0.37	0.37
Sat Flow, veh/h	872	3046	498	864	3313	271	1774	263	1360	714	785	1583
Grp Volume(v), veh/h	135	267	271	192	259	268	184	0	148	68	0	274
Grp Sat Flow(s),veh/h/ln	872	1770	1775	864	1770	1815	1774	0	1623	1499	0	1583
Q Serve(g_s), s	8.2	6.8	6.9	12.9	6.5	6.6	3.7	0.0	3.0	20.3	0.0	7.9
Cycle Q Clear(g_c), s	14.8	6.8	6.9	19.7	6.5	6.6	3.7	0.0	3.0	22.1	0.0	7.9
Prop In Lane	1.00		0.28	1.00		0.15	1.00		0.84	0.53		1.00
Lane Grp Cap(c), veh/h	343	646	648	337	646	662	238	0	814	644	0	583
V/C Ratio(X)	0.39	0.41	0.42	0.57	0.40	0.40	0.77	0.00	0.18	0.11	0.00	0.47
Avail Cap(c_a), veh/h	343	646	648	337	646	662	238	0	814	644	0	583
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	14.2	14.3	21.7	14.2	14.2	14.3	0.0	8.2	15.9	0.0	14.5
Incr Delay (d2), s/veh	3.4	2.0	2.0	6.9	1.9	1.8	14.4	0.0	0.5	0.3	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	2.7	2.8	2.9	2.6	2.7	3.4	0.0	0.9	0.6	0.0	2.9
Lane Grp Delay (d), s/veh	23.1	16.2	16.3	28.5	16.0	16.0	28.7	0.0	8.7	16.2	0.0	17.2
Lane Grp LOS	C	B	B	C	B	B	C		A	B		B
Approach Vol, veh/h		673			719			332			342	
Approach Delay, s/veh		17.6			19.4			19.8			17.0	
Approach LOS		B			B			B			B	
Timer												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		25.9			25.9		8.0	34.1			26.1	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		21.9			21.9		4.0	30.1			22.1	
Max Q Clear Time (g_c+I1), s		16.8			21.7		5.7	5.0			24.1	
Green Ext Time (p_c), s		3.5			0.2		0.0	3.0			0.0	
Intersection Summary												
HCM 2010 Ctrl Delay			18.5									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
11: Grandin Drive E & 100 Avenue

Full Build Out - Signals Option
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	402	142	104	334	37	119	17	80	26	30	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	0	1	1	0	1	1
Cap, veh/h	455	1416	633	390	1416	633	123	9	662	95	80	662
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	978	3539	1583	822	3539	1583	0	23	1583	0	191	1583
Grp Volume(v), veh/h	161	437	154	113	363	40	147	0	87	61	0	111
Grp Sat Flow(s),veh/h/ln	978	1770	1583	822	1770	1583	23	0	1583	191	0	1583
Q Serve(g_s), s	7.2	4.6	3.6	6.0	3.8	0.9	0.0	0.0	1.9	0.0	0.0	2.4
Cycle Q Clear(g_c), s	11.0	4.6	3.6	10.6	3.8	0.9	23.0	0.0	1.9	23.0	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	0.46		1.00
Lane Grp Cap(c), veh/h	455	1416	633	390	1416	633	132	0	662	175	0	662
V/C Ratio(X)	0.35	0.31	0.24	0.29	0.26	0.06	1.11	0.00	0.13	0.35	0.00	0.17
Avail Cap(c_a), veh/h	455	1416	633	390	1416	633	132	0	662	175	0	662
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	11.3	11.0	14.9	11.0	10.2	25.9	0.0	9.9	13.5	0.0	10.0
Incr Delay (d2), s/veh	2.1	0.6	0.9	1.9	0.4	0.2	111.0	0.0	0.4	5.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	1.6	1.2	1.2	1.3	0.3	5.7	0.0	0.6	0.6	0.0	0.8
Lane Grp Delay (d), s/veh	16.9	11.9	11.9	16.8	11.5	10.3	136.9	0.0	10.3	18.9	0.0	10.6
Lane Grp LOS	B	B	B	B	B	B	F		B	B		B
Approach Vol, veh/h		752			516			234			172	
Approach Delay, s/veh		12.9			12.6			89.8			13.5	
Approach LOS		B			B			F			B	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		27.0			27.0			28.0			28.0	
Change Period (Y+Rc), s		5.0			5.0			5.0			5.0	
Max Green Setting (Gmax), s		22.0			22.0			23.0			23.0	
Max Q Clear Time (g_c+I1), s		13.0			12.6			25.0			25.0	
Green Ext Time (p_c), s		5.1			5.3			0.0			0.0	

Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									

Notes

DIRECTIONAL TRAFFIC COUNT SUMMARY

HIGHWAY: 642 **REFERENCE NO.:** **INTERSECTION OF:** Hwy 642 (100 Ave) & Grandin Drive, Morinville AB

LATITUDE (degrees): **LONGITUDE (degrees):** **LEGAL DESCRIPTION:**

DAY & DATE OF COUNT: May 2012 **COUNT DURATION:** 6 HOURS (6:00 TO 9:00 AM, 3:30 TO 6:30 PM)

	APPROACHING INTERSECTION												
	FROM THE EAST ON 642						FROM THE WEST ON 642						
INTERVAL	LEFT		THROUGH		RIGHT		LEFT		THROUGH		RIGHT		TOTALS
6:00-6:15 AM	1	1	12	10			1		14		3		**42**
6:15 - 6:30	7	5			7	5	1		6	8	2		**41**
6:30 - 6:45	23	7			10	6			24	1	1		**72**
6:45 - 7:00	14	13			14	6	2		17		3		**69**
7:00 - 7:15	10	9			7	11	2		20	1	1		**61**
7:15 - 7:30	16	5			10	5	3		3			1	**43**
7:30 - 7:45			17	13	7	1	18	2	20		6		**84**
7:45 - 8:00	13	4	13	5	2		21	4	11		1		**74**
8:00 - 8:15	40	10	12	5	9	2	15		19	3	9	3	**127**
8:15 - 8:30	15	2	10	1	3	1	12		16		7		**67**
8:30 - 8:45	14		8	8	3	1	10	2	28	3	15		**92**
8:45-9:00 AM	4		9	1	1	2	8	1	22		10		**58**
3:30-3:45 PM	7		27	2	5		15		28	1	21		**106**
3:45 - 4:00	2		17	3	6		5		23	1	19	1	**77**
4:00 - 4:15	3		35	2	2		26		29	2	26		**125**
4:15 - 4:30	17		48		7		17		41	4	35	1	**170**
4:30 - 4:45	1		43	2	3		13		16		11		**89**
4:45 - 5:00	2	1	15		1		23		33		32		**107**
5:00 - 5:15	10		15	3	2	2	12		22		25		**91**
5:15 - 5:30	11		18	1	10	1	20		41		27		**129**
5:30 - 5:45	7		22		6		22		38		23		**118**
5:45 - 6:00	7		22	1	5		23		25		30		**113**
6:00 - 6:15	4		13	1	5		22		25		27		**97**
6:15-6:30 PM	4		12		7		17		21		29		**90**
VEH CLASS	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	
TOTALS	232	57	368	58	132	43	308	9	542	24	363	6	**2142**
	EL		**ET**		**ER**		**WL**		**WT**		**WR**		

	APPROACHING INTERSECTION													
	FROM THE NORTH ON GRADIN DR						FROM THE SOUTH ON GRANDIN DR							
INTERVAL	LEFT		THROUGH		RIGHT		LEFT		THROUGH		RIGHT		TOTALS	GRAND TOTALS
6:00-6:15 AM	3		1		15		10	6			11	6	**52**	**94**
6:15 - 6:30	1			1	7	8							**17**	**58**
6:30 - 6:45	5		1		25								**31**	**103**
6:45 - 7:00	5				10								**15**	**84**
7:00 - 7:15	10				17								**27**	**88**
7:15 - 7:30	2		1		6								**9**	**52**
7:30 - 7:45	7		3	1	27	6							**44**	**128**
7:45 - 8:00	7		5		44								**56**	**130**
8:00 - 8:15	4		3		60								**67**	**194**
8:15 - 8:30	7		2	1	37	1							**48**	**115**
8:30 - 8:45	2		16	1	20								**39**	**131**
8:45-9:00 AM	2		7		12								**21**	**79**
3:30-3:45 PM	1		4		8		4	1	5				**23**	**129**
3:45 - 4:00	3		3		10		12		5				**33**	**110**
4:00 - 4:15	1		5		9		12		2	1	6	1	**37**	**162**
4:15 - 4:30	1		2		10		16	1	3		2		**35**	**205**
4:30 - 4:45	2		3	1	4		8		1				**19**	**108**
4:45 - 5:00		1	3	1	6		21				4		**36**	**143**
5:00 - 5:15			8		12		16		1		2		**39**	**130**
5:15 - 5:30	1		12		17		17		3		3		**53**	**182**
5:30 - 5:45			2		9		17		4		5		**37**	**155**
5:45 - 6:00	15		12	1	12		23		5		5		**73**	**186**
6:00 - 6:15	1		3		11		20		5		3		**43**	**140**
6:15-6:30 PM			1		7		18		1		2		**29**	**119**
VEH CLASS	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**		
TOTALS	80	1	97	7	395	15	194	8	35	1	43	7	**883**	**3025**
	NL		**NT**		**NR**		**SL**		**ST**		**SR**			

North East Set

	APPROACHING INTERSECTION					
	FROM THE NORTH ON GRADIN DR					
	LEFT		THROUGH		RIGHT	
6:00-6:15 AM						
6:15 - 6:30						
6:30 - 6:45	1	1	12	13		
6:45 - 7:00		1	19	11	1	
7:00 - 7:15		1	14	5		1
7:15 - 7:30			12	10		
7:30 - 7:45						
7:45 - 8:00	1	1	30	11	2	
8:00 - 8:15	1	2	25	7	1	1
8:15 - 8:30	1		8	6	1	
8:30 - 8:45			13	4		
8:45-9:00 AM	2		9	2	1	
	P	**T**	**P**	**T**	**P**	**T**
	6	6	142	69	6	2
	NL		**NT**		**NR**	

LOCATION DIAGRAM ENCLOSED (Y/N): NO

WEATHER CONDITIONS:

RECORDER(S):

COMMENTS:

VEHICLE CLASSES

P: PASSENGER VEHICLES

T: TRUCKS

Table 6.1

Option Evaluation Matrix

	Conventional (Traffic Signals)	Roundabouts
Policy Criteria		
Consistent with Morinville Policy	◕	◕
Supports ASP Goals	◕	●
Consistent with Alberta Transportation Policy	◕	●
Highway Network Connectivity	●	●
Implementation Criteria		
Up Front Costs	◕	◕
Maintenance Costs	◔	●
Land Requirements	●	●
Downtown Related Criteria		
"Fit" in Downtown Morinville	◕	●
Ease of Property (Business) Access	◔	●
Promotes Economic Development	◕	●
On Street Parking	◔	●
Technical Criteria		
Intersection Capacity	◕	◕
Vehicle Safety	◔	◕
Pedestrian Safety	◔	◕
Lowers Vehicle Speeds	◔	●
Minimizes Traffic Delay	◔	◕
Accommodation of Large Vehicles	●	◔
Public Related Criteria		
Public Acceptance	●	◕
Driver Familiarity	●	◕
Ease of Pedestrian Access	◕	●

○ - does not meet criteria
◔ - partially addresses criteria
◕ - mostly addresses criteria
● - fully addresses criteria

6.0 Plan Development

6.1 Options Evaluation

At the preliminary stage, two alternatives for the corridor were considered and presented at the first public Open House on September 26, 2012. The two alternatives were to improve the corridor intersections with conventional signalized intersections, or to improve them with modern roundabouts.

The two options were considered on the basis of several criteria (listed below), noting whether each alternative 'does not meet,' 'partially addresses,' 'mostly addresses', or 'fully addresses' the requirements of each criteria. The baseline model is the corridor as it functions today. The criteria were chosen in an effort to highlight all major needs and requirements of the alternative chosen.

The criteria are:

6.1.1 Policy Criteria

- **Consistent with Morinville policy** – is the alternative consistent with the Town's Municipal Development Plan (MDP), Municipal Sustainability Plan (MSP), and applicable Area Structure Plans (ASPs)?
- **Supports Area Structure Plan (ASP) Goals** – does the alternative support the goals outlines in the Coeur de Morinville ASP? Namely contributing to 'place-making' (landmarks, streetscapes, definition of precincts) and contributing to/enabling streetscape improvements and enhancements.
- **Consistent with Alberta Transportation policy** – is the alternative consistent with existing Alberta Transportation policy? This includes policies on items such as intersection treatments, intersection spacing, access management, right of way widths, design cross-sections, design vehicles, etc.
- **Highway Network Connectivity** – does the alternative maintain connectivity between Highway 642 east of Morinville, Highway 642 west of Morinville, and Highway 2? Does the alternative mesh well with the regional highway network?

6.1.2 Implementation Criteria

- **Up Front Costs** – does the alternative limit up front implementation (capital) costs? This includes detailed planning, land acquisition, construction, etc.
- **Maintenance Costs** – does the alternative limit ongoing maintenance and operational costs?
- **Land Requirements** – does the alterative limit the amount of right of way required for its constructions?

6.1.3 Downtown Related Criteria

- **"Fit" in Downtown Morinville** – does the alternative align with the existing character of downtown Morinville?
- **Ease of Property (Business) Access** – does the alternative provide easy access to the properties and businesses that front onto the corridor?

- **Promotes Economic Development** – does the alternative encourage economic development along the corridor? Does the alternative provide stability and direction to encourage business plans?
- **On Street Parking** – does the alternative maintain on-street parking, as compared to the baseline model?

6.1.4 Technical Criteria

- **Intersection Capacity** – does the alternative provide sufficient capacity at all intersections along the corridor? Can side streets easily access the corridor? Can traffic on the corridor easily access side streets?
- **Vehicle Safety** – does the alternative maintain or increase safety for vehicular traffic along the corridor, relative to the baseline model?
- **Pedestrian Safety** – does the alternative maintain or increase safety of pedestrians along and crossing the corridor, relative to the baseline model?
- **Lowers Vehicle Speeds** – does the alternative serve to encourage lower vehicle speeds along the corridor?
- **Minimize Traffic Delay** – does the alternative serve to lower overall delay by traffic using the corridor?
- **Accommodation of Large Vehicles** – does the alternative provide access and passage to large vehicles, such as semi-trucks (WB-21)?

6.1.5 Public Related Criteria

- **Public Acceptance** – is the public comfortable with and accepting of the alternative?
- **Driver Familiarity** – are local drivers familiar with the intersection treatments contained in the alternative?
- **Ease of Pedestrian Access** – does the alternative provide easy access for pedestrians to the corridor? Is it easy for pedestrians to cross the corridor?

The evaluation matrix is attached as **Table 6.1**. Based on the evaluation matrix, the roundabout option was selected as better able to meet the goals of the project for the corridor.

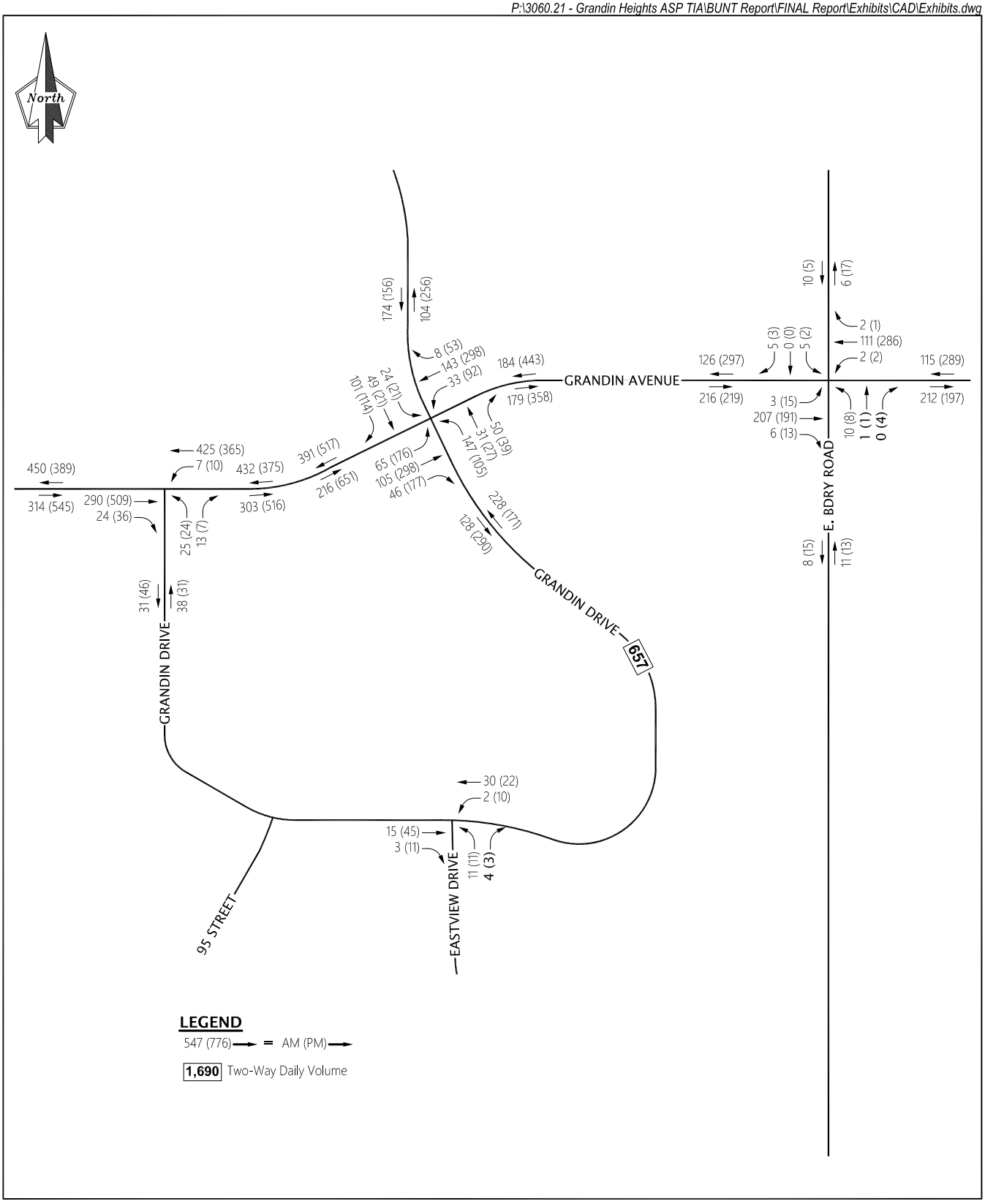
6.2 Roundabout Recommended Option

The additional benefits of roundabout intersections can be summarized as follows:

- The roundabout option provides four lanes with parking on both sides of 100 Avenue between 107 Street and 100 Street without requiring additional right of way, except at roundabout intersections. The total right of way required for the roundabout option is 0.75 ha (1.94 ac), whereas the conventional intersection option requires approximately 1.0 ha (2.41 ac), and requires buy-out of approximately 61,000 ft^2 of building area versus 30,000 ft^2 for the roundabout. The right of way costs for the roundabout option are approximately 50% lower than the conventional intersection option.
- The roundabout option provides for legal U-turns at roundabout intersections along 100 Avenue, which is more conducive to conversion of minor intersections to right in/outs and in general implementation of an access management strategy.
- The roundabout option will provide operational improvements on the 100 Avenue corridor through traffic calming, but does not necessarily increase the time of travel. Traffic flow is

APPENDIX B

Excerpts from Grandin Heights ASP Traffic Impact Analysis



NOT TO SCALE - FOR ILLUSTRATION PURPOSES ONLY

Exhibit 2-1

2015 Existing Traffic Conditions
AM and PM Peak Hours and Daily

7.4 Intersection Capacity Analysis by Stage

As identified in Section 6.3.2, northbound movements at the Grandin Avenue/Grandin Drive East intersection are projected to operate at LOS E with a v/c ratio in the order of 0.96 during the AM peak hour under full build-out of the ASP. During the PM peak hour under full build-out of the ASP, several movements are projected to operate at LOS E or worse, including the eastbound and westbound through and right-turn movements and northbound movements, and volumes are projected to exceed the capacity of the intersection. Given that several movements are projected to operate at undesirable levels of service with the full build-out of the ASP, upgrading the intersection to a roundabout design is anticipated to be required prior to 2028.

The Grandin Avenue/Grandin Drive East intersection is a four-legged intersection that is all-way stop-controlled and, as identified in Section 6.3.2, includes the following geometry:

- **West Approach** – one left-turn bay, one through lane, one shared through/right lane;
- **East Approach** – one left-turn bay, one through lane, one shared through/right lane;
- **South Approach** – one shared left/through/right lane; and
- **North Approach** – one shared left/through/right lane.

Tables 7-2 and **7-3** summarize the projected intersection operations at the Grandin Avenue/Grandin Drive East intersection during the AM and PM peak hours, respectively, for total traffic conditions under each phase of development. Note that existing intersection operations and those projected under 2028 total traffic conditions are also included for reference.

As summarized in Table 7-2, all movements at the Grandin Avenue/Grandin Drive East intersection are projected to operate at LOS D or better during the AM peak hour under 2019, 2022 and 2025 total traffic conditions except for northbound movements under 2025 total traffic conditions, which are projected to operate at LOS E. During the PM peak hour, all movements are projected to operate at LOS D or better under 2019, 2022 and 2025 total traffic conditions, as summarized in Table 7-3, with the exception of eastbound through and right-turn movements and northbound movements under 2025 total traffic conditions. All movements are projected to operate with v/c ratios less than 1.0 under total traffic conditions for all horizons considered.

Table 7-2: Grandin Avenue/Grandin Drive East Intersection by Phase – AM Peak Hour

	Eastbound			Westbound			Northbound			Southbound		
Movement	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Geometry	**L/T/TR**			**L/T/TR**			**LTR**			**LTR**		
2015 Existing Traffic Conditions (all-way stop-controlled) – from Table 6-5												
Volume (vph)	65	105	46	33	143	8	147	31	50	24	49	101
v/c	0.34	0.14		0.09	0.21		0.46			0.33		
LOS	B	B		B	B		B			B		
95th Queue (veh)	2	1		0	1		2			1		
2019 (Phase 1) Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	76	122	107	37	156	37	234	56	56	38	71	101
v/c	0.18	0.30		0.09	0.23		0.73			0.44		
LOS	B	B		B	B		D			B		
95th Queue (veh)	1	1		0	1		6			2		
2022 (Phase 2) Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	84	143	107	37	159	38	234	59	56	40	73	112
v/c	0.20	0.32		0.09	0.25		0.75			0.48		
LOS	B	B		B	B		D			C		
95th Queue (veh)	1	1		0	1		7			3		
2025 (Phase 3) Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	86	150	124	37	166	38	262	65	56	40	76	115
v/c	0.21	0.38		0.10	0.27		0.85			0.51		
LOS	B	B		B	B		E			C		
95th Queue (veh)	1	2		0	1		9			3		
2028 Total Traffic Conditions (all-way stop-controlled) – from Table 6-5												
Volume (vph)	89	163	140	37	177	39	290	70	55	41	80	118
v/c	0.24	0.45		0.10	0.30		0.96			0.56		
LOS	B	C		B	B		F (64 sec)			C		
95th Queue (veh)	1	2		0	1		12			3		

Table 7-3: Grandin Avenue/Grandin Drive East Intersection by Phase – PM Peak Hour

	Eastbound			Westbound			Northbound			Southbound		
Movement	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**
Geometry	**L/T/TR**			**L/T/TR**			**LTR**			**LTR**		
2015 Existing Traffic Conditions (all-way stop-controlled) – from Table 6-6												
Volume (vph)	176	298	177	92	298	53	105	27	39	21	21	114
v/c	0.46	0.54		0.20	0.48		0.44			0.34		
LOS	C	C		B	C		C			B		
95th Queue (veh)	2	3		1	3		2			2		
2019 (Phase 1) Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	195	330	239	97	308	78	156	45	43	36	40	114
v/c	0.50	0.78		0.26	0.52		0.66			0.50		
LOS	C	D		B	C		D			C		
95th Queue (veh)	3	7		1	3		5			3		
2022 (Phase 2) Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	204	330	239	97	317	79	156	47	43	37	43	122
v/c	0.53	0.80		0.26	0.54		0.67			0.54		
LOS	C	D		B	C		D			C		
95th Queue (veh)	3	7		1	3		5			3		
2025 (Phase 3)Total Traffic Conditions (all-way stop-controlled)												
Volume (vph)	207	337	264	97	324	80	175	51	43	37	47	124
v/c	0.56	0.89		0.27	0.58		0.76			0.58		
LOS	C	E		C	C		E			C		
95th Queue (veh)	3	10		1	4		6			4		
2028 Total Traffic Conditions (all-way stop-controlled) – from Table 6-6												
Volume (vph)	209	348	287	97	335	80	194	54	43	38	51	126
v/c	0.58	0.99		0.28	0.62		0.85			0.62		
LOS	C	F (70 sec)		C	D		E			D		
95th Queue (veh)	4	13		1	4		8			4		

APPENDIX C

Traffic Signal Warrant for 100 Avenue and Grandin Drive East

Alberta Transportation - Traffic Signal Warrant Analysis

Main Street (name)	100 Ave	Direction (EW or NS)	EW
Side Street (name)	Grandin Drive E	Direction (EW or NS)	NS
Quadrant / Int #		Comments	2021 AT Raw counts adjusted to 100th highest hour, 2.5% growth (1-year) and ped. volume from Grandin Hieghts TIA with growth.
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET		

Road Authority:	Alberta Transportation
City:	Town of Morinville
Analysis Date:	2022 Oct 24, Mon
Count Date:	2021 Sep 07, Tue
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
100 Ave	WB	1		1		1		10,000	2
100 Ave	EB	1		1		1		990	2
Grandin Drive E	NB				1				
Grandin Drive E	SB				1				
Are the Grandin Drive E NB right turns significantly impeded by through movements? (y/n)							n		
Are the Grandin Drive E SB right turns significantly impeded by through movements? (y/n)							n		

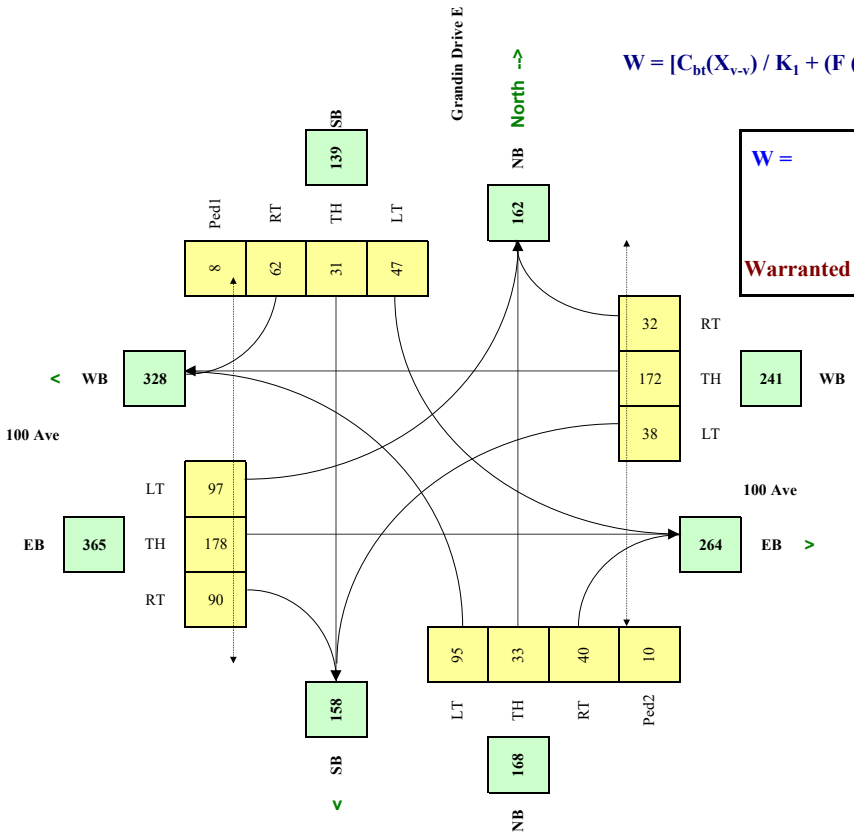
Demographics		
Elem. School/Mobility Challenged	(y/n)	y
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	y
Metro Area Population	(#)	10,000
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
100 Ave	EW	50	6.0%	n	3.0
Grandin Drive E	NS		4.0%	n	

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:00 - 8:00	129	37	94	110	32	98	29	129	28	84	164	37	17	45	8	14
8:00 - 9:00	123	36	58	55	38	80	20	165	13	49	168	58				
14:00 - 15:00	106	29	16	24	40	54	25	145	19	94	165	84	12	8	6	0
15:00 - 16:00	81	44	21	21	25	56	38	170	32	121	181	115				
16:00 - 17:00	65	35	22	30	30	49	62	215	56	110	187	99	17	8	0	2
17:00 - 18:00	65	18	28	40	21	32	51	208	41	126	201	145				
Total (6-hour peak)	**569**	**199**	**239**	**280**	**186**	**369**	**225**	**1,032**	**189**	**584**	**1,066**	**538**	**46**	**61**	**14**	**16**
Average (6-hour peak)	**95**	**33**	**40**	**47**	**31**	**62**	**38**	**172**	**32**	**97**	**178**	**90**	**8**	**10**	**2**	**3**

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v\text{-}v}) / K_1 + (F\,(X_{v\text{-}p})\,L) / K_2] \times C_i$$

W =	103	86	17
		Veh	*Ped*

Warranted

RESET SHEET

Alberta Transportation - Traffic Signal Warrant Analysis

Main Street (name)	100 Ave	Direction (EW or NS)	EW
Side Street (name)	Grandin Drive E	Direction (EW or NS)	NS
Quadrant / Int #		Comments	2042 Future Volumes
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET		

Road Authority:	Alberta Transportation
City:	Town of Morinville
Analysis Date:	2022 Aug 02, Tue
Count Date:	2021 May 01, Sat
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
100 Ave	WB	1		1		1		10,000	2
100 Ave	EB	1		1		1		990	2
Grandin Drive E	NB				1				
Grandin Drive E	SB				1				

Are the Grandin Drive E NB right turns significantly impeded by through movements?	(y/n)	n
Are the Grandin Drive E SB right turns significantly impeded by through movements?	(y/n)	n

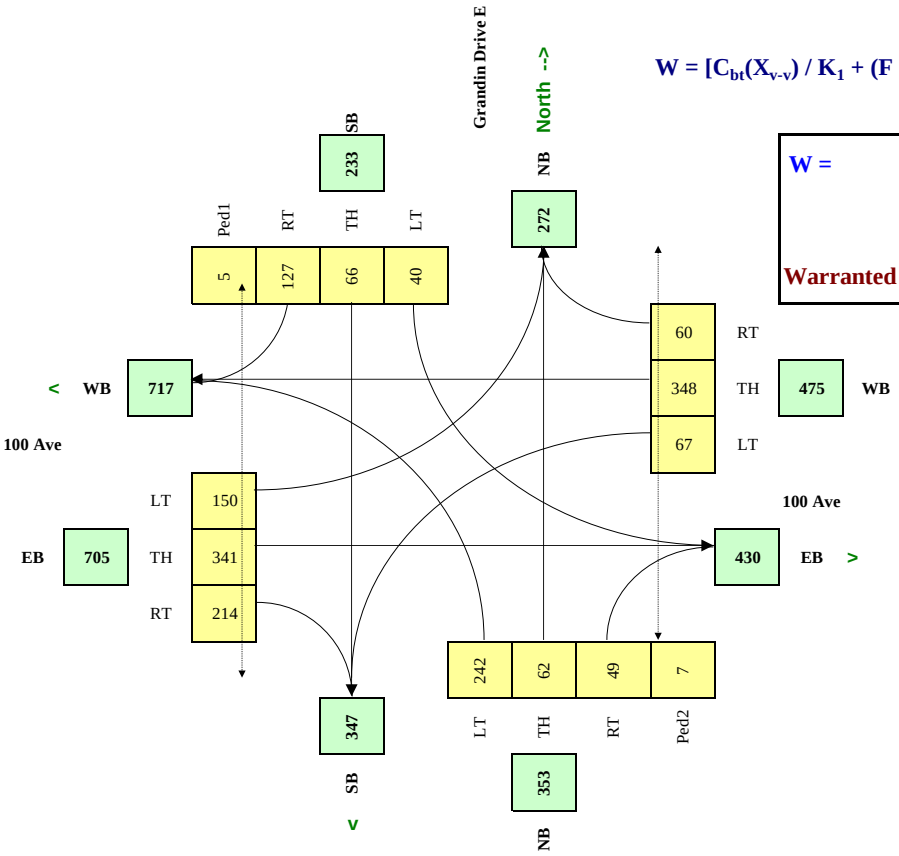
Demographics		
Elem. School/Mobility Challenged	(y/n)	y
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	y
Metro Area Population	(#)	16,500
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
100 Ave	EW	50	5.0%	n	1.0
Grandin Drive E	NS		5.0%	n	

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:00 - 8:00	290	70	55	44	80	139	37	249	41	104	245	140	11	30	5	9
8:00 - 9:00	290	70	55	44	80	139	37	249	41	104	245	140				
11:30 - 12:30	242	62	49	40	66	127	67	348	60	150	341	214	8	5	4	0
12:30 - 13:30	242	62	49	40	66	127	67	348	60	150	341	214				
4:00 - 5:00	194	54	43	36	52	115	97	447	78	196	437	287	11	5	0	1
5:00 - 6:00	194	54	43	36	52	115	97	447	78	196	437	287				
Total (6-hour peak)	**1,452**	**372**	**294**	**240**	**396**	**762**	**402**	**2,088**	**358**	**900**	**2,046**	**1,282**	**30**	**40**	**9**	**10**
Average (6-hour peak)	**242**	**62**	**49**	**40**	**66**	**127**	**67**	**348**	**60**	**150**	**341**	**214**	**5**	**7**	**2**	**2**

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v\text{-}v}) / K_1 + (F\,(X_{v\text{-}p})\,L) / K_2] \times C_i$$

W =	312	293	19
		Veh	*Ped*

Warranted

RESET SHEET

APPENDIX D

Traffic Counts and Operational Analysis Results

Turning Movement Summary Diagram

Reference No.: 70000950

Intersection of:
642 & GRANDIN DR EJ, MORINVILLE

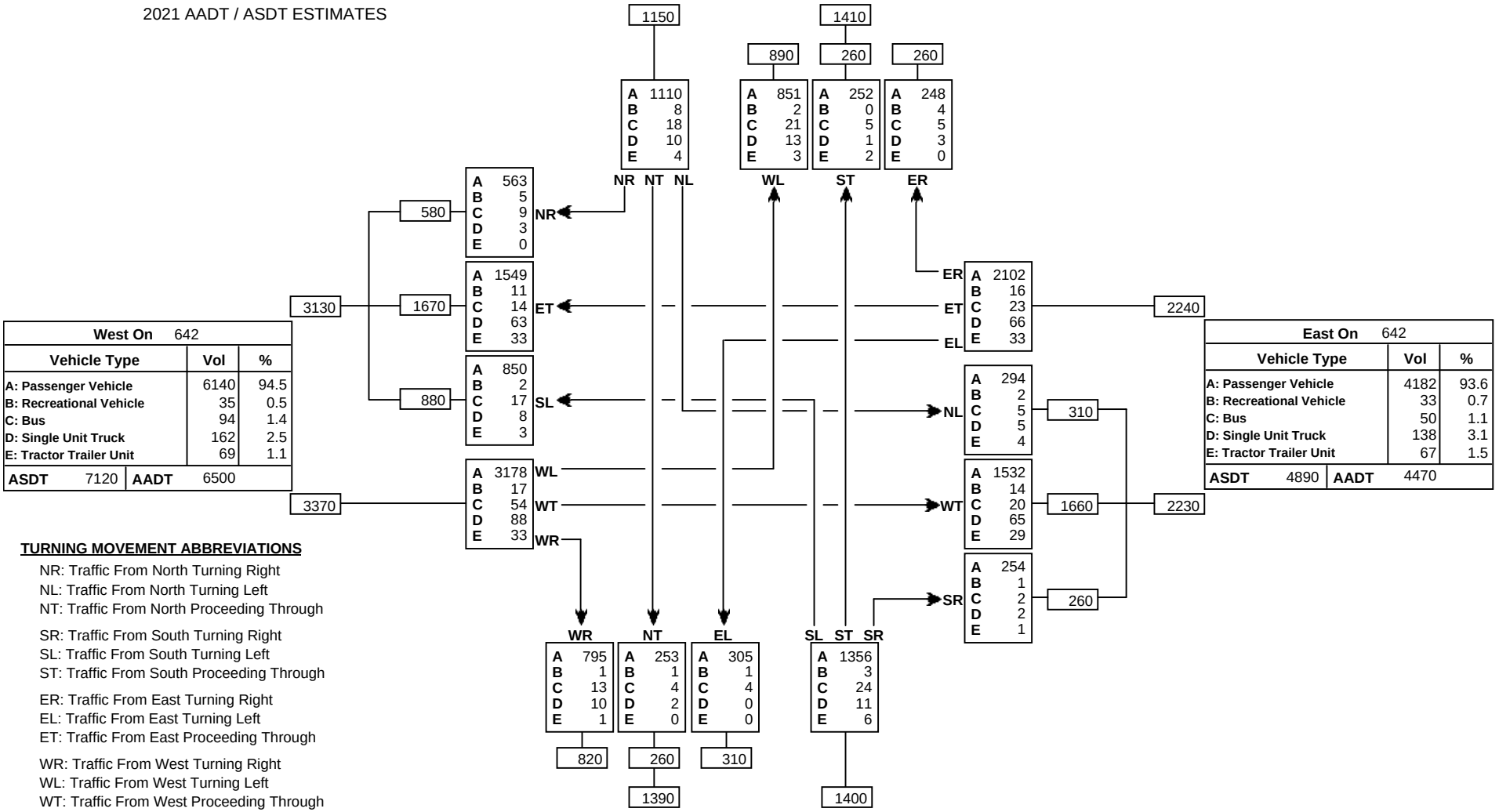
2021 AADT / ASDT ESTIMATES

North On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	2461	96.1
B: Recreational Vehicle	14	0.5
C: Bus	49	1.9
D: Single Unit Truck	27	1.1
E: Tractor Trailer Unit	9	0.4
ASDT 2800	**AADT** 2560	

West On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	6140	94.5
B: Recreational Vehicle	35	0.5
C: Bus	94	1.4
D: Single Unit Truck	162	2.5
E: Tractor Trailer Unit	69	1.1
ASDT 7120	**AADT** 6500	

East On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	4182	93.6
B: Recreational Vehicle	33	0.7
C: Bus	50	1.1
D: Single Unit Truck	138	3.1
E: Tractor Trailer Unit	67	1.5
ASDT 4890	**AADT** 4470	

South On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	2709	97.1
B: Recreational Vehicle	6	0.2
C: Bus	45	1.6
D: Single Unit Truck	23	0.8
E: Tractor Trailer Unit	7	0.3
ASDT 3050	**AADT** 2790	



TURNING MOVEMENT ABBREVIATIONS

NR: Traffic From North Turning Right
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

TURNING MOVEMENT ABBREVIATIONS

AADT: Annual Average Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of January 1 to December 31 (365 days)

ASDT: Average Summer Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of May 1 to September 30 (153 days)

Turning Movement Summary Diagram

Reference No.: 70000950

Intersection of:
642 & GRANDIN DR EJ, MORINVILLE

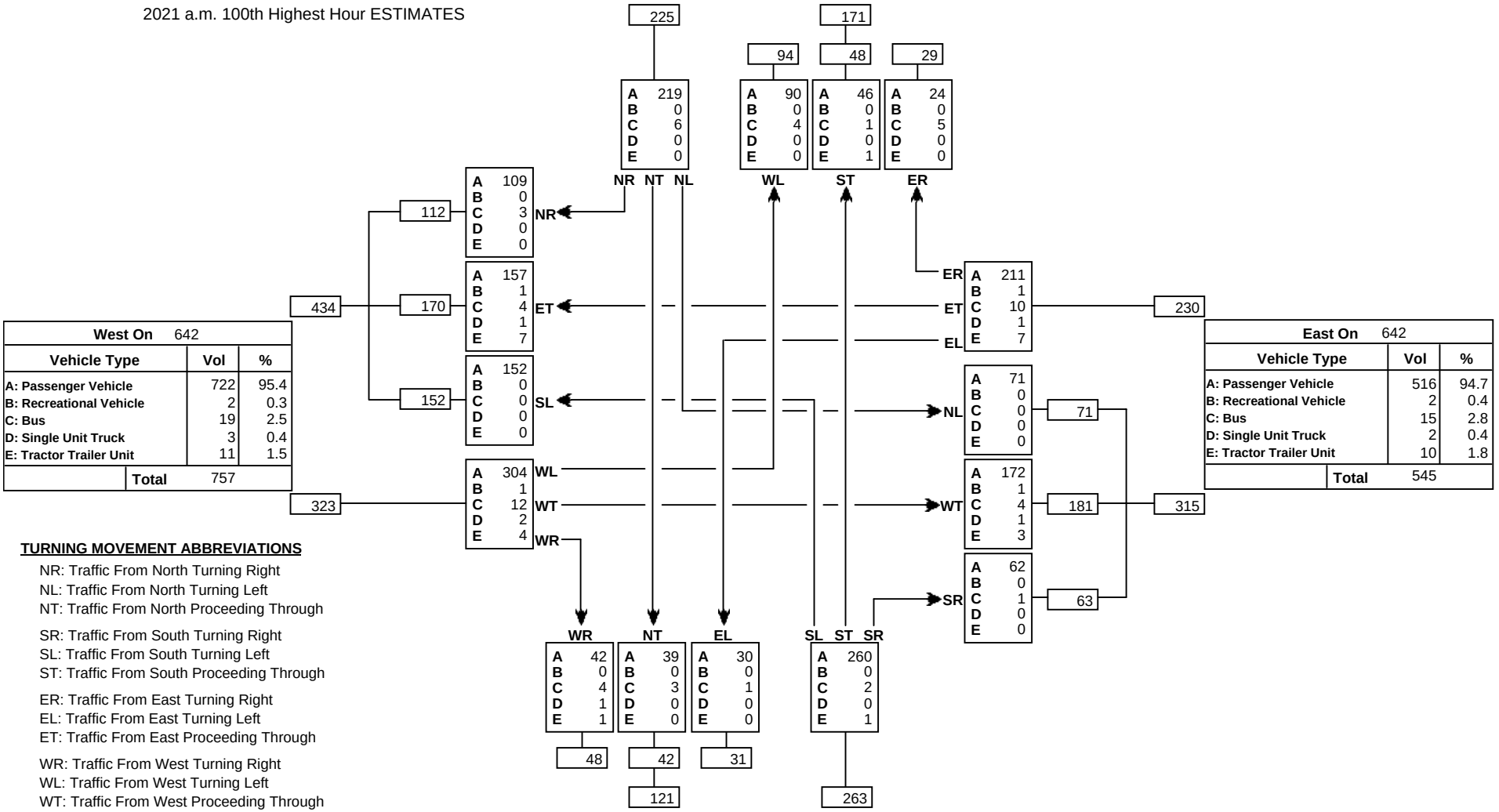
2021 a.m. 100th Highest Hour ESTIMATES

North On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	379	95.7
B: Recreational Vehicle	0	0.0
C: Bus	16	4.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	1	0.3
Total	396	

West On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	722	95.4
B: Recreational Vehicle	2	0.3
C: Bus	19	2.5
D: Single Unit Truck	3	0.4
E: Tractor Trailer Unit	11	1.5
Total	757	

East On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	516	94.7
B: Recreational Vehicle	2	0.4
C: Bus	15	2.8
D: Single Unit Truck	2	0.4
E: Tractor Trailer Unit	10	1.8
Total	545	

South On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	371	96.6
B: Recreational Vehicle	0	0.0
C: Bus	10	2.6
D: Single Unit Truck	1	0.3
E: Tractor Trailer Unit	2	0.5
Total	384	



TURNING MOVEMENT ABBREVIATIONS

NR: Traffic From North Turning Right
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

Turning Movement Summary Diagram

Reference No.: 70000950

Intersection of:
642 & GRANDIN DR EJ, MORINVILLE

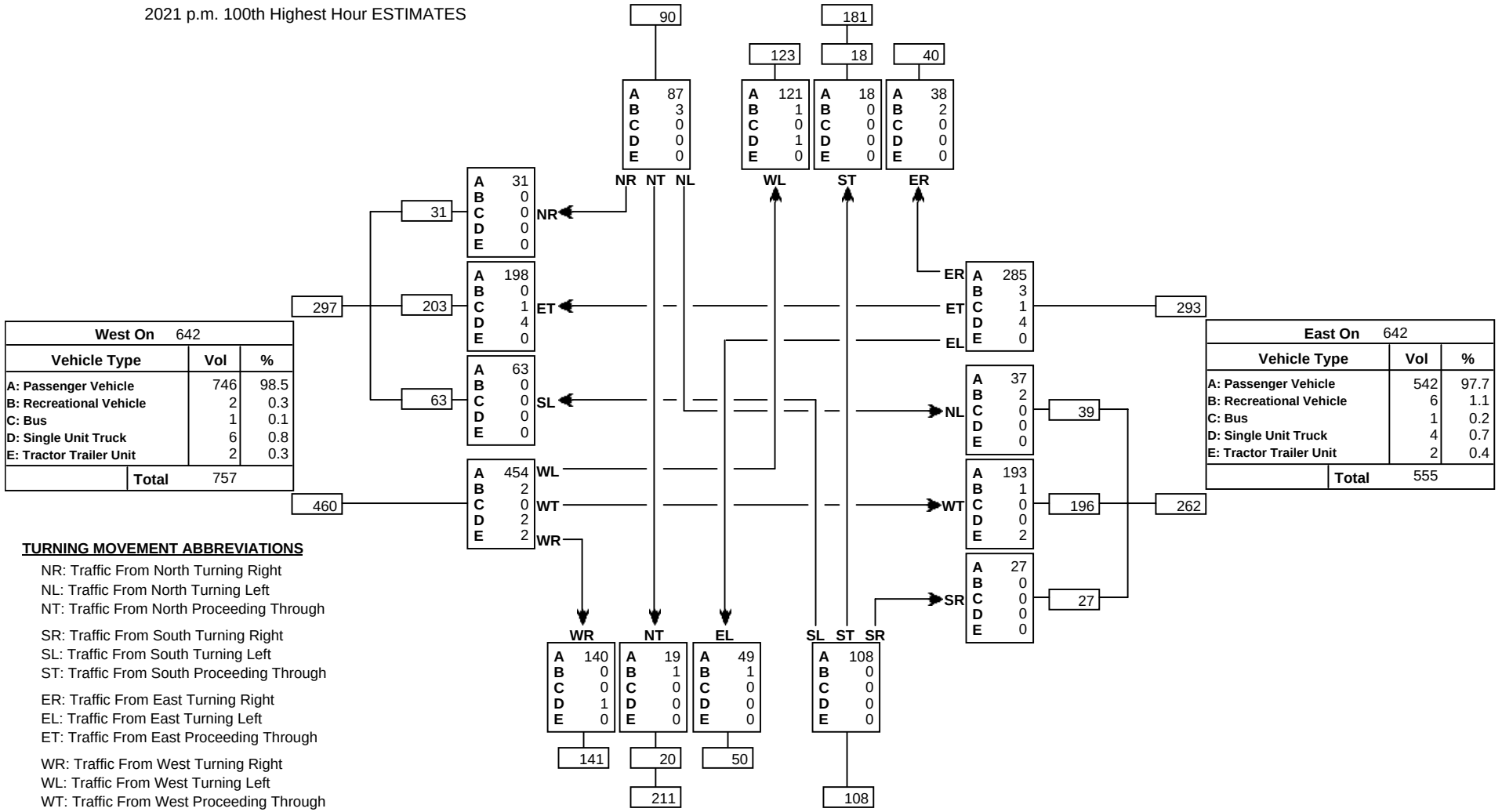
2021 p.m. 100th Highest Hour ESTIMATES

North On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	264	97.4
B: Recreational Vehicle	6	2.2
C: Bus	0	0.0
D: Single Unit Truck	1	0.4
E: Tractor Trailer Unit	0	0.0
Total	271	

West On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	746	98.5
B: Recreational Vehicle	2	0.3
C: Bus	1	0.1
D: Single Unit Truck	6	0.8
E: Tractor Trailer Unit	2	0.3
Total	757	

East On 642		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	542	97.7
B: Recreational Vehicle	6	1.1
C: Bus	1	0.2
D: Single Unit Truck	4	0.7
E: Tractor Trailer Unit	2	0.4
Total	555	

South On Grandin Dr		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	316	99.1
B: Recreational Vehicle	2	0.6
C: Bus	0	0.0
D: Single Unit Truck	1	0.3
E: Tractor Trailer Unit	0	0.0
Total	319	



TURNING MOVEMENT ABBREVIATIONS

NR: Traffic From North Turning Right
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

INTERSECTION SUMMARY

Site: 1 [AM Peak Grandin Drive, 100 Avenue (2042)]

New Site
Site Category: (None)
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	54.5	km/h	54.5	km/h
Travel Distance (Total)	1649.5	veh-km/h	1979.4	pers-km/h
Travel Time (Total)	30.3	veh-h/h	36.3	pers-h/h
Demand Flows (Total)	1573	veh/h	1887	pers/h
Percent Heavy Vehicles (Demand)	3.6	%		
Degree of Saturation	0.444			
Practical Spare Capacity	91.4	%		
Effective Intersection Capacity	3541	veh/h		
Control Delay (Total)	3.07	veh-h/h	3.69	pers-h/h
Control Delay (Average)	7.0	sec	7.0	sec
Control Delay (Worst Lane)	9.6	sec		
Control Delay (Worst Movement)	11.7	sec	11.7	sec
Geometric Delay (Average)	5.4	sec		
Stop-Line Delay (Average)	1.7	sec		
Idling Time (Average)	0.0	sec		
Intersection Level of Service (LOS)	LOS A			
95% Back of Queue - Vehicles (Worst Lane)	2.4	veh		
95% Back of Queue - Distance (Worst Lane)	16.9	m		
Queue Storage Ratio (Worst Lane)	0.01			
Total Effective Stops	973	veh/h	1168	pers/h
Effective Stop Rate	0.62		0.62	
Proportion Queued	0.49		0.49	
Performance Index	50.0		50.0	
Cost (Total)	917.11	$/h	917.11	$/h
Fuel Consumption (Total)	155.3	L/h		
Carbon Dioxide (Total)	368.4	kg/h		
Hydrocarbons (Total)	0.030	kg/h		
Carbon Monoxide (Total)	0.402	kg/h		
NOx (Total)	0.614	kg/h		

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Site Model Variability Index (Iterations 3 to N): 1.9 %
Number of Iterations: 5 (Maximum: 10)
Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 3.1% 1.8% 1.0%

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	754,863	veh/y	905,836	pers/y
Delay	1,476	veh-h/y	1,771	pers-h/y
Effective Stops	467,044	veh/y	560,453	pers/y
Travel Distance	791,778	veh-km/y	950,134	pers-km/y
Travel Time	14,535	veh-h/y	17,442	pers-h/y
Cost	440,214	$/y	440,214	$/y

Fuel Consumption	74,559	L/y
Carbon Dioxide	176,853	kg/y
Hydrocarbons	14	kg/y
Carbon Monoxide	193	kg/y
NOx	295	kg/y

INTERSECTION SUMMARY

Site: 1 [PM Peak Grandin Drive, 100 Avenue (2042)]

New Site
Site Category: (None)
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	54.5	km/h	54.5	km/h
Travel Distance (Total)	2244.0	veh-km/h	2692.8	pers-km/h
Travel Time (Total)	41.2	veh-h/h	49.4	pers-h/h
Demand Flows (Total)	2143	veh/h	2572	pers/h
Percent Heavy Vehicles (Demand)	4.3	%		
Degree of Saturation	0.385			
Practical Spare Capacity	121.0	%		
Effective Intersection Capacity	5573	veh/h		
Control Delay (Total)	4.06	veh-h/h	4.88	pers-h/h
Control Delay (Average)	6.8	sec	6.8	sec
Control Delay (Worst Lane)	10.3	sec		
Control Delay (Worst Movement)	12.2	sec	12.2	sec
Geometric Delay (Average)	5.0	sec		
Stop-Line Delay (Average)	1.8	sec		
Idling Time (Average)	0.1	sec		
Intersection Level of Service (LOS)	LOS A			
95% Back of Queue - Vehicles (Worst Lane)	2.2	veh		
95% Back of Queue - Distance (Worst Lane)	16.4	m		
Queue Storage Ratio (Worst Lane)	0.01			
Total Effective Stops	1319	veh/h	1582	pers/h
Effective Stop Rate	0.62		0.62	
Proportion Queued	0.52		0.52	
Performance Index	66.0		66.0	
Cost (Total)	1247.55	$/h	1247.55	$/h
Fuel Consumption (Total)	216.1	L/h		
Carbon Dioxide (Total)	513.3	kg/h		
Hydrocarbons (Total)	0.042	kg/h		
Carbon Monoxide (Total)	0.555	kg/h		
NOx (Total)	0.960	kg/h		

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Site Model Variability Index (Iterations 3 to N): 2.1 %
Number of Iterations: 6 (Maximum: 10)
Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 2.5% 1.3% 0.7%

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	1,028,716	veh/y	1,234,459	pers/y
Delay	1,951	veh-h/y	2,341	pers-h/y
Effective Stops	632,934	veh/y	759,520	pers/y
Travel Distance	1,077,132	veh-km/y	1,292,559	pers-km/y
Travel Time	19,771	veh-h/y	23,725	pers-h/y
Cost	598,821	$/y	598,821	$/y

Fuel Consumption	103,729	L/y
Carbon Dioxide	246,402	kg/y
Hydrocarbons	20	kg/y
Carbon Monoxide	266	kg/y
NOx	461	kg/y

```
  2             169     172    100.0%
  Total         169     172
----------------------------------------
  The SIDRA Standard roundabout capacity model option is in use.
  This model takes into account the total circulating flow as well as the effect
  of flow distribution in circulating lanes on the entry capacity results.


APPROACH LANE FLOW RATES

----------------------------------------
  Lane        Approach Flows (veh/h)
  No.         Out  To Downst  Total
----------------------------------------
  South: Grandin Drive
  1            58      379      437
  Total        58      379      437
----------------------------------------
  East: 100 Ave
  1             0      161      161
  2            43      140      183
  Total        43      301      344
----------------------------------------
  North: Grandin Drive
  1           146      131      277
  Total       146      131      277
----------------------------------------
  West: 100 Ave
  1             0      246      246
  2           147      122      269
  Total       147      368      515
----------------------------------------
```

Go to Table Links (Top)

Roundabout Pedestrian Effects
Site: AM Peak Grandin Drive, 100 Avenue (2042)

```
Site ID: 1
Roundabout


ROUNDABOUT ENTRY
```

Lane	Turn	Pedestrian Flow Rate ped/h	Adj.Flow Rate ped/h	Opposing Ped.Factor	Circulating Flow Rate veh/h	Circulating Flow Rate pcu/h	Adjustment Factor
South: Grandin Drive							
1	L2	9	9	1.00	414	423	0.999
1	T1	9	9	1.00	414	423	0.999
1	R2	9	9	1.00	414	423	0.999
East: 100 Ave							
1	L2	32	32	1.00	488	495	0.980
1	T1	32	32	1.00	488	495	0.980
2	T1	32	32	1.00	488	495	0.980
2	R2	32	32	1.00	488	495	0.980
North: Grandin Drive							
1	L2	5	5	1.00	606	617	0.999
1	T1	5	5	1.00	606	617	0.999
1	R2	5	5	1.00	606	617	0.999
West: 100 Ave							
1	L2	12	12	1.00	169	172	0.989
1	T1	12	12	1.00	169	172	0.989
2	T1	12	12	1.00	169	172	0.989
2	R2	12	12	1.00	169	172	0.989

ROUNDABOUT EXIT

Pedestrian Flow Rate ped/h	Adj.Flow Rate ped/h	Opposing Ped.Factor	Conflict Zone Length m	Critical Gap sec	Follow-up Headway sec	Exit Lane Capacity veh/h	Exit Flow Total veh/h	Exit Flow Average veh/h/lane
South: Grandin Drive								
9	9	1.00	5.00	3.85	2.31	1549	271	271
East: 100 Ave								
32	32	1.00	9.00	6.92	4.15	830	362	181
North: Grandin Drive								
5	5	1.00	5.00	3.85	2.31	1554	226	226
West: 100 Ave								
12	12	1.00	9.00	6.92	4.15	853	714	357

Go to Table Links (Top)

Movements

Intersection Negotiation and Travel Data
Site: AM Peak Grandin Drive, 100 Avenue (2042)

```
  2             195     198    100.0%
  Total         195     198
---------------------------------------
  The SIDRA Standard roundabout capacity model option is in use.
  This model takes into account the total circulating flow as well as the effect
  of flow distribution in circulating lanes on the entry capacity results.


APPROACH LANE FLOW RATES

---------------------------------------
  Lane        Approach Flows (veh/h)
  No.         Out  To Downst  Total
---------------------------------------
  South: Grandin Dr
  1            45      261      306
  Total        45      261      306
---------------------------------------
  East: 100 Ave
  1             0      306      306
  2            82      267      349
  Total        82      573      655
---------------------------------------
  North: Grandin Dr
  1           121       93      214
  Total       121       93      214
---------------------------------------
  West: 100 Ave
  1             0      458      458
  2           302      208      510
  Total       302      666      968
---------------------------------------
```

Go to Table Links (Top)

Roundabout Pedestrian Effects
Site: PM Peak Grandin Drive, 100 Avenue (2042)

```
Site ID: 1
Roundabout


ROUNDABOUT ENTRY
-------------------------------------------------------------------------------------
Lane  Turn        Pedestrian           Opposing   Circulating  Circulating  Adjustment
             Flow Rate  Adj.Flow Rate  Ped.Factor   Flow Rate    Flow Rate     Factor
               ped/h        ped/h                    veh/h        pcu/h
-------------------------------------------------------------------------------------
South: Grandin Dr
   1   L2          1            1         1.00          704          721        1.000
   1   T1          1            1         1.00          704          721        1.000
   1   R2          1            1         1.00          704          721        1.000
-------------------------------------------------------------------------------------
East: 100 Ave
   1   L2          5            5         1.00          467          475        0.996
   1   T1          5            5         1.00          467          475        0.996
   2   T1          5            5         1.00          467          475        0.996
   2   R2          5            5         1.00          467          475        0.996
-------------------------------------------------------------------------------------
West: 100 Ave
   1   L2         12           12         1.00          195          198        0.989
   1   T1         12           12         1.00          195          198        0.989
   2   T1         12           12         1.00          195          198        0.989
   2   R2         12           12         1.00          195          198        0.989
-------------------------------------------------------------------------------------


ROUNDABOUT EXIT
-------------------------------------------------------------------------------------------------------
      Pedestrian           Opposing    Conflict    Critical  Follow-up  Exit Lane     Exit Flow
Flow Rate  Adj.Flow Rate  Ped.Factor  Zone Length    Gap      Headway   Capacity   Total   Average
  ped/h        ped/h                     m          sec       sec      veh/h     veh/h   veh/h/lane
-------------------------------------------------------------------------------------------------------
South: Grandin Dr
      1            1         1.00        5.00        3.85       2.31      1559      459      459
-------------------------------------------------------------------------------------------------------
East: 100 Ave
      5            5         1.00        9.00        6.92       4.15       861      543      272
-------------------------------------------------------------------------------------------------------
West: 100 Ave
     12           12         1.00        9.00        6.92       4.15       853      796      398
-------------------------------------------------------------------------------------------------------
```

North Leg not included as Pedestrian count estimated at zero (0).

Go to Table Links (Top)

Movements

Intersection Negotiation and Travel Data
Site: PM Peak Grandin Drive, 100 Avenue (2042)

```
Site ID: 1
Roundabout


TRAVEL SPEED, TRAVEL DISTANCE AND TRAVEL TIME

-----------------------------------------------------------------------------------------
```

Lanes, Volumes, Timings
3:

11-25-2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	245	140	37	249	41	290	70	55	44	80	139
Future Volume (vph)	104	245	140	37	249	41	290	70	55	44	80	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.979			0.934			0.905	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3249	0	1719	3366	0	1770	1740	0	1770	1686	0
Flt Permitted	0.560			0.507			0.611			0.670		
Satd. Flow (perm)	1013	3249	0	917	3366	0	1138	1740	0	1248	1686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		152			37			60			151	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		133.9			89.8			113.4			85.6	
Travel Time (s)		9.6			6.5			8.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	113	266	152	40	271	45	315	76	60	48	87	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	418	0	40	316	0	315	136	0	48	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

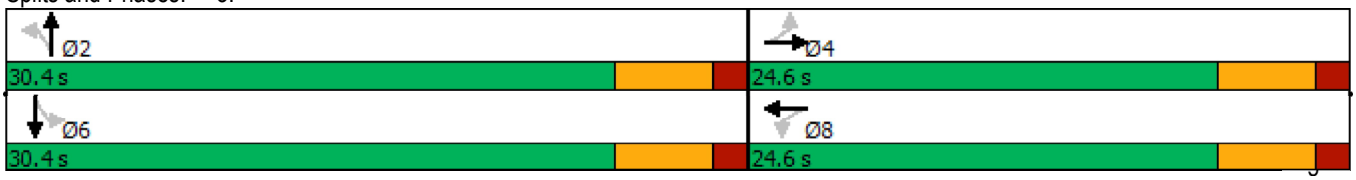
Lanes, Volumes, Timings
3: 11-25-2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5		27.5	27.5		27.5	27.5	
Total Split (s)	24.6	24.6		24.6	24.6		30.4	30.4		30.4	30.4	
Total Split (%)	44.7%	44.7%		44.7%	44.7%		55.3%	55.3%		55.3%	55.3%	
Maximum Green (s)	19.1	19.1		19.1	19.1		24.9	24.9		24.9	24.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	15.5	15.5		15.5	15.5		24.9	24.9		24.9	24.9	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.48	0.48		0.48	0.48	
v/c Ratio	0.37	0.39		0.14	0.30		0.57	0.16		0.08	0.27	
Control Delay	18.4	10.0		14.6	13.0		14.8	5.3		7.8	4.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.4	10.0		14.6	13.0		14.8	5.3		7.8	4.2	
LOS	B	A		B	B		B	A		A	A	
Approach Delay		11.8			13.2			11.9			4.8	
Approach LOS		B			B			B			A	
Stops (vph)	79	178		30	183		203	40		26	52	
Fuel Used(l)	5	12		1	9		11	3		1	4	
CO Emissions (g/hr)	85	220		26	177		204	51		22	68	
NOx Emissions (g/hr)	16	43		5	34		39	10		4	13	
VOC Emissions (g/hr)	20	51		6	41		47	12		5	16	
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
Cycle Length: 55
Actuated Cycle Length: 51.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3:



Lanes, Volumes, Timings
3:

11-25-2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	437	287	97	447	78	194	54	43	36	52	115
Future Volume (vph)	196	437	287	97	447	78	194	54	43	36	52	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.978			0.933			0.897	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3235	0	1719	3362	0	1770	1738	0	1770	1671	0
Flt Permitted	0.257			0.354			0.643			0.689		
Satd. Flow (perm)	465	3235	0	641	3362	0	1198	1738	0	1283	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		312			31			47			125	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		133.9			89.8			113.4			85.6	
Travel Time (s)		9.6			6.5			8.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	213	475	312	105	486	85	211	59	47	39	57	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	787	0	105	571	0	211	106	0	39	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	

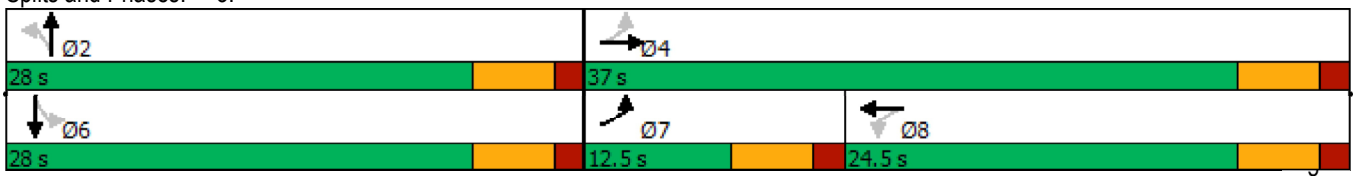
Lanes, Volumes, Timings
3: 11-25-2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	24.5		24.5	24.5		27.5	27.5		27.5	27.5	
Total Split (s)	12.5	37.0		24.5	24.5		28.0	28.0		28.0	28.0	
Total Split (%)	19.2%	56.9%		37.7%	37.7%		43.1%	43.1%		43.1%	43.1%	
Maximum Green (s)	7.0	31.5		19.0	19.0		22.5	22.5		22.5	22.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0		12.0	12.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	29.4	29.4		16.8	16.8		22.5	22.5		22.5	22.5	
Actuated g/C Ratio	0.47	0.47		0.27	0.27		0.36	0.36		0.36	0.36	
v/c Ratio	0.60	0.47		0.61	0.62		0.49	0.16		0.08	0.27	
Control Delay	17.9	7.5		37.8	22.3		21.1	9.8		14.8	6.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.9	7.5		37.8	22.3		21.1	9.8		14.8	6.9	
LOS	B	A		D	C		C	A		B	A	
Approach Delay		9.7			24.7			17.3			8.3	
Approach LOS		A			C			B			A	
Stops (vph)	111	272		82	413		148	40		26	45	
Fuel Used(l)	8	19		5	23		9	3		1	3	
CO Emissions (g/hr)	143	363		102	423		159	50		24	61	
NOx Emissions (g/hr)	28	70		20	82		31	10		5	12	
VOC Emissions (g/hr)	33	84		24	98		37	12		6	14	
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 62.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 15.2 Intersection LOS: B
Intersection Capacity Utilization 72.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3:



APPENDIX E
What We Heard Report

What We Heard Report

Town of Morinville Intersection Planning Study – Public Engagement

Fall 2022

Project Overview:

The Town of Morinville is studying the intersections of Grandin Drive/100 Avenue and Cardiff Road/100 Street to determine future improvement options to better accommodate increased traffic flow and improve overall service and safety. These intersections are operating at high traffic volumes which is causing traffic backups and safety concerns for pedestrians.

Technical analysis has proposed a roundabout or traffic signals for each intersection. These options were presented to the public through an open house on October 26, 2022, and through an online survey for feedback.

Feedback received at the open house and from the online survey will be used to help inform what the recommendations will be for each intersection.

This report summarizes the input received from residents in the Fall of 2022 on intersection improvement options and methods used.

Project Area and Improvement Option Details:

Grandin Drive and 100 Avenue

- Currently a 4-way intersection with large, flashing stop signs.
- 100 Avenue is also Highway 642, a provincial highway.
- It is located near two schools and has increased pedestrian and vehicle traffic before and after school.
- There are morning traffic delays for drivers turning left onto 100 Avenue from Grandin Drive.
- The two improvement options developed for this intersection are a set of traffic signals, or a dual lane roundabout.

Cardiff Road and 100 Street

- Currently a 3-way stop with stop signs.
- It is a main entrance into the Town of Morinville from the south.
- Many residents who work in Edmonton or St. Albert use this intersection. High levels of traffic during the afternoon created congestion on the eastbound lanes of Cardiff Road.
- The two improvement options developed for this intersection are a set of traffic signal lights, or a single lane roundabout. A dual lane roundabout may be needed in future as traffic volumes grow.

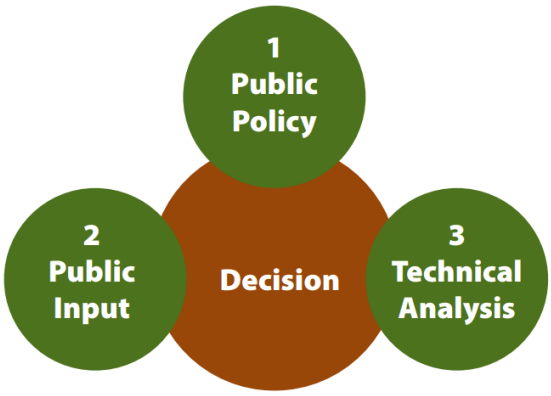
How Decisions Are Made:

Decision making is based on three components:

Public Policy – How Town and Provincial initiatives and requirements are implemented.

Public Input – Local knowledge and feedback of community stakeholders.

Technical Analysis – What infrastructure can best meet the area needs, where it can fit, and what impacts it will have to the immediate and surrounding area.



Key considerations by the Town:

Category	Description
1 - Public Policy	• Supports Town of Morinville goals and policies. • Aligns with Alberta Transportation Policy.
2 - Public Input	• Public input received at the open house.
3 - Technical Analysis	• Capital costs for construction. • Cost for land acquisition. • Cost to road users. • Collision reduction. • Safety improvements for pedestrians and cyclists. • Ease of use (driver familiarity). • Change to traffic noise and emissions. • Ability to service future community growth. • Impacts to traffic flow.

Role of the Public:

For this project, the public were consulted to share their perspectives and feedback on the options for the two intersections, and what they value most for improvements proposed in each option. Their input will be considered by decision makers on the project.

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decision.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.

Source: International Association for Public Participation (IAP2), Participation Spectrum

How We Engaged:

A single-phase engagement process was designed to gather public and stakeholder input to inform decision making for the intersections of Grandin Drive/100 Avenue and Cardiff Road/100 Street. This was undertaken during the Fall of 2022 using an in-person open house and online survey.

The Public Survey:

A survey was primarily used to gather feedback on a roundabout option and traffic signal option for each intersection. Participants could rate their level of support for each option and provide an explanation. It also gave participants the opportunity to share any other information they felt needed to be taken into consideration by decision makers when selecting the final improvement options.

The survey was administered online, with paper surveys available for use at the open house for those who preferred them. The survey was open between October 26 and November 9, 2022. More than 640 participants completed the survey.

Open House:

One open house was hosted at the Morinville Cultural Centre on October 26, 2022 from 6:30 p.m. to 8:30 p.m. 61 participants attended. The project team shared draft option designs through display boards and answered participant questions. Many town counselors also attended to speak with residents on their concerns and preferences for the intersections.

How We Spread the Word:

The open house and online survey were promoted through the Town's Facebook account, billboards, local newspapers, and the Town website. At the open house, business cards with the QR code link to the online survey were distributed. The QR code link was also available on the display boards. The code could be scanned with a smart phone camera, which would take the participant to the survey link online.

Most participants on the online survey heard about the opportunities to engage through social media.

What We Heard:

Who Completed The Survey:

We asked how the participants were related to the two intersections. Participants could select more than one option.

- 423 were vehicle commuters that use the intersection of Cardiff Road and 100 Street.
- 417 were vehicle commuters that use the intersection of Grandin Drive and 100 Avenue.
- 274 were residents near Grandin Drive and 100 Avenue.
- 165 were residents near Cardiff Road and 100 Street.
- 25 were employees at a business near Cardiff Road and 100 Street.
- 22 were employees at a business near Grandin Drive and 100 Avenue.
- 19 described themselves as "other".
    - Of this group, most were parents of children who walk through the intersection of Grandin Drive and 100 Avenue (8).

  - Others were adult pedestrians (2), school bus operators (2), and a former resident (1). The remaining 6 did not describe themselves further.
- 12 were a business owner and/or operator near Cardiff Road and 100 Street.
- 6 were a business owner and/or operator near Grandin Drive and 100 Avenue.

What We Heard: Overall

Participants were the most concerned with the intersection of Grandin Drive and 100 Avenue. This largely had to do with concerns about pedestrian safety, especially that of children who walk through the intersection to nearby schools. At the open house, the Project Team felt that many attendees were most supportive of traffic signals at that intersection. Attendees felt bringing vehicles to a full stop with clear signals of whose turn it was to proceed would be safest.

By contrast, attendees felt a roundabout at the intersection of Cardiff Road and 100 Street would be most suitable because there were few to no pedestrians and it kept traffic flowing.

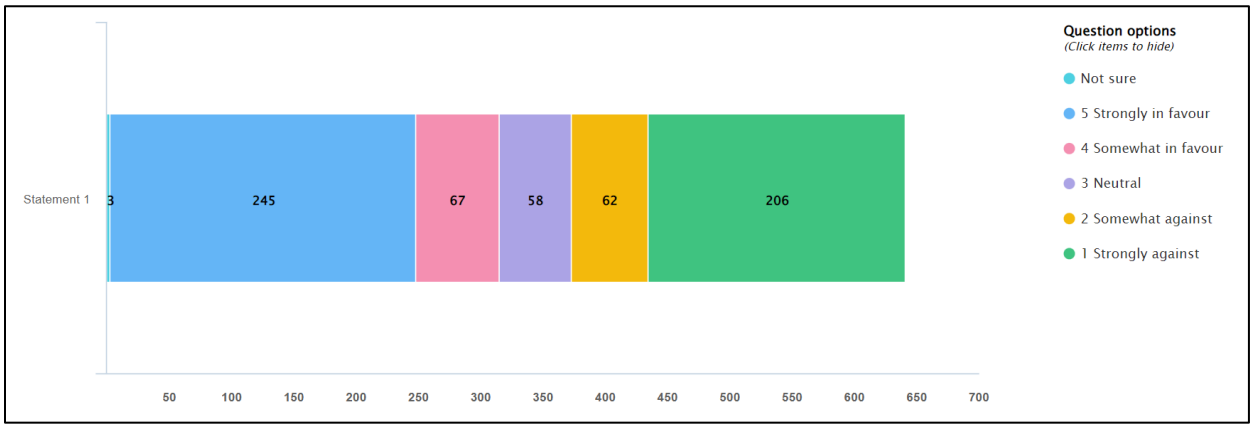
This feedback received at the open house aligns with the online survey results.

What We Heard: Detailed

Residents were asked to rate improvement options on a scale from 1-5, 1 meaning “I am strongly against this option” and 5 meaning “I am strongly in favour of this option”.

Question: What is your level of support for the roundabout option for the Cardiff Road and 100 Street intersection.

Figure 1, Results: Support for a roundabout at Cardiff Road and 100 Street; Likert scale.



Question: What is your reasoning for your choice?

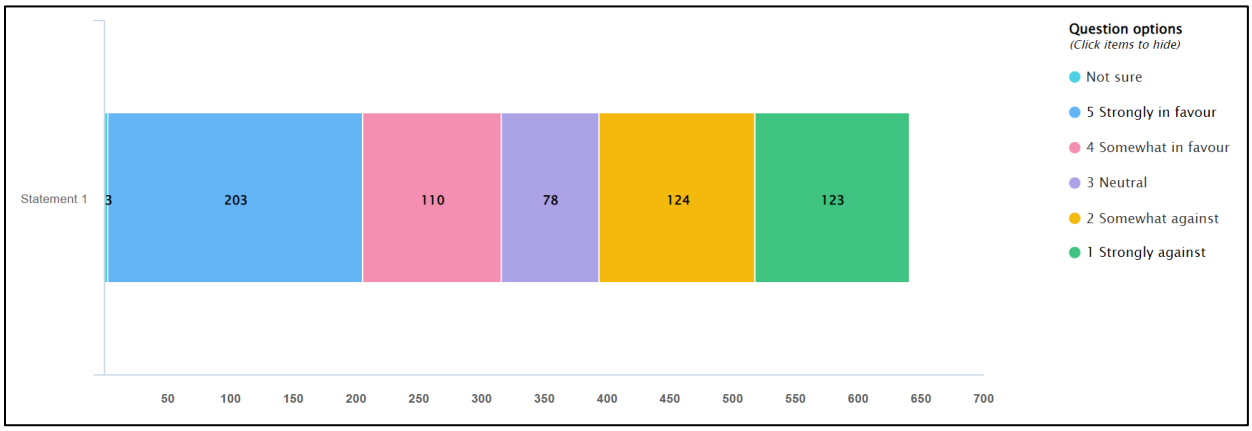
Top Themes We Heard (in descending volume):

- Support for a roundabout because it would keep traffic moving and ease congestion.
- Against a roundabout because of concerns with drivers understanding how to use them properly.
- Support for roundabout generally.
- Improvements are not needed for this intersection and/or should not be a Town priority.

- Against roundabout because they are felt to be dangerous for cars and large trucks.
- Against roundabout generally.
- Against roundabout because of cost concerns.
- Support for traffic signals generally.

Question: What is your level of support for the traffic signal option for the Cardiff Road and 100 Street intersection?

Figure 2, Results: Support for traffic signals at Cardiff Road and 100 Street; Likert scale



Question: What is your reasoning for your choice?

Top Themes We Heard (in descending volume):

- Against traffic signals because of concerns they would increase congestion.
- Support for traffic signals because they are felt to reduce congestion.
- Improvements are not needed for this intersection and/or should not be a Town priority.
- Support for roundabout generally.
- Support for traffic signals because they are easy to use and understand.
- Support for traffic signals because they are felt to improve safety generally.
- Support for traffic signals generally.
- Concern about drivers currently running stops.

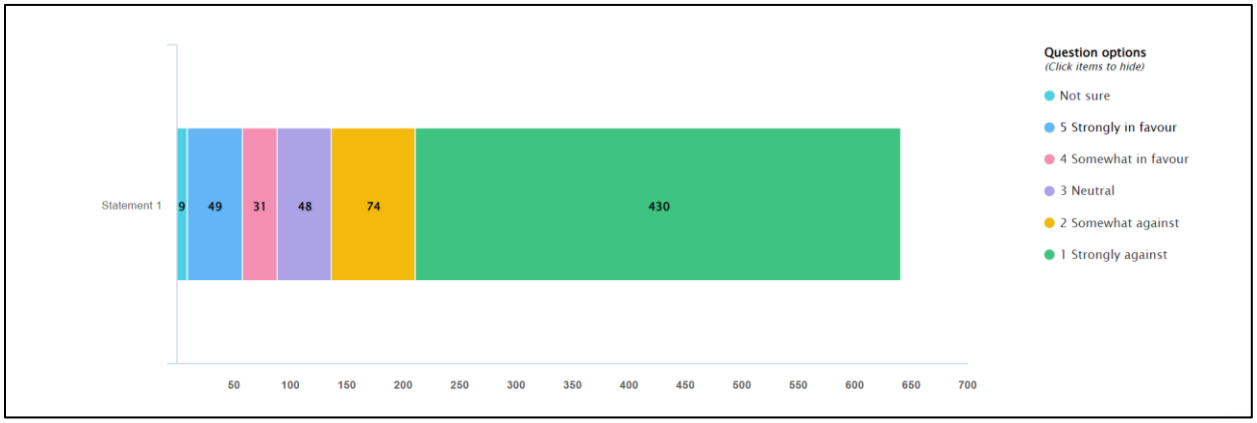
Question: Is there anything else you would like to suggest prior to a recommendation being made for the Cardiff Road and 100 Street intersection?

Top Themes We Heard (in descending volume):

- Request for road widening to allow for a turning lane and a straight through lane.
- Request for an overpass.

Question: What is your level of support for the roundabout option for the Grandin Drive and 100 Avenue intersection?

Figure 3, Results: Support for a roundabout at Grandin Drive and 100 Avenue; Likert scale



Question: What is your reasoning for your choice?

Top Themes We Heard (in descending volume):

- Against roundabout because they are felt to be dangerous for pedestrians.
- Against roundabout generally.
- Against a roundabout because of concerns with drivers understanding how to use them properly.
- Support for traffic signals generally.
- Support for roundabout because they are felt to keep traffic moving and ease congestion.
- Support for roundabout generally.
- Against roundabout for general safety reasons.

Question: Is there anything else you would like to suggest prior to a recommendation being made for the Grandin Drive and 100 Avenue intersection?

Top Themes We Heard (in descending volume):

- Support for traffic signals generally.
- Concerns about children's safety.

Question: What is your level of support for the traffic signal option for the Grandin Drive and 100 Avenue intersection?

Top Themes We Heard (in descending volume):

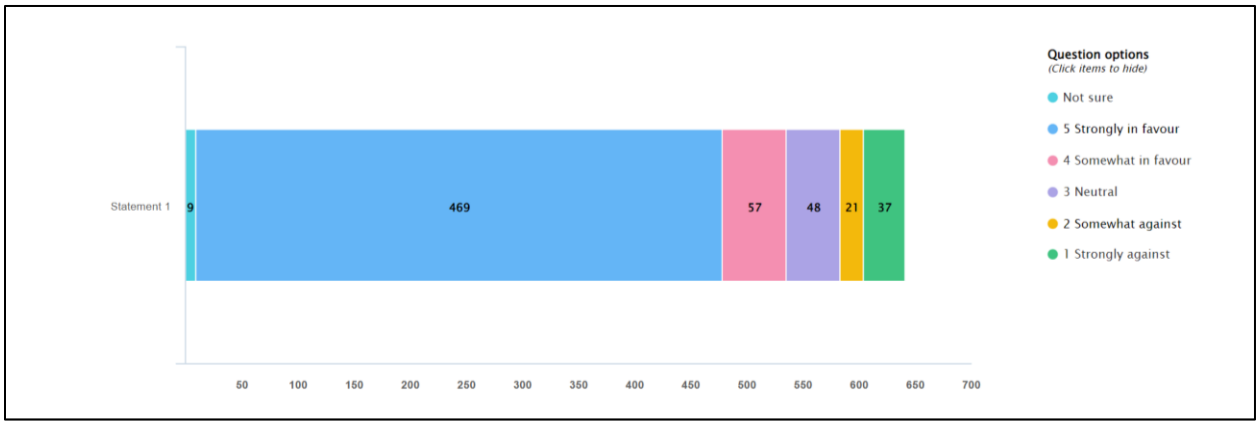
- Support for traffic signals generally.
- Support for traffic signals because they are felt to be good for pedestrian safety.
- Support for traffic signals because they are felt to be best for children's safety.
- Support for traffic signals because they are felt to be good for safety generally.
- Support for traffic signals because they are felt to ease congestion and keep traffic flowing.

- Support for traffic signals because they are felt to provide clear direction on whose turn it is to go and when.
- Support for traffic signals because they are felt to be good for car safety.
- Support for traffic signals, but concerns they could increase congestion.

Significant comment*: 1 respondent said they supported traffic signals because they are most beneficial for those with limited mobility or other disabilities. Those users may be prevented from using a 4 way cross walk with stop signs or a roundabout crossing safely.

**Significant as it represents a considerable access issue for users with limited mobility or use mobility aides.*

Figure 4, Results: Support for traffic signals at Grandin Drive and 100 Avenue; Likert scale



Question: Do you have anything else to share that you feel should be taken into consideration for any aspect of the study?

Top Themes We Heard (in descending volume):

- Concerns about children's safety.
- Mentions of other intersections of concern outside of study scope.

Next Steps:

Community feedback will be considered alongside public policy, cost, safety factors, and technical analysis done by the project team to propose the most suitable option for each intersection. See How Decisions are made on page 2 for more information.

The project team will present the recommended options for each intersection to Alberta Transportation in Fall/Winter 2022 for feedback and a collective decision will be made by the Town and Province. A final recommendation will then be made to Town Council.

Information about the recommendations and construction will be available through EngageMorinville.ca as the project details are determined.

Construction timelines will be developed when funding availability is confirmed and will align with the Town capital budget planning cycle.

Our Community Our Passion
Town of Legal
Ville de

December 20, 2022

The Honourable Jason Copping
Minister of Health
423 Legislature Building
10800 - 97 Avenue
Edmonton, AB TSK 286

Re: Morinville X-Ray Machine

Dear Minister Copping,

With Morinville's close proximity to the Town of Legal, we would like to echo that the Morinville Clinic is a valuable asset to our community as it provides a wide range of routine and specialized lab testing and clinical consultations, not only for the Town of Morinville, but also for those small rural communities, such as the Town of Legal, whose residents rely on these types of services being offered at nearby facilities.

We understand the Morinville Clinic has been without a functioning x-ray machine since February 2020. For some of our residents, travel can sometimes be difficult to coordinate or arrange, and the fact that accessible general X-ray services in St. Albert, (which is 37 kilometres and a half-hour drive away) or in several other locations which are up to an hour away, including in Edmonton, Redwater, Fort Saskatchewan, Stony Plain, Westlock, and Barrhead, time and distance is not feasible or adequate for those requiring urgent care. Legal's proximity to Morinville is far easier for our residents to navigate to for these services.

Of Legal's population of 1,232, 15% of the population consists of those being 65 years of age or older. Our supportive living facility (Chateau Sturgeon) and seniors subsidized apartments (Sunset and Sunrise Villas) house several of our senior residents, and many of those do not have the means to commute for x-ray services.

Town of Legal Council supports fair and reasonable access to quality healthcare for our residents and those in surrounding communities.

Sincerely,

Trina Jones
Mayor
Town of Legal