CANADA'S MOST NOTORIOUS CITY
MOOSE JAW
SASKATCHEWAN

CITY OF MOOSE JAW

2024 Transportation Master Plan

Acknowledgements

To all the Moose Jaw residents, community business owners, and organizations who enthusiastically participated in the stakeholder consultation sessions and provided comments through online surveys throughout the Plan's development, thank you for all your input.

We would also like to thank the City of Moose Jaw staff for their active participation and contribution to the plan.

2024 Transportation Master Plan
Consulting Team

KGS
GROUP

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Statement of Limitations and Conditions

LIMITATIONS

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INTRODUCTION

1.0 INTRODUCTION

1.1 What is a Transportation Master Plan?

The Transportation Master Plan (TMP) will establish a comprehensive plan for future transportation investments in Moose Jaw. The TMP will address travel by all modes, including pedestrians, cyclists, transit, passenger car and commercial trucks and will focus on transportation safety, operations, and system capacity.

The TMP is a living document that is intended to be updated over time to reflect the changing needs of the community. Two previous transportation plans were adopted by the City of Moose. The first was issued in 1987, and a second followed in 2012. This TMP is an update to reflect current transportation objects of the City, as well as introduces a multimodal approach to transportation planning, with policies and recommendations for walking, cycling, transit, and driving.

1.2 Why the Transportation Master Plan Matters

Transportation is the lifeblood of a city, connecting people to jobs, schools, healthcare, and recreational opportunities. The TMP recommendations will help to:

- Improve Mobility: Develop strategies to reduce congestion and improve the flow of traffic.
- Reflect Trends: Acknowledge people's mode choices, travel habits and patterns change.
- Enhance Safety: Focus on safety improvements for pedestrians, cyclists, and motorists.
- Promote Sustainability: Identify opportunities to reduce emissions and make transportation more eco-friendly.
- Increase Accessibility: Ensure that transportation options are accessible and inclusive for all community members.
- Support Economic Growth: Enhance transportation to foster economic development and access to work.
- Quality of Life: Promote a high quality of life through efficient, reliable, and sustainable transportation options.

1.3 Public and Stakeholder Input

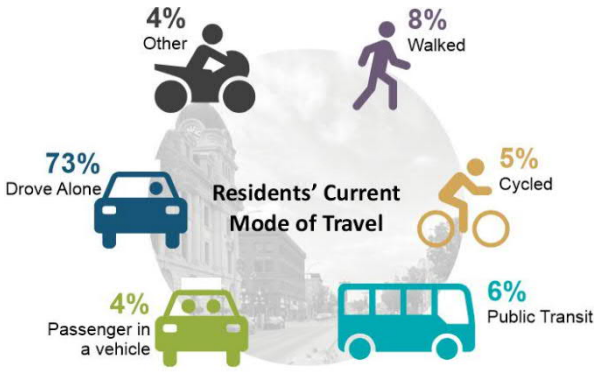
Stakeholder engagement and public consultation is integral to any planning activity. Engagement and consultation activities included:

- Hosting of stakeholder meetings on August 2, 2023. Over 40 organizations were invited to attend this meeting to provide ideas for improving the transportation network for pedestrians, cyclists, transit users and car users.
- Two online surveys to solicit public views on transportation.
  - The first survey was held between July 31, 2023, and August 14, 2023, to gain a perspective from the public on the current and future needs of the transportation network. The survey had a strong participation rate with 502 individuals providing feedback and another 806 individuals viewing the available materials.
  - The second survey explores active transportation solutions (specifically transit, cycling, and micro-mobility). The second survey was held between October 23, 2023, and November 15, 2023. It had participation from 283 individuals and another 658 people viewing the available materials.
- Updates of the TMP were also presented to Moose Jaw City Council and City staff on September 18, 2023.
- One public open house in November 2023 to present vision for the TMP and receive public feedback.

What We Heard

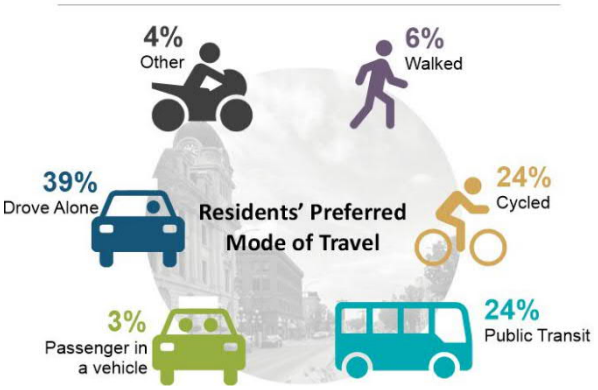
Through the consultation activities, several broad themes emerged. In general, residents and stakeholders wanted the City of Moose Jaw to:

- Improve road conditions with more frequent maintenance and snow removal.
- Improve road network operations through changes to signal timing and signal coordination.
- Improve pedestrian facilities by filling in gaps in the network and providing accessibility ramps at intersections.
- Provide safe and connected cycling facilities.
- Improve transit by extending service and increasing frequency of service.



The stakeholder and public engagement identified there is strong demand for cycling and transit in Moose Jaw.

Almost half of all respondents indicated they would prefer to travel by bicycle or transit if network improvements were implemented. This indicates an extremely high latent demand for travel by active modes exists in Moose Jaw.



1.4 Project Process

The Transportation Master Plan was developed from Spring 2023 to Spring 2024 and included various phases to its development.

1.5 Guiding Principles

The Guiding principles reflect the City of Moose Jaw's values and helps sets the direction for City council and staff to achieve the quality-of-life residents want both now and in the future. Future transportation initiatives should support one or more of the following principles.

The feedback from consultation and engagement through the TMP confirmed agreement with the principles and approval of a focus on people (not just drivers) living and travelling safely in a sustainable, complete community.

1.6 What's Inside

The TMP was designed as a series of smaller discrete projects, conducted independently but with the goal of forming one overall plan for transportation. For example, defining safe routes to school is a considerably different activity than assessing the condition of roadways. However, both activities impact the City's capital planning and transportation priorities.

TABLE 1-1: TMP ACTIVITIES

Major Tasks		
City-Wide Road Network Assessment	Roadway Classification Review	Designs of Intersections and Parking
Truck / Dangerous Goods Routes Assessments	Traffic Forecasting	Road Condition Assessment
Transit System Assessment	Intersection Traffic Operations	Sidewalk Renewal Prioritization
Thatcher Corridor Operations Review	Traffic Signal Equipment Review	Major Intersections Conditions Assessment
Railway Crossing Compliance	Safe Routes to School Assessment	Staging and Capital Planning
Traffic Data Collection	Bikes and Pedestrians / Accessibility	Stakeholder and Public Engagement

TRANSPORTATION NETWORK

2.0 TRANSPORTATION NETWORK

Future growth and increasing demands to efficiently move people and goods within and through Moose Jaw will intensify the needs for a safe, connective, and sustainable road network.

Existing Conditions

Located along the Moose Jaw River, Moose Jaw is proudly situated on Treaty 4 Territory. Moose Jaw is the 4th largest city in Saskatchewan and is home to 33,665 people based on the 2021 Census.

The City of Moose Jaw manages approximately 227 kilometers of roadway infrastructure within its municipal boundaries. The existing road network in Moose Jaw is extensive and provides relatively fast and efficient travel between most areas at almost any time of the day by car. Moose Jaw has many key transportation facilities that are within or near the city:

- There are rail facilities operated by CP Rail and CN Rail running through the middle of Moose Jaw and which separates Moose Jaw's North and South Hill neighbourhoods.
- The Trans-Canada Highway is located at the northern boundary of the city, which provides east-west connectivity through the province and national connectivity.
- Highway 2, the longest north-south highway in the province, passes through Moose Jaw, and connects the Canada-United States border to La Ronge in northern Saskatchewan.
- 15 Wing Moose Jaw, the centre for Royal Canadian Air Force aircrew training, is located 4 km south of the city.

Local transportation is largely dependant on the road network, with 77% of travellers using personal vehicles (73% drive and 4% are passengers) to reach their destinations, according to the public surveys completed in 2023 as part of the TMP engagement.

Unlike many urban centres across Canada, the road network has available capacity to accommodate growth. There are however locations on the network where intersections experience some congestion and delays, particularly during the peak commute times and after school pick-up.

2.1 Growth of Moose Jaw

Moose Jaw has seen slow, continued growth over the years with the population increasing by 8.5% over the last 20 years. The comprehensive plan for the TMP is driven by what we know today about existing conditions and how we see trends that will change the transportation needs of the community. Current trends that require consideration within the TMP include:

- Growing Population - Moose Jaw is expected to experience slow but continued growth over the next 10 years. The Official Community Plan identifies that there are three generational peaks within the population of Moose Jaw today: the retirement-age group ('Baby Boomers'), the working class, family-formation group ('Gen-Y or Millennials'), and the school-aged group ('GenZ'). Each generational concentration will have a unique set of transportation needs within the community.
- Growing Economy - Moose Jaw's economy is diverse, with key sectors including sales and service, trades and transport, and community services (education, law, and government services). Moose Jaw also remains an attractive area for retail and service type businesses due to the high volume of tourists that visit the city from around the province. Mobility, parking, and trucking are key considerations for a growing economy.
- Regional Context – Moose Jaw is uniquely situated in the regional network along Highway 1. With surrounding mining activity and proximity to neighbouring Regina, there is a daily commute to locations outside the city for employment, as well as the traditional internal commuter pattern. Connectivity is an important consideration from a regional context.

The growth in vehicles on the road typically outpaces population growth in a community due to various factors such as increased urbanization, rising incomes leading to higher car ownership rates, and the expansion of transportation infrastructure. As more families and individuals own multiple vehicles and businesses expand their fleets, the demand for road usage intensifies.

The TMP is focusing on the growth of Moose Jaw over the next 10 years. The citywide traffic volume projections assumed a 2% growth in vehicle traffic per year to account for growth from new schools and infill development. This growth also accounts for residents who will need to travel to get to work, school, recreational activities and for their other daily needs.

The citywide growth provides one part of the picture, it is important to recognize that future travel growth and traffic patterns will vary in different parts of the city as development proceeds around the city. The growth of a number of residential and industrial developments was included in determining the 10-year traffic forecast, including the West Park Village, Iron Bridge Estates, redevelopment of the Valley View lands, as well as the development in the Southeast Industrial Lands.

The 10-year daily traffic forecast is presented in Figure 2-1.

MOOSE JAW TRANSPORTATION MASTER PLAN

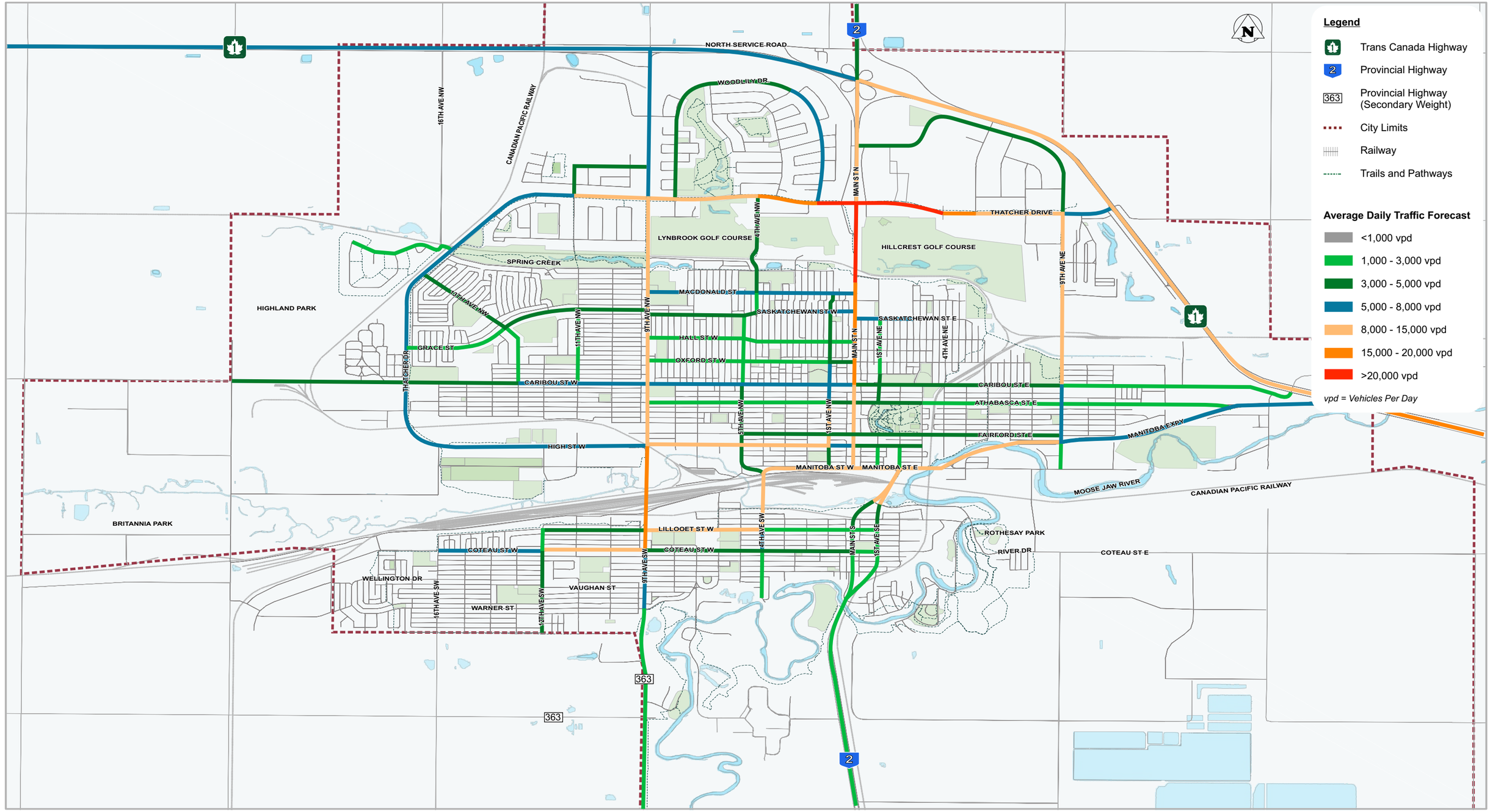


FIGURE 2-1: 10-YEAR DAILY TRAFFIC FORECAST

2.1.1 INTEGRATE TRANSPORTATION AND LAND USE PLANNING

Integrating land use planning and transportation is critical for creating sustainable, efficient, and livable communities. By coordinating these two aspects of urban development, cities can reduce traffic congestion, enhance accessibility, reduce green house gas emissions, and foster vibrant, walkable neighborhoods. Efficient land use and transportation planning can lead to cost savings for both residents and governments and result in economic growth of a city.

Ensure that land use and transportation decision-making tools, including policies, procedures, standards, and guidelines, are structured to reflect the integration of land use and transportation considerations.

Transportation Impact Assessment Guidelines

A Transportation Impact Assessment (TIA) evaluates the potential effects of new development on the transportation infrastructure and traffic patterns. It assesses factors such as vehicle trips generated, road capacity, and potential mitigation measures to address any impacts caused by the added traffic.

TIA guidelines should be developed to identify the development thresholds that would trigger the need for a TIA. Any proposed developments triggered by the guidelines, regardless of their intended land use(s), should be required to submit TIA outlining impacts to the vehicular transportation network, but also impacts and links to the City's mobility transportation network.

Impacts of new developments extend beyond vehicle interactions at access points to include accommodation of multiple modes of transportation on-site (i.e. sidewalks within neighbourhood and from parking lot to building). The new trip-generation should consider active modes of transport through the completion of links to the existing City infrastructure, such as sidewalks, pathways, crossing treatments and transit stops.

Develop Complete Streets Guidelines

A Complete Streets approach is a transportation policy and design framework that aims to ensure streets are safe and accessible for all users, regardless of age, ability, or mode of transportation. This approach considers the needs of pedestrians, cyclists, motorists, and public transit users in the planning, design, construction, operation, and maintenance of transportation infrastructure. Complete Streets typically feature sidewalks, bike lanes, crosswalks, bus lanes, medians, and other features designed to accommodate various modes of transportation safely. The goal is to create streets that promote active transportation, enhance public health, improve safety, and support community vitality and economic development.

Complete Streets will need to be implemented based on the needs of the community, recognizing that not all streets are able to accommodate all users to the highest level. Each individual street will need careful consideration of which Complete Street elements are incorporated into the design. The development, adoption, and implementation of a Complete Streets Policy will support the planning and design of a network that meets all road users.

Transportation and Land Use Planning Recommendations:

(1.1) Develop and adopt guidelines for Transportation Impact Assessments (TIAs).
(1.2) Require new developments to prepare a TIA to assess all aspects of the network.
(1.3) Prepare a Complete Streets Policy.

2.2 Road Network

The road network serves as the vital circulatory system of a city, facilitating the movement of people, goods, and services. Its efficiency and reliability are paramount for economic vitality, emergency response, and ensuring seamless connectivity within urban environments.

It is critical that elements within the road network are implemented consistently across Moose Jaw. Maintaining uniformity on the road ensures safety, efficiency, and predictability for all users, while also safeguarding infrastructure investments for future generations.

What We Heard About Roads

Residents and stakeholders indicated that there is a desire for a safe, efficient, and well-maintained infrastructure that supports seamless connectivity and enhances overall mobility for residents and visitors alike.

Key themes that emerged with respect to the transportation network:

- Roadways are in poor condition.
- The number of and severity of potholes needs addressing.
- Better snow removal is needed to reduce repairs.
- Improved traffic signal timing is needed.

Policies and Recommended Actions

The TMP assesses current transportation needs and infrastructure while strategically anticipating and accommodating future growth trends to ensure sustainable and efficient mobility solutions for the community.

Guiding Principle: *Create an efficient, connected, and sustainable road network for a thriving community.*

The TMP focuses on improving the existing infrastructure and making use of what is already in place. A cautious stance towards constructing new roads or expanding existing ones has been adopted due to the considerable expense of construction, operation, and upkeep. Nonetheless, it is important to strategically protect certain corridors for expansion to accommodate a growing Moose Jaw.

Key road network recommendations are presented in Figure 2-2.

The recommended road network, active transportation network and transit services, and asset management initiatives are described in the following sections.

MOOSE JAW TRANSPORTATION MASTER PLAN

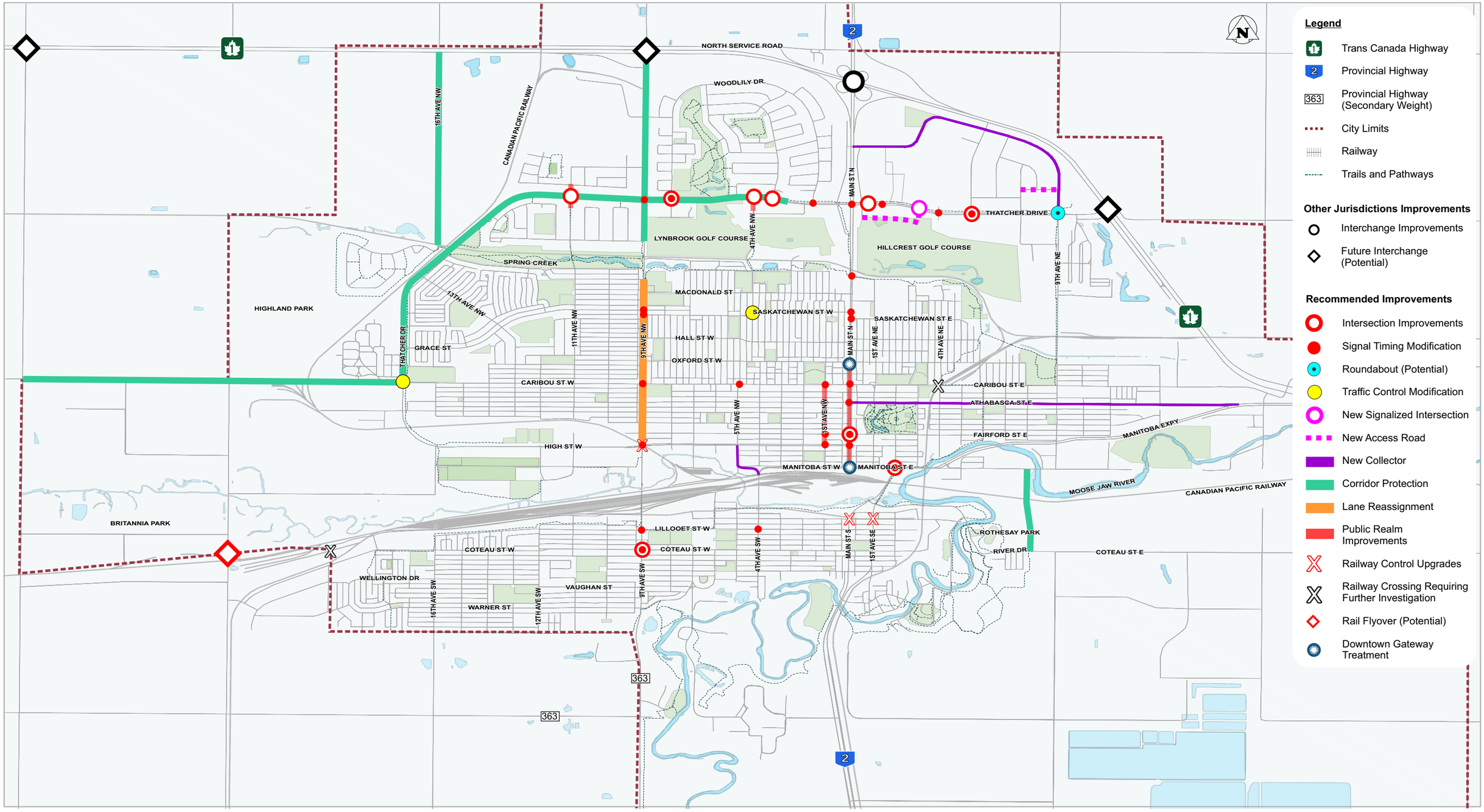


FIGURE 2-2: ROAD NETWORK PLAN

2.2.1 ROADWAY FUNCTION

Adopt a Road Classification

A road classification system is the grouping of roads according to the type of service they provide to the public and typically focuses on vehicle use, speed, and the volume of traffic.

The City of Moose Jaw's current road classification system, as outlined in the current Official Community Plan, follows Transportation Association of Canada's road classification hierarchy of Expressway, Arterial, Collector and Local Roads. This was revised in the 2012 TMP where the road classifications were expanded to consist of: Local, Service Road / Industrial, Rural Major and Minor Collector, Urban Minor Collector, Urban Major Collector, Rural Arterial, Urban Arterial, and Urban Expressway. The expansion of the road classifications was to support the snow removal policy and to provide for more specific development standards relative to the intended function of each of the road classifications. However, it was not formally adopted by the City.

The classification and design of a roadway network directly impacts the user experience. An arterial road will provide a different user experience for those that choose to drive, ride their bike, walk, or take transit compared to a local road. Understanding the service expectation of users has a direct impact on capital plans and ongoing maintenance.

The following road network classifications are used to support priority setting for road network expansion, rehabilitation, reconstruction, and maintenance; access management; and the functionality of the strategic road network:

- Arterial
- Collector (Major / Minor)
- Local

In response to evolving traffic patterns and urban development, the following roadways should be reclassified to better align with current transportation needs and enhance overall road network efficiency.

- Athabasca Street East (Main Street to Manitoba Expressway) – Athabasca Street East is currently classified as an arterial road, which is a duplication in the network with Caribou Street East which is also classified as an arterial. The development along Athabasca Street East (i.e. residential development, schools, etc.) lends the road to be function as a collector roadway. Athabasca Street East should be classified as a collector road. Athabasca Street East does provide connection into the city via Highway 1, and the Winter Maintenance Policy should be updated to have Athabasca Street East, as a collector, cleared at the same time as arterial roads.
- Diefenbaker Drive (Thatcher Drive to Main Street) – Diefenbaker Drive is currently classified as a local roadway. The development along Diefenbaker Drive (i.e. commercial development, hospital, key road through development area) lends the road to function as a collector and it should be classified accordingly.
- 5th Avenue Northwest (High Street West to Thunderbird Viaduct) – 5th Avenue Northwest is classified as a local road near High Street West and is classified as an arterial near the bridge. 5th Avenue Northwest is classified as a collector north of High Street West. 5th Avenue Northwest, between High Street West and the Thunderbird Viaduct functions as a collector and it should be classified accordingly.

Update Road Cross Sections

The Road Classification identifies the roadway characteristics necessary to provide consistency throughout a city's transportation network. Classifying roads into a hierarchy establishes a safe and orderly system while balancing mobility and accessibility on the network. The Road Classification also pre-establishes standards and expectations that can be applied to roads in new development areas. The following general roadway cross sections should be adopted to support uniformity for new development areas. Cross-sections should be reviewed at the start of each planned development to ensure that the specific cross-section elements support the needs of the adjacent development (e.g. wider sidewalks, bike lanes, turning lanes, parking lanes, bus stop locations, etc.). In cases where these additional elements are present, a wider right-of-way needs to be defined.

These cross sections are illustrated for the purposes of new developments. Existing roadway cross-sections typically remain unchanged until such time as there is roadway reconstruction or there is a change in the adjacent land use that predicates a review of the roadway cross section.

Typical Arterial Roadways

- Arterial streets are intended to carry large volumes of all types of traffic moving at medium speeds. They expediate movement of through traffic to major traffic generators and from subdivision to subdivision.
- Arterial streets typically carry between 5,000 and 30,000 vehicles per day. The traffic speeds along arterial streets range between 40 km/h and 90 km/h.
- Arterials usually have two or four travel lanes plus parking.
- The minimum acceptable intersection spacing on an arterial street is 200 m. Arterials should have a minimum spacing of 800 m.

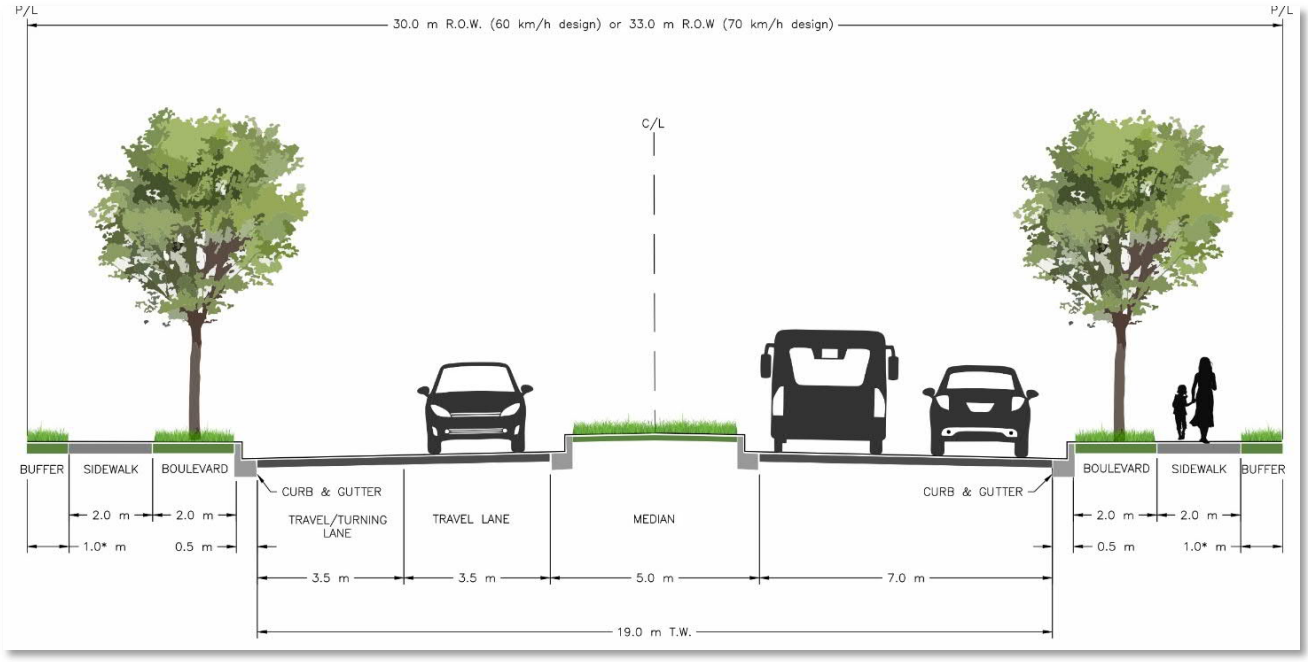


Figure 2-3: Typical Arterial Roadway Cross-section

Typical Major Collectors

- Major Collector streets shall provide both traffic movement and land access. They carry traffic between local and arterial streets.
- Major collector streets typically carry greater than 5,000 vehicles per day. The traffic speeds along collector streets range between 30 km/h and 70 km/h.
- Collectors usually have two travel lanes and parking.
- The minimum intersection spacing is 60 m.

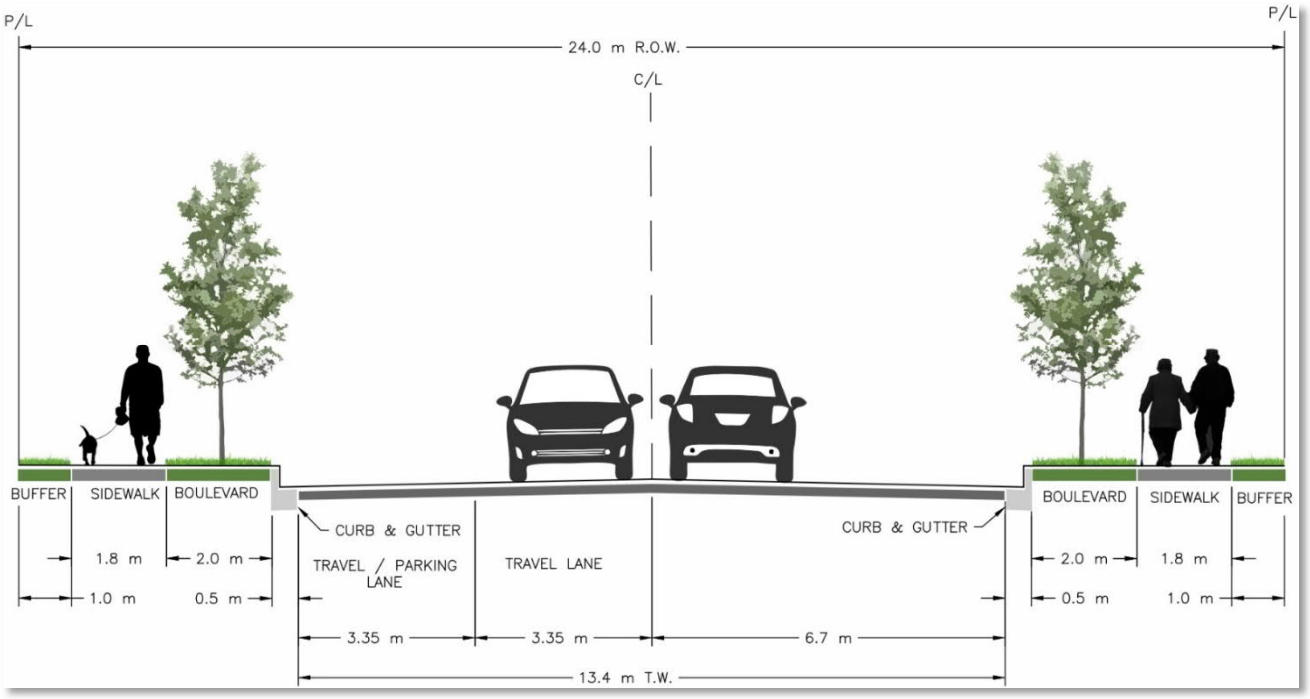


Figure 2-4: Typical Major Collector (>5,000 vpd) Roadway Cross-section

Typical Minor Collectors

- Traffic movement and land access is of equal importance.
- Minor collector streets typically carry less than 5,000 vehicles per day. The traffic speeds along collector streets range between 30 km/h and 70 km/h.
- Collectors usually have two travel lanes and parking. Sidewalks are typically provided on both sides.
- The minimum intersection spacing is 60 m.

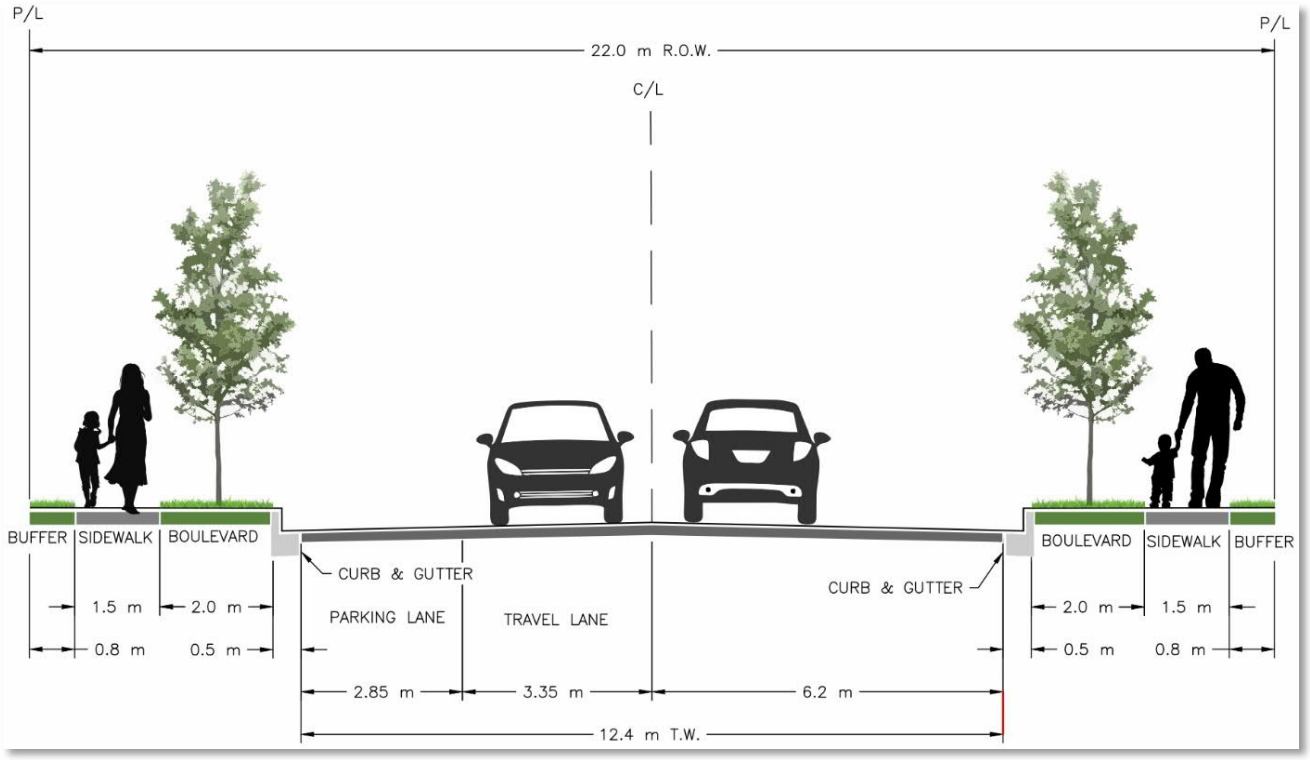


Figure 2-5: Typical Minor Collector (<5,000 vpd) Roadway Cross-section

Typical Local Roadways

- The main function of local streets is to provide land access.
- Local streets are not intended to carry large volumes of traffic, typically between 1,000 and 3,000 vehicles per day, but primarily traffic with an origin or designation along its length.
- The traffic speeds along local streets are typically lower, ranging between 30 km/h and 50 km/h and the minimum intersection spacing is 60 m.

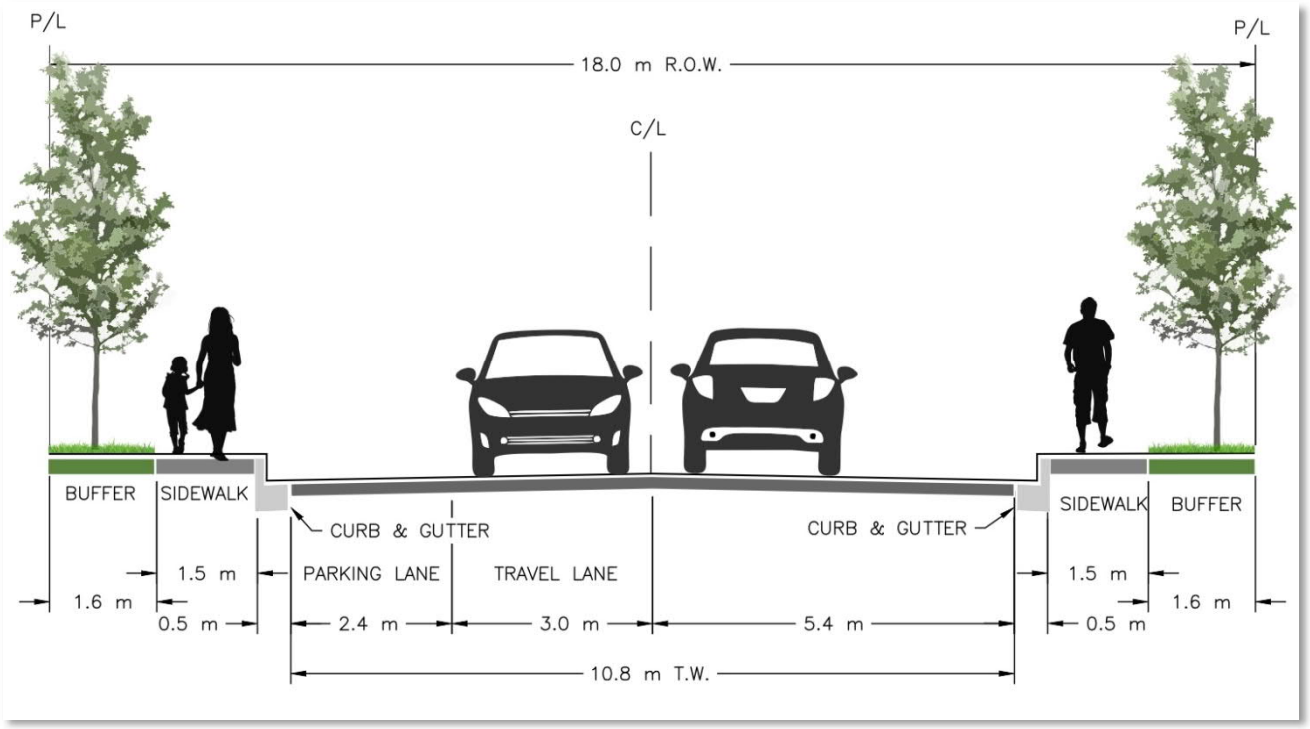


Figure 2-6: Typical Local Roadway Cross-section

Intersection Traffic Control Guidelines

The public identified a concern regarding the status of the uncontrolled intersections within the city, in terms of assigning additional traffic control (e.g. a stop or yield on the minor approach) at these intersections.

An intersection traffic control policy is a specific set of guidelines and rules designed to manage and regulate traffic flow at road intersections to ensure safety and efficiency. The policy determines how vehicles, cyclists, and pedestrians are controlled at intersections to minimize conflicts and delays. It typically includes a set of warrants to determine if traffic signals, stop signs, yield signs, roundabouts, or other traffic management tools are needed at an intersection. The intersection traffic control policy helps ensure that traffic control is implemented uniformly throughout Moose Jaw, and provides consistent motorist expectations on how traffic control is applied. As such, a policy outlining requirements for the application of traffic control should be adopted.

Roadway Function Recommendations:

(1.4) Adopt the updated road network classification.
(1.5) Classify Athabasca Street East as a collector and update the Winter Maintenance Policy, if required, to allow Athabasca Street East to be cleared at the same time as other arterials.
(1.6) Classify Diefenbaker Drive and 5th Avenue Northwest, between High Street West and Thunderbird Viaduct, as a collector road.
(1.7) Adopt general cross-sections based on road classification.
(1.8) Develop an Intersection Traffic Control Policy.

2.2.2 PROTECT FUTURE ROADS

The proposed road network modifications aim to improve the efficiency and safety of travel across the road network. Some improvements may occur outside of the 10-year timeframe but are carried forward from the 2012 TMP to protect for future right-of-way.

Long-term Road Network

Planning a long-term road network plan, even if it may not be constructed for 30 or more years, is essential for anticipating future transportation needs, accommodating population growth, and ensuring sustainable development. By forecasting demands and identifying potential travel corridors early on, cities can strategically acquire land, allocate resources efficiently, and avoid costly retrofits or disruptions to existing infrastructure. Moreover, long-term planning fosters resilience, allowing communities to adapt to evolving mobility trends, technological advancements, and environmental considerations over time.

The following are long-term road network considerations that the City should consider:

- The Saskatchewan Ministry of Highway (MH) has a study underway that looks at the long-term needs of Highway 1 through Moose Jaw. Preliminary findings indicate the need to protect for long-term potential interchanges at the Highway 1 and 32nd Avenue intersection, at the Highway 1 and 9th Avenue Northwest intersection, potential reconfiguration of the Highway 1 and Highway 2 interchange, and a long-term plan for a potential interchange at Highway 1 and Thatcher Drive intersection. The City should coordinate with MH to ensure that the road right of way is protected for future needs.
- As development expands west, 24th Avenue West should be upgraded, and the land surrounding the railway protected for a potential future flyover.

Widen Key Roads to Four Lanes

Moose Jaw will likely continue to expand as development proceeds within the community. The direction of city growth for these extended long-term horizons is unknown at this time, but it is prudent that potential corridors be considered for protection that may be necessary to facilitate future development. At this stage, these high-level corridors are intended to initiate discussions with various levels of government in an exploratory manner and may assist in planning where development will occur in the future.

The following roadways should be protected to allow for widening to four-lanes in the future:

- Thatcher Drive West between High Street West and Wood Lily Drive East
- 9th Avenue Northwest between Thatcher Drive and Highway 1
- 16th Avenue Northwest between Iron Bridge and Highway 1
- Lorne Avenue between Manitoba Street East and Coteau Street East
- Caribou Street West, west of Thatcher Drive

Protect Future Roads Recommendations:

(1.9) Coordinate with the Ministry of Highways to ensure that the land is protected for future potential interchanges along located along Highway 1.
(1.10) 24th Avenue West should be upgraded as development occurs in the west.
(1.11) Protect the land at the 24th Avenue Southwest and Railway crossing for a potential future flyover.
(1.12) Protect the right-of-way to allow for future widening along key corridors.

2.2.3 IMPROVE CORRIDOR OPERATIONS

Several key corridors were reviewed as part of the TMP to address their operation and layout.

Downtown Business District

Moose Jaw's downtown business district serves as the vibrant heart of the city, fostering economic growth, community engagement, tourism and cultural vitality through its diverse range of shops, restaurants, and attractions. Preserving the character of the downtown is important for maintaining its unique identity, fostering a welcoming atmosphere, and promoting walkability. This preservation not only enhances the overall aesthetic appeal and historic charm but also ensures accessibility for residents and visitors, encouraging foot traffic, supporting local businesses, and sustaining the downtown business district's economic vibrancy for generations to come.

The following is a list of elements the City of Moose Jaw should consider within their Downtown Business District:

- Gateway Treatments | Entry points to the Downtown are not well defined and there is a diminished sense of arrival for visitors entering the Downtown from Highway 1.
  - Main Street and Manitoba Street Gateway This street serves as a gateway and should be celebrated as an entrance to the Downtown and Main Street North. Improvements to this intersection to improve the pedestrian environment and establish a symbolic gateway feature to the Downtown.
  - Main Street and Oxford Street Gateway
    This intersection is the primary northern gateway to the Downtown. It is the transitional area between the historic downtown/Main Street and first ring of historic neighbourhoods. Establishing a gateway treatment at the Main Street and Oxford Street intersection enhances the streetscape for pedestrian movement.
- Wide Sidewalks & Bulb-outs | Moose Jaw's downtown is vibrant and exciting and attracts residents and tourists year-round. Moose Jaw's downtown is full of pedestrian activity. Maintaining the wide sidewalks and road median is critical for pedestrian movement, safety and ambience in the downtown area. The City should also consider implementing bulb-outs at the following intersections along Main Street: Caribou Street, Manitoba Street, and completing the remaining corners at Fairford Street. The bulb-outs define parking areas, define turning paths, make pedestrians more visible and shorten walking paths.
- Pedestrian Signal Timing | In areas with high pedestrian activity such as Moose Jaw's downtown, a leading pedestrian interval is particularly valuable in enhancing pedestrian safety at signalized intersections. The leading pedestrian interval provides pedestrians with a 'walk' symbol in advance of automobile traffic getting a green light to proceed. This way, pedestrians will have started to cross the street and be visible to car traffic. This strategic timing reduces conflicts between pedestrians and turning vehicles and is now being implemented in many Canadian cities.

- Main Street and Fairford Street Signage | Currently left turns are restricted from Fairford Street onto Main Street between 11 a.m. and 6 p.m. An assessment of the intersection is needed to see if the restriction is still valid, should be reduced to just the afternoon peak travel period or removed entirely.
- Transit App | Transit times affect people getting to and from work. A transit app should be developed to inform people of their bus arrival time by providing real-time information on bus location. This will allow for better trip planning for both residents and visitors and save time waiting outside for the bus.
- Parking | Planning for parking in Moose Jaw is important and it plays a critical role in urban development and transportation management. It is recommended that the City of Moose Jaw investigate "pay by app" systems for parking, which offer several advantages over traditional payment methods such as using coins or a pay station. In addition, expanding the amount of on-street parking downtown will improve access to businesses and shops. Angled parking should be considered along High Street West immediately west of Main Street to mirror the east side of Main Street. This will increase that amount of parking availability in the downtown, provide a dedicated area tourists will know and signal to drivers that they are entering a slower driving environment.

Downtown Moose Jaw has a wealth of key destinations within walking distance of the downtown. The following corridors were previously identified as key corridors to connect the downtown to the surrounding destinations.

- River Street Woonerf | provides a key connection between the Moose Jaw's downtown and the Moose Jaw Event Centre. River Street has already been reconstructed with a woonerf (i.e. meandering street) between Main Street and 1st Avenue Northwest and includes wider sidewalks, trees, pedestrian-scaled lighting, and raised crosswalks. As development occurs along River Street, the woonerf elements should be maintained.
- Fairford Street East | provides a key desire line between the Downtown, the Moose Jaw Casino, Temple Gardens Mineral Spa, and various amenities within Crescent Park. The sidewalks along Fairford Street East are constructed of paving stones and mature trees are established along the corridor. Transit also runs along this corridor. The City should continue to recognize the importance of this roadway for serving residents and tourists and prioritize street lighting, pedestrian crosswalks, and transit accommodations along the road.
- Cordova Street | Cordova Street is identified as a key street to enhance pedestrian connectivity from Main Street to Crescent Park.

Thatcher Drive

Thatcher Drive is a key arterial road initiating at Highway 1, and looping through west Moose Jaw before connecting into High Street W. It serves for both commercial access as a four-lane roadway and residential access predominantly as a two-lane roadway. Several key changes are addressed through the plan including:

- 9th Avenue Northeast and Thatcher Drive | this intersection is currently operating as a 4-way stop but, due to traffic volumes, will require upgrading to a traffic signal or single-lane roundabout over time. While traffic signals will provide adequate operation, traffic queues will be noticeable on the approaches, affecting nearby commercial driveway accesses. The preferred option for this location is a single-lane roundabout. This solution keeps traffic flowing during key commuter times but also addresses traffic quickly in times in off-peak hours. Single lane roundabouts exist in many Saskatchewan cities and are common throughout Canadian municipalities due to their known level of safety. They are as efficient as traffic signals for moving traffic but proven safer in virtually eliminating the common, and more severe, collision patterns inherent with traffic signals. The roundabout option would also serve as a unique gateway feature to Moose Jaw. The roundabout would have a visible impact entering from Highway 1 with plantings and central feature. This location already is a key tourist stop for Moose Jaw visitors where Mac the Moose and the Snowbird Tudor jet are displayed.

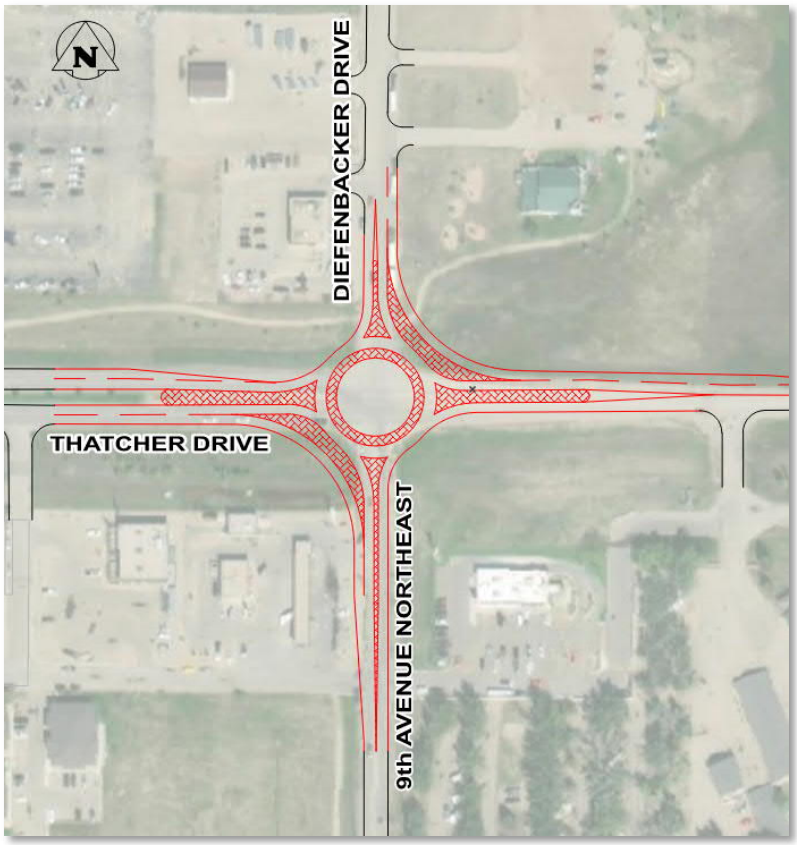


Figure 2-7: Thatcher Drive & 9th Avenue Northeast Proposed Roundabout

- Access to Hillcrest Golf Course | currently there is a median on Thatcher Drive that prevents left turns in and out of the Hillcrest Golf Course access. When travelling westbound on Thatcher Drive, drivers need to pass the site and make a U-turn west of Main Street. Likewise, to leave the golf course and access Main Street requires a U-turn on Thatcher Drive at the unsignalized Superstore access. To resolve current traffic and safety concerns, a new roadway is recommended to run adjacent to the easement and then connect into Thatcher Drive at a new traffic signal midpoint between the existing Superstore and Canadian Tire traffic signals. The signal spacing is appropriate and will allow for proper progression of traffic. The right in/right out intersection to the golf course would remain. Additional assessment is required to ensure adequate right-of-way for the road can be made available immediately north of the existing building structure.

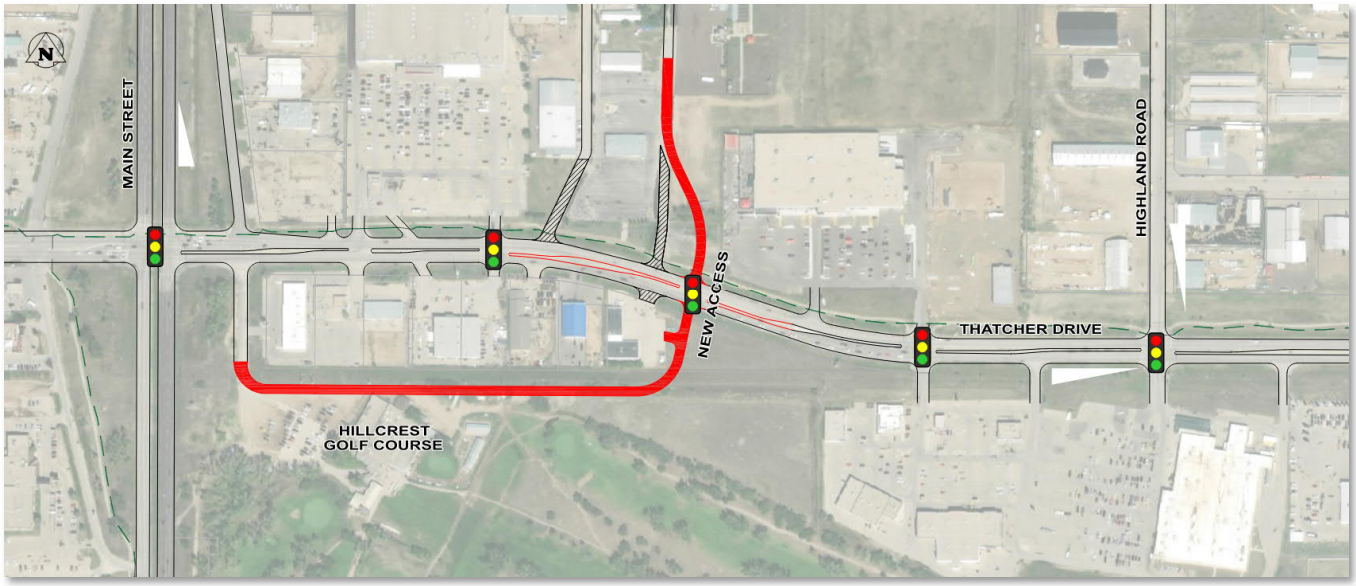


Figure 2-8: New Access to Hillcrest Golf Course on Thatcher Drive

- Transition from Four Lanes to Two Lanes on Thatcher Drive | Westbound vehicles on Thatcher Drive were observed weaving between the inside and outside lanes. If a vehicle was turning left at 4th Avenue Northwest, traffic would weave to the outside lane to avoid being delayed, and then quickly transition back prior to the lane drop on Thatcher Drive. This location is also an important pedestrian crossing location. Lane configuration changes are proposed between Blue Sage Drive and 4th Avenue Northwest to provide clearer direction to drivers and make it safer for pedestrians, including proper signage and median treatments to further control traffic through this transition point.

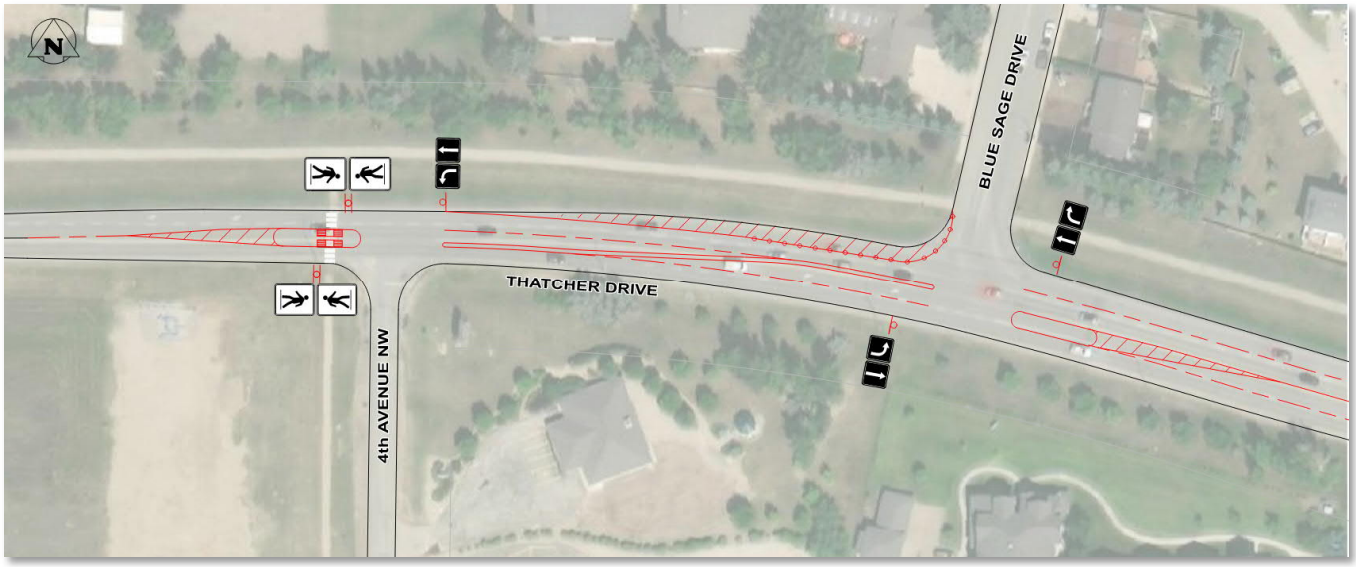


Figure 2-9: Thatcher Drive Four-lane to Two-lane Transition

- Thatcher Drive & 11th Avenue Northwest |
  Field observations indicated that this is a key intersection for students traveling to and from school. Students will cross Thatcher Drive to reach the multi-use pathway on the south side of the road. The sidewalks on 11th Avenue Northwest are currently incomplete and to do connect to the pedestrian crosswalk.
  The sidewalks on 11th Avenue Northwest should be extended to Thatcher Drive and new accessible ramps installed. The pedestrian crosswalk signage should be updated to meet current guidelines, making it safer for pedestrians using the intersection.

It is recommended that the City conduct further review regarding implementation requirements for the Thatcher Drive corridor.

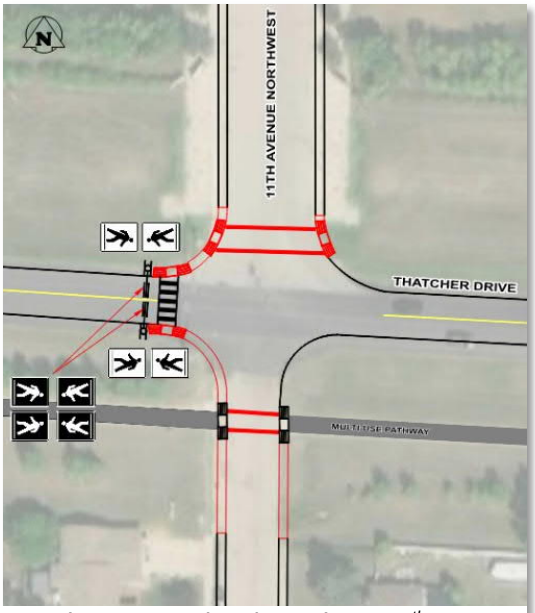


Figure 2-10: Thatcher Drive & 11th Avenue Northwest Pedestrian Improvements

1st Avenue NW

This is a key north-south arterial roadway parallel to Main Street in Moose Jaw. It transitions from downtown into a residential roadway to the north, where it is adjacent to Central Collegiate high school.

Work was recommended through the previous TMP to change the cross-section to include providing bulb-outs at street corners to calm traffic and improve pedestrian crossings. This work was initiated with signage but not carried out in full.

The current plan revisits the goals for 1st Avenue Northwest between High Street and Caribou Street. The following recommendations will complete previous TMP work and solidify the operation of this corridor:

- Repaint linework with a 3.5m centre two-way left-turn lane.
- Ensure signage and paint markings identify operation as two-way left-turn lane and a separate through/right turn lane.
- Provide a dashed white line demarcating a 2.5m parking lane.
- Provide bulb outs at intersections to provide shorter crossing distances for pedestrians, and better control of traffic speeds along the corridor.

These recommendations will help change the character of this important road and serve to clarify intended traffic operations.

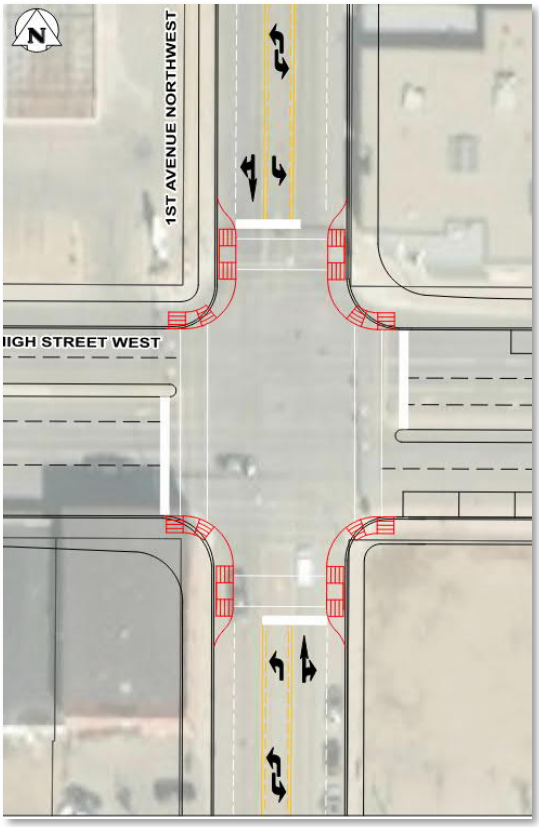


Figure 2-11: Example 1st Avenue Northwest Roadway Improvements

Improve 9th Avenue Northwest Operations

As a key north-south arterial, 9th Avenue Northwest extends from Highway 1 to the South Hill neighbourhood. 9th Avenue Northwest serves as one of three existing crossings over the CP Mainline to unify the whole city. 9th Avenue Northwest will remain an important commuter link in the community.

The predominant issue currently is the weaving of traffic between lanes to avoid turning traffic, specifically left turn traffic. This issue was brought up during stakeholder consultation regarding emergency services and comments were received from the public through the online survey as well.

The key recommendation for this roadway is to convert the section between High Street West and Caribou Street West from a four-lane to a three-lane cross section. The identified section will have a centre two-way left turn lane (TWLTL) and the outside lanes will operate for through traffic and right turns. This results in greater organization of traffic and less weaving due to periodic traffic turning left onto residential streets.

Modelling indicates the roadway will operate more efficiently with this cross-section. In addition, this will allow proper room for sidewalks and potentially a two-way pathway to be constructed on the east side of 9th Avenue NW. It also allows emergency vehicles to use the centre lane to bypass vehicles traveling in the through lanes in the event of an emergency during peak periods of congested traffic volumes.

There may be some merit to further extending the three-lane cross-section as far north as Simcoe Street (just north of the skate park) and should be reviewed in further detail.

The detailed design of 9th Avenue Northwest should proceed.

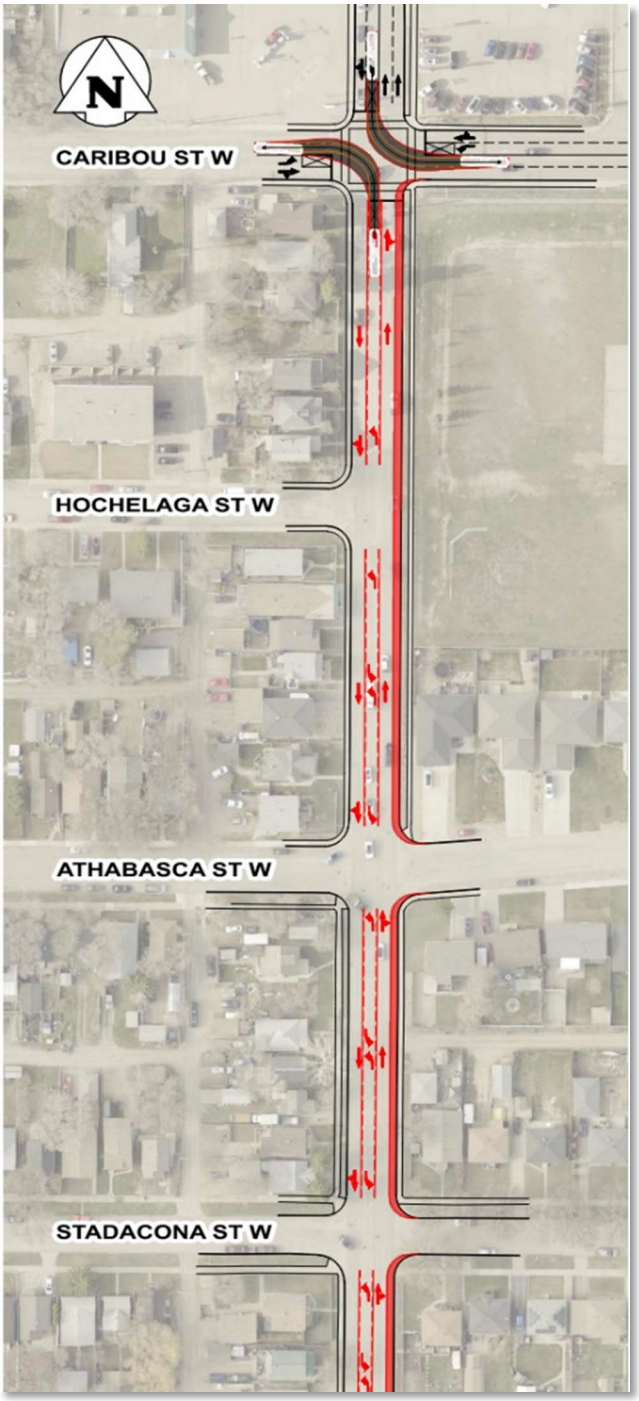


Figure 2-12: 9th Avenue Northwest Lane Reassignment

Repair Thunderbird Viaduct

The Thunderbird Viaduct is a non-designated heritage site located on 4th Avenue. Completed in 1929 and commonly known as the Fourth Avenue Viaduct, the concrete and steel span bridge extend over 340 metres across the Canadian Pacific Railway yards and Thunder Creek. The Thunderbird Viaduct holds significant importance in Moose Jaw as a key transportation connection across the railway, linking various parts of the city and facilitating the flow of traffic and was identified as a key desire line for pedestrians and cyclists by the public. Its strategic location provides essential connectivity for residents, commuters, and businesses, serving as a vital link between residential neighborhoods, commercial districts, and recreational areas.

Source: City of Moose Jaw

The Thunderbird Viaduct is aging and needs repair. Heavy vehicles are currently restricted from using the bridge, which impacts transits ability to the use the bridge. As development occurs in Moose Jaw, the adjacent 9th Avenue bridge will near capacity, and vehicles will look to use Thunderbird Viaduct as an alternative. As one of three crossings to South Hill, it is imperative that the 4th Avenue Thunderbird bridge be repaired.

Upgrades to the Thunderbird Viaduct should consider all modes, including the accommodation of transit, pedestrians, and cyclist to continue to provide connectivity throughout the community. Once repaired, transit could be routed to use the Thunderbird Viaduct, which will affect how people enter the downtown.

Improve Corridor Operations Recommendations:

(1.13) Implement gateway treatments at the northern and southern boundaries of the downtown.
(1.14) Ensure downtown continues to be pedestrian friendly by maintaining wide sidewalks with a centre median.
(1.15) Implement bulb-outs along Main Street at Caribou Street, Manitoba Street, and completing the remaining corners at Fairford Street.
(1.16) Implement a leading pedestrian interval along Main Street.
(1.17) Assess the potential for permitting left-turning traffic from Fairford Street onto Main Street
(1.18) Maintain River Street, Fairford Street, and Cordova Street as key pedestrian corridors from the Downtown.
(1.19) Conduct further review regarding implementation requirements for the presented recommendations along the Thatcher Drive corridor.
(1.20) Implement a roundabout at the Thatcher Drive and 9th Avenue Northeast intersection.
(1.21) Provide a new signalized access on Thatcher Drive to provide access to the Hillcrest Golf Course and other business located along the south side of Thatcher Drive.
(1.22) Update lane configuration and signage on Thatcher Drive between Blue Sage Drive and 4th Avenue Northwest.
(1.23) Install a RRFB to improve pedestrian crossing at the Thatcher Drive and 4th Avenue Northwest intersection.
(1.24) Extend sidewalks, provide accessible pedestrian ramps, and update pedestrian crossing at the Thatcher Drive and 11th Avenue Northwest intersection and provide accessible pedestrian ramps.
(1.25) Implement bulb-outs on 1st Avenue Northwest between High Street West and Caribou Street West.
(1.26) Complete detailed design and implement a centre two-way left-turn lane on 9th Avenue Northwest between High Street West and Caribou Street West.
(1.27) Review the potential of extending the centre two-way left-turn lane on 9th Avenue Northwest, north to Simcoe Street.
(1.28) Ensure upgrades to the Thunderbird Viaduct consider all modes, including pedestrians, cyclists, transit and vehicles.

2.3 Intersection Operations

Intersections within Moose Jaw generally operate with spare capacity. During the peak hours, there are spot locations where intersections operate with lower levels of service. Capacity and congestion concerns, as identified by the public, are usually related to traffic signal operations and queueing at specific intersections.

Forty-nine key intersections were reviewed throughout Moose Jaw, including signalized intersections, all-way stop-controlled intersections, and several two-way stop-controlled intersections.

2.3.1 SAFE AND EFFICIENT TRAFFIC FLOW

Intersection Safety

Road safety has become an increasingly important issue for municipalities in recent years. In addressing intersection safety within the community, it is imperative to highlight specific locations exhibiting elevated collision rates. The following intersections were identified to have a collision rate greater than 1.0 collision per million entering vehicles (MEV):

- 1st Avenue Northeast and Ross Street East
- 1st Avenue Northwest and Athabasca Street East
- 4th Avenue Northwest and MacDonald Street
- 5th Avenue Northwest and Oxford Street East
- 9th Avenue Southwest and Coteau Street West

The following intersections were identified to have a collision rate between 0.64 – 0.99 collisions per MEV, and require on-going monitoring:

- 1St Avenue Northwest and Fairford Street West
- 5th Avenue Northwest and Athabasca Street West
- 9th Avenue Southwest and Lillooet Street West
- Main Street and Caribou Street
- 1st Avenue Northwest and Caribou Street West
- 9th Avenue Northeast and Athabasca Street East
- Thatcher Drive and Main Street
- Main Street and Athabasca Street

Intersection Improvements

Using the 10-year forecast traffic volumes, the intersections were reviewed and intersections where identified where physical modifications could improve performance and safety:

- Thatcher Drive and 9th Avenue Northeast – Construct a single-lane roundabout or alternatively implement traffic signals. Further details for the Thatcher Drive Corridor are presented in Section 2.2.3 Improve Corridor Operations.
- Thatcher Drive and Highland Road – convert the northbound approach to a left, through, and right-turn lane and remove split phase signal timing.
- Thatcher Drive and 11th Avenue Northwest – add westbound right-turn lane. Protect for potential future traffic signals. Continue to monitor traffic volumes as development progresses.
- Thatcher Drive West and Caribou Street West – convert to a four-way stop-controlled intersection in the future.
- 4th Avenue Northwest and Saskatchewan Street West – Update to proper roundabout standards, including splitter islands, lane widths, central feature, and yield signs.

- 9th Avenue Southwest and Coteau Street West – convert the eastbound approach to a dedicated eastbound left-turn lane and a shared through / right-turn lane.
- 9th Avenue Northwest and High Street West – update lane arrangement to accommodate the conversion of 9th Avenue Northwest to a 3-lane roadway.
- Manitoba Street East and 1st Avenue Southeast – Implement two northbound left-turn lanes or add split phasing as development south of Moose Jaw proceeds.
- Overhead Flashing Beacons – review the need for overhead flashing beacons and ensure that the messaging doesn't cause driver confusion.

Additional intersection improvements have been identified in Section 2.2 Road Network.

Update Signal Timing and Coordination

All signalized intersections within Moose Jaw were reviewed for existing and forecast operation. The majority of intersections are operating well with the current traffic conditions and are expected to continue to operate well in the future. The analysis identified that several intersections were using the minimum thresholds for signal timing. Using minimum signal timing parameters may not be advisable because they could fail to adequately address the dynamic traffic conditions and demand fluctuations experienced at intersections. Minimum timings may lead to inefficient traffic flow, increased congestion, longer travel times, and frustration from road users. Standard signal timing parameters should be developed to provide consistency for network operation.

Signal timing changes would also improve intersection performance at Thatcher Drive and Woodlily Drive West. Split phasing should also be removed, along with updating the lane configuration, at Thatcher Drive and Highland Road.

Due to the adjacent railway underpass, the split phasing will need to be introduced at the Manitoba Street East and 2nd Avenue Northeast intersection in the future, as there is not adequate room for geometric changes. The timing will be dependent on development.

Intersection Operations Recommendations:

(1.29) Update intersection geometry and traffic control over time as traffic volumes grow.
(1.30) Develop consistent signal timing parameters to be used on the network.
(1.31) Periodically review and update signal timing plans on the network.

2.4 Truck & Goods Movement

Supporting truck and goods movement is an essential function of the road network. The movement of goods is essential to economic development within a community. Moose Jaw's truck and dangerous goods system comprises of a loop around the entire city using Thatcher Drive, High Street East, Manitoba Street East, and 9th Avenue Northwest, along with other ancillary roads and highways (Highways 1 and Highway 2). Pick up / drop off routes lead inward towards downtown from this loop. Concerns raised from the public regarding trucks around Moose Jaw include truck speed and noise complaints along 9th Avenue Southwest, 1st Avenue Southeast and Main Street and as trucks are entering or exiting the city.

Moose Jaw should work with local law enforcement to control speeds along roadings entering and existing the city.

Truck & Goods Movement Recommendations:

(1.32) Work with local law enforcement to ensure posted limits are adhered to.

2.5 Railway Crossings

2.5.1 SAFE RAILWAY CROSSINGS FOR ALL MODES

Moose Jaw faces the challenge of numerous railway lines intersecting roads and trails within city limits, necessitating many controlled crossings. Both the Canadian Pacific Railway (CPR) and Canadian National Railway (CNR) maintain lines within Moose Jaw, including two east-west and two north-south routes that encircle the city. With over 27 at-grade railway crossings within city limits, a comprehensive review of each crossing, encompassing both vehicle and trail pathways, was conducted to address safety and efficiency concerns within the TMP framework.

Signs and Pavement Markings

Many railway crossings within Moose Jaw were observed to have faded pavement markings, faded or damaged signs, and general maintenance needed around the railway crossing. Moose Jaw should coordinate with Transport Canada to prioritize and implement standard signage and a general maintenance program at the railway crossings. Moose Jaw should continue to include railway crossings in their annual pavement marking program.

Railway Crossing Control

Railway warning system upgrades were found to be warranted at the following intersections based on the current traffic volumes:

- Main Street South and Home Street
- 1st Avenue Southeast and Home Street
- 9th Avenue Northwest and High Street West

Traffic volumes should be confirmed at the following railway crossing locations to determine if a warning system is warranted.

- 24th Avenue Southwest near Viterra Plant
- Caribou Street East & 4th Avenue Northeast

Moose Jaw should continue to monitor traffic volumes at railway crossings to ensure that the appropriate railway crossing warning system is in place.

Railway Crossing Recommendations:

(1.33) Coordinate with CP Rail and CN Rail regarding maintenance around railways and upgrading faded or damaged signs.
(1.34) Coordinate with CN Rail regarding upgrading rail crossing warning systems.
(1.35) Periodically review and evaluate the need for upgrading railway crossing warning systems.
(1.36) Continue to incorporate railway crossings into the annual pavement markings program.

2.6 Parking

Planning for parking in Moose Jaw is important for several reasons, and it plays a key role in urban development and transportation management, particularly when related to the downtown. Accessible and well-planned parking can positively impact local businesses. When customers can easily find parking near commercial areas, it encourages economic activity, supports the vitality of retail services and supports tourism. There is a cost to providing and managing parking but also a value to users based on its availability.

Pay by App

It is recommended that the City of Moose Jaw investigate "pay by app" systems for parking, which offer several advantages over traditional payment methods. These benefits include convenience for users allowing cashless transactions and remote payment for extending parking time limits. Such a system could be integrated with the existing meter system for those that still want to use coins. The benefits include needing less parking equipment over time, less maintenance of meters and less physical collection of cash. This should be seen as a better opportunity to manage city-owned parking, provide flexibility to modify pricing by zone and the potential for improving parking availability through proper management and pricing.

Angle Parking

High Street currently has angled parking east of Main Street for the block from Main Street to 1st Avenue Northeast. Angled parking allows for more parking stalls per block to serve downtown businesses and serves to slow traffic. The request was made to assess extending angled parking for the two blocks to the east from 1st Avenue Northeast to 3rd Avenue Northeast.

For the block of High Street between 1st Avenue Northeast and 2nd Avenue Northeast, the following was found:

- There are four driveway access, a loading zone for the apartment building and a bus stop on the north side of the block High Street. Only 7 stalls exist along this block face. As a result, there would be little gain in implementing angled parking without changing parking access points or the bus stop location
- On the south side of the block there are currently 16 parking stalls along the north side of Providence Place that could be converted to angled parking. Angled parking would result in the parking supply increasing by 4 stalls

For the block of High Street between 2nd Avenue Northeast and 3rd Avenue Northeast, the following was found:

- There is one apartment building and the remainder are single-family dwellings. The use of angled parking with single-family homes would not be a typical format.

There are other solutions that may be preferrable for this section including bulb-outs or a median if the intent is to narrow the travel way and slow traffic.

Angle parking could be implemented on High Street west of Main Street if the goal is to provide more available parking in the downtown. Angled parking could provide up to an additional 18 new parking spaces along High Street West between Main Street and 1st Avenue Northwest.

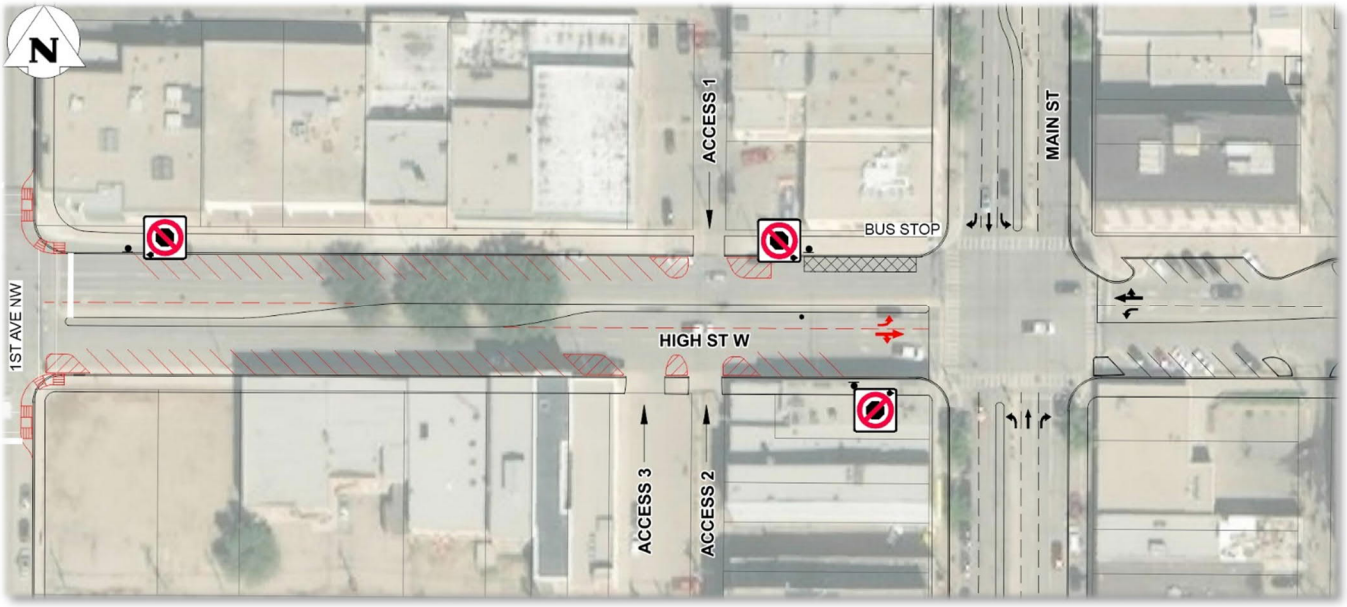


Figure 2-13: High Street West Angled Parking Concept

Parking Recommendations:

(1.37) Investigate a pay-by-app system for parking.

(1.38) Explore implementing angled parking on High Street West between Main Street and 1st Avenue Northwest.

ACTIVE TRANSPORTATION

3.0 ACTIVE TRANSPORTATION

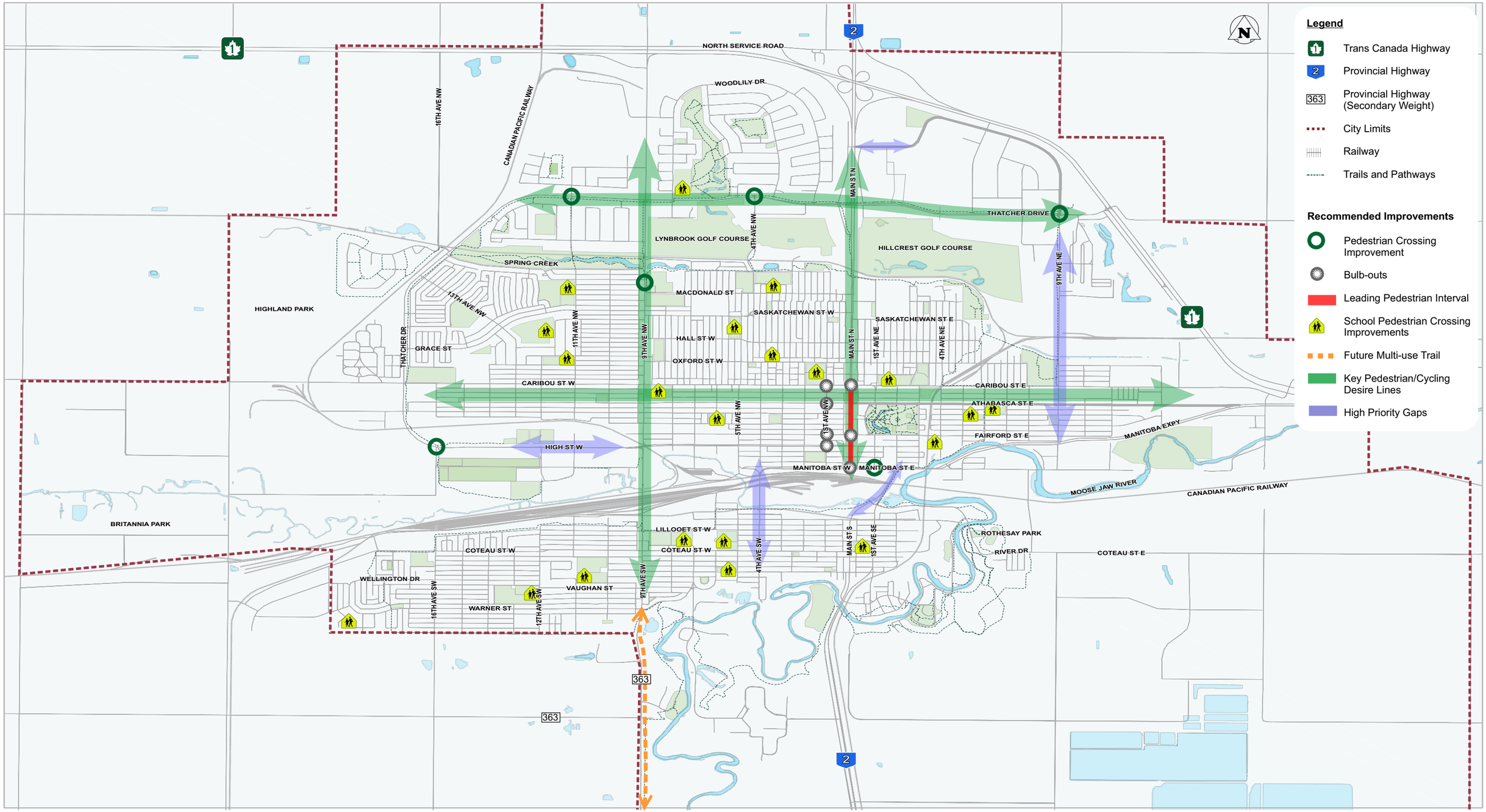
Active transportation can provide safe, affordable, and efficient transportation opportunities for people to incorporate physical activity into their daily lives and gain associated health benefits. Moreover, the adoption of active modes of travel not only enhances personal well-being but also yields broader community advantages, including reduced greenhouse gas emissions, enhanced air quality, and optimized utilization of existing infrastructure. By fostering a transportation network that accommodates active modes, communities promote transportation choice, enhance neighborhood connectivity, and cultivate vitality, contributing to the realization of a complete community. As Moose Jaw competes to keep and attract young residents, providing transportation choices will be important.

Moose Jaw boasts several key destinations that showcase its history, culture, and natural beauty. Infrastructure supporting access to these key destinations, among others, should be prioritized.

- Moose Jaw Downtown
- Saskatchewan Polytechnic
- Yara Centre
- Main Street, including Town 'N' Country Mall
- Thatcher Drive

The high-level recommended active transportation improvements are presented in Figure 3-1.

MOOSE JAW TRANSPORTATION MASTER PLAN



Legend

- Trans Canada Highway
- Provincial Highway
- Provincial Highway (Secondary Weight)
- City Limits
- Railway
- Trails and Pathways

Recommended Improvements

- Pedestrian Crossing Improvement
- Bulb-outs
- Leading Pedestrian Interval
- School Pedestrian Crossing Improvements
- Future Multi-use Trail
- Key Pedestrian/Cycling Desire Lines
- High Priority Gaps

FIGURE 3-1: PEDESTRIAN & CYCLING NETWORK

3.1 Transportation and Health

Transportation networks are traditionally designed to focus on travel by car. This type of design can have the unintentional result of removing physical activity from people's lives and discouraging travel by active modes such as walking, cycling and transit.

We are learning that transportation, by providing active modes opportunities, has a direct tie to people's overall health and life expectancy. Even a modest increase in walking and cycling to work or school can be important to a person's health and impact societal costs for health care, but also address other transportation consequences, including congestion, vehicle pollution, public productivity, and sustainability. The City of Moose Jaw needs to draw awareness to the importance of transportation in creating a built environment that better supports a healthy community.

Goals for the Moose Jaw TMP aligned with the following public health goals:

- Change in how we plan communities and transportation, including expanded availability of public transit infrastructure through improved funding.
- Strengthen public policies to support greater active transportation and public transit use. There needs to be a stronger connection between the high-level vision expressed in public policies and the local implementation of solutions to improve communities. There are many transportation and land use planning policies that could better support the achievement of compact, complete communities involving more walking, cycling and public transit use.

Normalize planning for active transportation and public transit use by municipalities. Planning for walking, cycling and public transit use should not be an exception to be accommodated as an afterthought or only provided for recreational purposes. Instead, planning for active transportation and public transit use needs to become as routine as planning for water, sewers, roads and utilities. Municipalities are learning that these aspects of transportation are important to be competitive as a municipality.

Municipalities such as Moose Jaw should institutionalize the consideration of active transportation and public transit at all levels of planning. This includes:

- Supporting greater integration of land use and transportation planning i.e. building neighbourhoods that incorporate active transportation solutions.
- Establishing and reporting on the achievement of municipal targets for active transportation and public transit use (i.e. know current usage, goals to be achieved and regular check-ins on progress).
- Require transportation impact assessments (TIAs) for all new developments that follow recognized standards for assessing all modes of travel within the analysis.

3.2 Sidewalk Network

Most trips in the network begin and end by walking. Individuals who primarily rely on driving as their mode of transportation often rely on sidewalks to access their destinations after parking their vehicles. Likewise, transit riders benefit from seamless connections between bus stops and their intended destinations. This emphasizes the importance of ensuring that areas where people walk, whether adjacent to the network or within the network itself, are thoughtfully designed to enhance pedestrian accessibility.

Existing Conditions

The City of Moose Jaw manages approximately 240 kilometers of sidewalk infrastructure within its municipal boundaries and the condition this infrastructure varies between good to poor. Moose Jaw's downtown core has an extensive sidewalk network with wide sidewalks to accommodate pedestrians. This network supports pedestrian movement in the downtown as Moose Jaw is frequently visited by tourists.

As the network extends out, there are gaps in the network that could provide access to major destinations, transit stops, or the multi-use pathway system. The sidewalk widths also become narrower.

A well-connected sidewalk network can significantly contribute to the safety and accessibility of routes leading to schools, ensuring that students can commute safely and conveniently. The Safe Routes to School assessment identified that there are schools within Moose Jaw that lack nearby accessible curbs or have missing sidewalks adjacent to the school, and that signage and pavement markings were worn or outdated. Most municipalities reviewed in Saskatchewan have already moved from a 40 km/h speed limit to 30 km/h speed limit within school zones.

What We Heard About Sidewalks

The public engagement sessions indicated a desire to see better, safer connections between major destinations. There is also a strong community desire for better public transit. Sidewalk infrastructure can provide for increased connectivity and accessibility in the areas surrounding major destinations, supporting public transit, and providing safe routes to schools.

Key themes that emerged in respect to the pedestrian network:

- There are gaps in the network that provide access to major destinations (i.e. development along Thatcher Drive, Dr. F.H. Wigmore Regional Hospital, Yara Centre).
- There are missing sidewalk connections (i.e. sidewalks that do not connect to a trail or are missing segments all together).
- An additional level of control is required to facilitate pedestrians crossing roadways.
- Sidewalks need maintenance or repair or lack accessible ramps.

Quick Facts

- 240 km of sidewalk infrastructure
- 8% of commuters currently travel by walking.

Policies and Recommended Actions

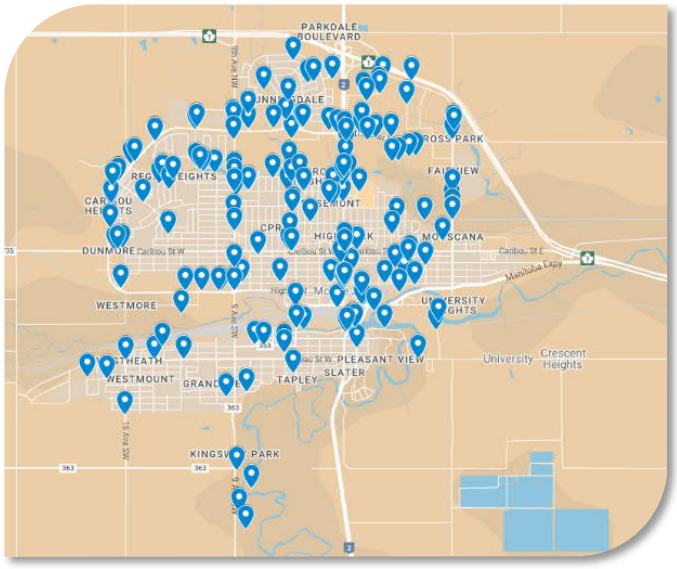
Sidewalks play an important role in transportation networks as they enhance connectivity and promote alternative transportation modes to driving. Maintaining a safe and accessible network of sidewalks is key to providing safe routes to schools and providing accessible, safe, comfortable sidewalks for all persons and abilities.

Guiding Principle: Build a safe and accessible pedestrian-friendly city.

Highlights of the sidewalk network recommendations are summarized below.

FILL SIDEWALK GAPS

Providing continuous pedestrian facilities is important to improving pedestrian safety. Moose Jaw residents identified more than 125 locations that were missing sidewalks and another 60 locations where sidewalk repair or maintenance was needed. Missing sections of sidewalk and sidewalk repairs should be prioritized and completed. This includes adopting a sidewalk renewal policy that addresses these locations and prioritizes them for maintenance.



The Safe Routes to School review identified that there are a number of school zones that have a sidewalk on one side of the street, which is often adequate if it is along the school side of the street. But several school zones have sidewalks only on the non-school side or have no sidewalks on either side of a street. These locations should be prioritized in need of additional sidewalks.

One challenge to addressing the sidewalk gaps and maintenance is funding. The sidewalk network should be prioritized focusing on key areas that are pedestrian generators, such as schools, recreational centres, and missing pathway connections.

3.2.1 MORE WALKABLE COMMUNITY

The importance of pedestrian-friendly access to nearby destinations lies at the core of constructing an inclusive, integrated, and sustainable transportation system.

Accessibility for Everyone

One element of an inclusive sidewalk network is the provision of pedestrian ramps at street corners. Pedestrian ramps facilitate accessibility and walkability and are needed for the safe access and egress for pedestrians, strollers, wheelchairs and walkers, small bicycles, and more. When pedestrian ramps are missing from even one corner of an intersection, it can be a barrier and safety risk to users. The best practice for pedestrian ramps is to have them at all corners of intersections where sidewalks are present, but especially for crosswalks. Nearly every school zone in Moose Jaw had crosswalks and intersections with missing pedestrian ramps, and schools and other important areas of pedestrian traffic should be given priority for installation.

Leading Pedestrian Interval

Moose Jaw's downtown is vibrant and exciting and attracts residents and tourists year-round. Moose Jaw's downtown is full of pedestrian activity. In areas with high pedestrian activity, such as Moose Jaw's downtown, a leading pedestrian interval is particularly valuable in enhancing pedestrian safety at intersections, by providing pedestrians with a head start to begin crossing before vehicles receive a green light. This strategic timing reduces conflicts between pedestrians and turning vehicles, mitigating the risk of collisions, and improves overall pedestrian visibility. Leading pedestrian intervals are especially beneficial in areas with high pedestrian activity, where prioritizing pedestrian movements enhances overall intersection safety and promotes walkability.

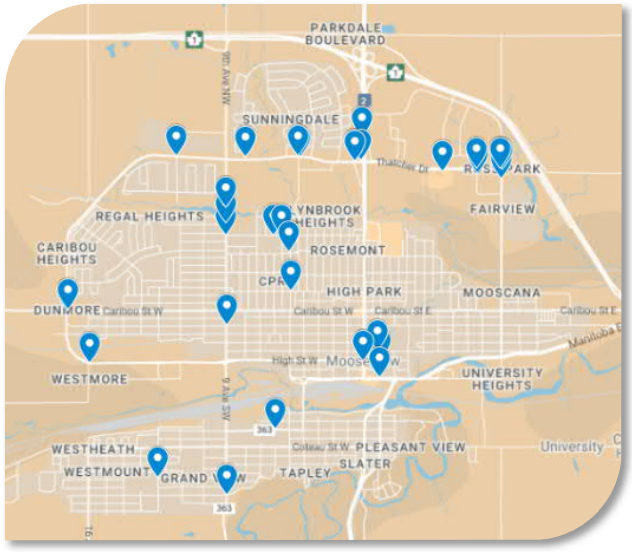
Establish Standards for Sidewalk Widths

Sidewalk width is crucial as it directly impacts pedestrian comfort, safety, and accessibility. A wider sidewalk allows for smoother pedestrian flow, accommodates diverse users, including individuals with disabilities or caregivers with strollers, and provides space for amenities like benches or street trees, enhancing the overall pedestrian experience and encouraging active transportation. The sidewalk width needs to be relative to the surrounding amenities and road classification. Standards for typical sidewalk widths relate to the classification of road. More information on recommended sidewalk widths can be found in Section 2.2.1 Roadway Function.

3.2.2 SAFER STREETS AND CROSSINGS

Improved Pedestrian Crossings

In addition to sidewalks, residents identified a need for improved pedestrian crossings at various locations around the city. Pedestrian crossings along Thatcher Drive, and at 9th Avenue Northwest near the Kinsmen Sportsplex were identified as primary corridors where improved pedestrian crossings were needed. Other locations identified included the trail at the High Street West and Thatcher Drive intersection, and at Manitoba Street East and 1st Avenue Northeast intersection.



Pedestrian Treatments Guidelines

Traffic control at pedestrian crosswalks may come in a variety of forms through the combined use of pavement markings, signage, as well as illumination and signalization. Uniform application of pedestrian treatments promotes improved motorist awareness and compliance with the various forms of traffic control. Ideally, a municipality would adopt a policy regarding application of pedestrian crossing treatments to ensure the uniform application of treatments and control that consistently meets motorist expectation.

Over time, all pedestrian crossing treatments should be updated to meet current national guidelines.

Safe Routes to School

Children are one of the most vulnerable road users. There are several improvements that can be implemented to improve the safety of children using the transportation network.

- Speed Limit Reduction – Reduced speed limits significantly decrease the risk of collisions and limit the severity of injuries sustained in a collision. A lower speed limit through school zones and play areas is considered a best practice. It is recommended that Moose Jaw convert to a speed limit of 30 km/h within school zones and when there is an adjacent play area. This is consistent with national guidelines and in line with the majority of Canadian municipalities.
- School Zone Signage - Just as every school zone should have signage marking the beginning of the school zone and reduced speed limit, so should each school zone have speed limit signs at the corresponding end points of the school zone in order to specify where the resumption of the original speed limit begins.
- Crosswalk Signage - For the most part, Moose Jaw uses the standard School Zone Crosswalk sign, but there are dozens of locations where very old or incorrect crosswalk signs are in place, or do not have enough signs present to meet current national standards. Crosswalk signage should be updated to meet current national standards.
- Pavement Markings - Ladder crosswalks and standard twin parallel lines are currently used as crosswalk treatments in school zones. All school crosswalk locations must use zebra crosswalks or a ladder crosswalk as an alternative.

Traffic Calming Guidelines

Traffic calming refers to the deliberate design and implementation of measures aimed at reducing vehicle speeds, improving safety for all road users, and creating more livable and pedestrian-friendly environments within communities. These measures can include physical interventions such as speed humps, chicanes, road narrowing, roundabouts, and raised crossings, as well as signage, road markings, and landscaping strategies. The overall aim of traffic calming is to create streets that prioritize safety, accessibility, and comfort for pedestrians, cyclists, and residents, while still allowing for efficient movement of vehicles.

Adopt the Transportation Association of Canada's Traffic Calming Guidelines which formalizes the process for traffic calming with specific warrant criteria to guide decision-makers and City staff on the types of measures that are most appropriate to implement based on the situation.

Sidewalk Network Recommendations:

(1.39) Address gaps in the sidewalk network as part of regular operations and maintenance.
(1.40) Implement pedestrian ramps at schools and near key destinations.
(1.41) Add a leading pedestrian interval to signalized intersections along Main Street in the downtown.
(1.42) Establish standard for crosswalk widths.
(1.43) Improve pedestrian crossings at key crossings throughout the network.
(1.44) Ensure all pedestrian crossings meet current industry standards.
(1.45) Update school zone signage to be consistent with current standards.
(1.46) Implement speed reduction to 30 km/h in school zones.
(1.47) Adopt National Traffic Calming Guidelines.

3.3 Cycling Network

The City of Moose Jaw completed the Moose Jaw Trails and Pathways Master Plan in June 2023. The Trails and Pathways Master Plan provides a way forward to improve and expand its trails and pathway system over the next decade and beyond. The cycling-related recommendations in the TMP build upon the Trail and Pathways Master Plan recommendations.

Existing Conditions

The City of Moose Jaw has over 70 km of pathways and trails within its municipal boundary. This infrastructure enables residents to travel through the city under their own power, and provides opportunities for recreation, physical activity, and spending time outdoors. These trails are divided into three main areas: Northwest Trails, Northeast Trails, and South Trails.

- Northwest Trails | The Northwest Trails area spans from the west side of Main Street, east to the City boundary and from the north side of the rail tracks, north to the City boundary. The northwest contains several newer neighbourhoods where trails created as subdivisions were developed. Rotary Trail is a key east-west connection that runs along Thatcher Drive.
- Northeast Trails | The Northeast Trails area covers Main Street east to the City boundary, and from Manitoba Expressway north to the City boundary. The eastern half of the Rotary Trail loop runs through this area and connects the east and west sides of the City.

Quick Facts

- 70 km of trails and pathways
- No formal on-street cycling infrastructure
- 5% of commuters currently travel by cycling,
- 24% of commuters indicated they would prefer to travel by bike.

- South Trails | The South Trails area spans south of High Street and the Manitoba Expressway to the City boundary. The area includes industrial and commercial areas along Lillooet St. W and residential areas further south. The South area also includes Wakamow Valley.

While the City has developed a substantive trail network for a community of its size, it has not yet adopted an on-street cycling network to accommodate residents.

What We Heard about Cycling

Residents and stakeholders expressed a strong desire for on-street cycling infrastructure to provide a safe and comfortable network that allows residents to reach their place of work or recreation without the need of a vehicle. Cycling facilities are complementary to pedestrian facilities in an inclusive, integrated, and sustainable transportation system.

Key themes that emerged in respect to cycling:

- An east-west connection through the city is needed. The following roads were identified as potential candidates: Thatcher Drive, Athabasca Street East, Caribou Street East and West, Manitoba Street East and West
- A north-south connection through the city is needed. The following roads were identified as potential candidates: including Main Street, 9th Avene Northwest, 9th Avenue Northeast, and Thunderbird Bridge were identified.
- A bike path to 15 Wing Moose Jaw was also identified as a missing link in the network.
- Residents also identified better access to key destination was needed, including:
  - Access to work to shopping destinations along Thatcher Drive, Main Street, Downtown, and Town and Country Mall.
  - Access to institutional destinations including the hospital, library, and Sask Polytechnic.
  - Access to recreational sites including Crescent Park, Wakamow Valley, Yara Centre, and the Kinsmen Sportsplex.

Policies and Recommended Actions

Active transportation can provide safe, affordable, and efficient means of transportation enabling people to integrate physical activity into their daily routines and gain associated health advantages.

Guiding Principle: Establish an integrated and safe cycling network.

Highlights of the cycling recommendations are summarized below.

3.3.1 FILL PATHWAY GAPS

The Trails and Pathways Master Plan identified that there are gaps and deficiencies in the network that need to be addressed ensuring that the cycling network is complete and accessible for all residents. Doing so will improve the usability of the trail network and improve safety for pedestrians and cyclists. This, in turn, will result in more people walking and cycling for transportation, recreation and health. The City should continue to prioritize address gaps in the trail and pathway network.

3.3.2 CYCLING NETWORK PLAN

A comprehensive cycling network plan that connects to the pathways / trails network should be prepared to promote sustainable transportation options, enhance public health, and foster a vibrant community for Moose Jaw residents. Along with the personal health benefits of increasing active modes of travel, there are broader community advantages, including reducing greenhouse gas emissions, improved air quality, and optimizing use of existing infrastructure. A transportation framework that facilitates active modes not only fosters individual well-being but also aligns with the notion of complete communities by affording transportation options.

A cycling network plan should incorporate the following elements:

- Identifies north-south and east-west connections across the city (i.e. 15 Wing Moose Jaw connection)
- Provides connected routes that serves demand to key destinations.
- Identify facility types for different road classifications.
- Incorporates flexibility to accommodate the city's growing needs.
- Missing connections (incorporate trail master plan)

3.3.3 CYCLING FACILITY STANDARDS

Cycling facilities encompass a variety of infrastructure types designed to accommodate and encourage bike use in urban and suburban areas. The type of facility implemented depends on the traffic volume, traffic speed, and available space. Bike lanes, distinguished by painted markings or physical barriers, provide designated space for cyclists alongside motor vehicle traffic, promoting safety and visibility. Separated bike paths, often found in parks or adjacent to roads, offer exclusive facilities for cyclists, protected from car traffic. Shared roadways, where cyclists and vehicles coexist without separate lanes, are common in residential areas and low-speed urban streets. Additionally, bike parking facilities, including bike racks and secure enclosures, support cyclists by offering convenient storage options at key destinations. Each facility type serves to enhance cycling accessibility, safety, and convenience, contributing to the promotion of sustainable transportation alternatives.

Developing a set of standards for cycling facilities is essential for several reasons:

- Safety
- Accessibility
- Consistency
- Efficiency
- Public Confidence
- Long-term planning

Cycling Network Recommendations:

(1.48) Address gaps in the trail and pathway network as identified in the trails master plan.
(1.49) Develop a comprehensive on-street cycling network plan.
(1.50) Develop a set of cycling facility standards.

3.4 Transit Network

Transit plays a vital role in the transportation system in Moose Jaw. Having an effective and efficient transit system in Moose Jaw will provide essential mobility and independence for those who are non-drivers by choice or necessity - seniors, children, students, and workers and low-income families who do not have access to a vehicle. Transit also plays an important role for persons with disabilities, who may have limited other mobility options.

An efficient transit service in turn supports local employers and businesses and enhances a dynamic downtown core, shopping centres and the vibrant cultural/recreational facilities in Moose Jaw. The transit service also serves to reduce traffic and parking congestion, air pollution, and contributes to local climate change strategies in the City.

Quick Facts

- 6% of commuters travel by transit
- +32,000 trips completed by transit in 2022

Existing Conditions

Moose Jaw's transit network (Figure 3-2) operates four fixed Regular Transit routes on 40-minute cycles to provide service for customers traveling to and from the four quadrants of the city. Route 2 and Route 4 are interlined (i.e. two independent routes combined into one operational schedule), and Route 1 and Route 3 are interlined. All the routes converge together at a central depot in the downtown core in the vicinity of City Hall and the Mae Wilson Theatre. Regular transit service currently operates between 7:15 a.m. and 6:30 p.m. Monday to Friday. No transit service is currently available on weekends or statuary holidays. Additional transit service coverage is offered on regular school days to high school students on School Extra runs which operate from South Hill and Northwest areas of the city, to complement Regular Transit Service.

Paratransit is also offered by the City from Monday to Friday between 7:30 a.m. and 5:30 p.m. and on Saturday between 10:30 a.m. and 5:30 p.m. Customers of this service must schedule rides and are encouraged to book in advance. The Paratransit service is focused on providing trips for customers that have pre-booked medical and other appointments. Approximately 60% of Paratransit trips are scheduled as reoccurring, and the service meets the needs of other customers with more immediate trips needs as it can best accommodate.

MOOSE JAW TRANSPORTATION MASTER PLAN

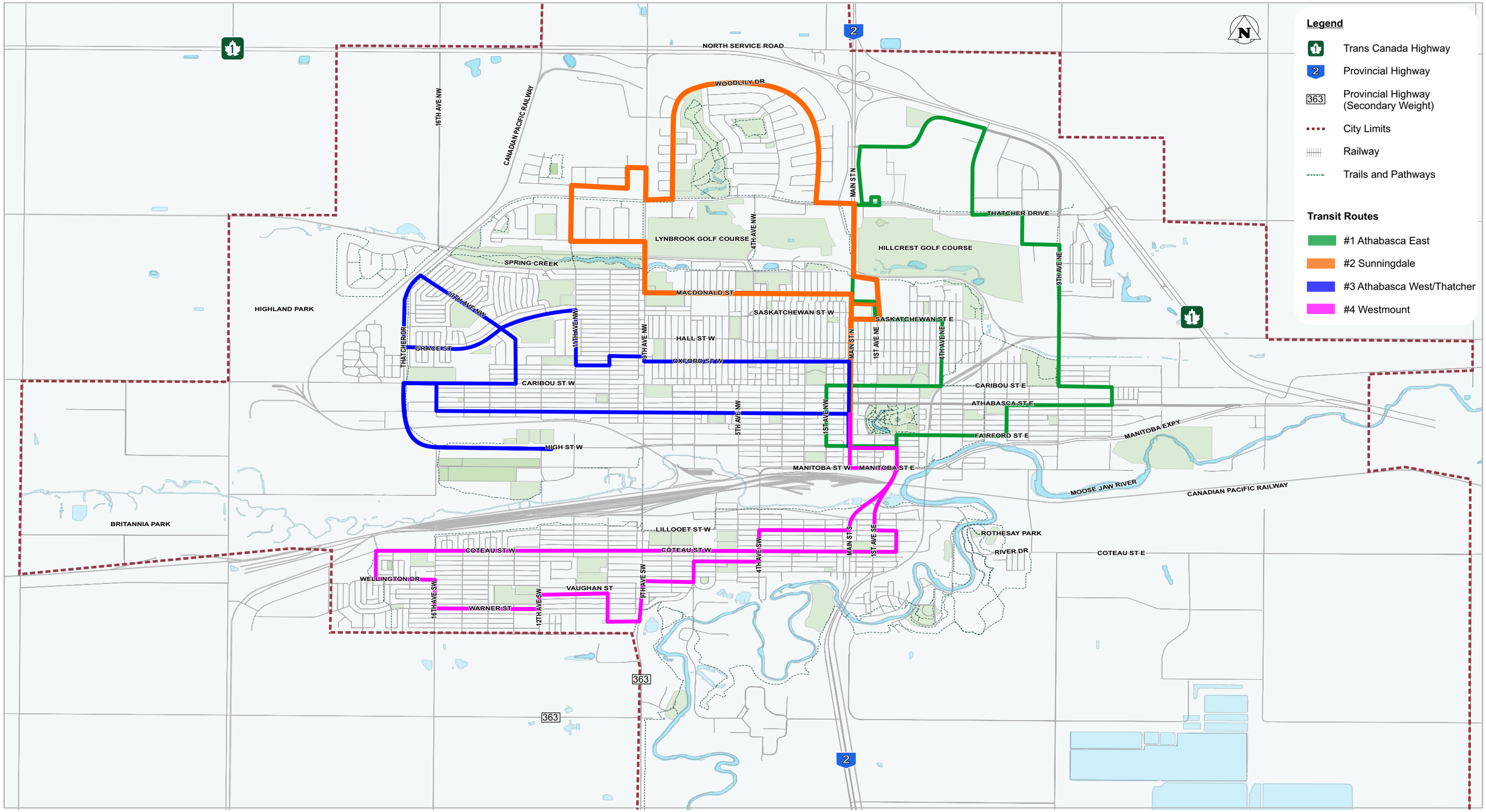


FIGURE 3-2: EXISTING TRANSIT NETWORK

What We Heard about Transit

A broad range of comments were raised by participants during the engagement events relating to regular and paratransit services. The following themes emerged with respect to transit:

- Service Hours: Desire for transit service to begin earlier in the day and end later in the day, particularly for work trips. There was also a desire to provide weekend service for those working weekends and/or getting groceries.
- Bus Frequency: Desire to provide service more frequent than the current 40-minute service.
- Access: Desire to improve bus stop locations and accessibility. Some locations lack sidewalks making it difficult to access the transit stop.
- Reliability: Desire to improve transit service reliability and bus route locations as well as provide up- to-date customer information in terms of bus routes and scheduling.
- Amenities: Desire to improve transit infrastructure at bus stops (i.e. shelters, benches, lighting, landing pads, etc.).

Policies and Recommended Actions

Investing in transit is critical to keeping residents moving as the population grows. The TMP aims to increase transit ridership and recommends increased investment in transit service and infrastructure to expand transit service, make transit faster, and more reliable. Transit is the best option for shifting driving trips that are too long to walk or bike, and increase mobility options for residents.

Guiding Principle: Elevate the role of public transit.

Highlights of the transit recommendations are summarized below.

3.4.1 EXPANDED TRANSIT SERVICE

Transit service should be expanded to cover early mornings and evenings to better serve the needs of all residents (i.e. workers, shoppers, and medical and tourist needs). Transit service later into the evening, or on weekends, may not translate into many riders. But in the long run, its availability tends to correlate with high ridership. That's because riders won't use the service in one direction unless they can get back, so evening service, even if the buses aren't full, is a key part of how high ridership can be developed all day. The same is true of weekends. If you commute five days a week including some weekend days – like many people in the retail, entertainment, or service sectors – you are unlikely to rely on transit unless it works for you on all of those days.

3.4.2 MORE FREQUENT TRANSIT SERVICE

Frequency of service is a key factor in attracting riders. The TMP aims to increase frequency of service to every 30 minutes by adding vehicles and operators, as well by reducing some bus stops and areas covered.

Frequency of transit service has three independent benefits for the customer, which helps to explain why high frequency is so critical to increasing ridership:

- It reduces waiting for the customer, which is everyone's least favorite part of a trip. The basic sensation of being able to go when you want to go is the essence of frequency.
- It makes connections easy, where routes become part of a stronger transit network. A network of frequent transit routes makes it easy to travel in two dimensions – all over the city, or at least all over the part of it that

supports frequent service. This network change effect massively expands the usefulness of every line in the network, thus increasing each line's ridership potential.

- Frequency of service can act as a backstop for reliability. If a vehicle breaks down or is late, frequency means another will be along soon.

Riders would also benefit from a Transit Live Application. This application will provide visibility of bus location in the network through a real-time bus location map. A rider can wait indoors until their bus is approaching, which makes the transit system much easier to use and increases ridership.

3.4.3 BUS STOP IMPROVEMENTS

Bus stops should be recognizable, accessible, and comfortable places for people to wait for the bus. Upgrades to aging or substandard bus stops will continue, with a focus on high-activity locations. Improvements will focus on accessibility and capacity enhancements and providing amenities such as benches, lighting, signage, and shelters, where warranted. Amenities will be prioritized at bus stops near major destinations or where two or more transit routes meet.

While the City could simply proceed with this list of recommendations in the order presented, this review was intended as a high-level examination of the Moose Jaw transit network and to develop potential solutions that may have the most impact for improving transit as a necessary part of a good City transportation network. In order for these recommendations to proceeds, it is recommended that a full City Transit Master Plan be completed to confirm the details, sequencing and operating and capital costs of the various transit service and related recommendations.

Transit Network Recommendations:

(1.51) Establish a Transit-Live App.
(1.52) Complete a Transit Master Plan
(1.53) Expand weekday hours of service and frequency.
(1.54) Review and update transit stop locations.
(1.55) Improve the overall maintenance condition of all transit stops.
(1.56) Provide regular transit service on Saturdays and pilot an on-demand service on Sundays.
(1.57) Establish an enhanced branding and marketing strategy for the transit system.
(1.58) Provide enhance bus stop elements.
(1.59) Improve paratransit scheduling and increase hours for paratransit dispatcher.
(1.60) Update the City's Paratransit Application form to meet current industry standards and guidelines.
(1.61) Extend weekday Paratransit service.

3.5 Micromobility

Approximately 3 out of every 5 people who responded to the TMP's active modes survey indicated that they have either used or would consider using micro mobility solutions for travel, such as scooters or e-bikes.

This response follows a trend in North America on the growing use of micromobility solutions. Scooters are seen as a cost-effective and environmentally sustainable solution for short trips and often focused on tourist areas and downtowns. By comparison, e-bikes allow for a longer range of travel and able to address Moose Jaw's hilly terrain. Both of these micromobility solutions could find their way into Moose Jaw's suite of transportation services over time.

While there is no current plan around bringing in a program around micromobility to Moose Jaw, it is possible that Moose Jaw could be considered as a viable location for these services, either today or in the future, by commercial providers that offer these solutions on a pay per use platform. A level of preparedness is encouraged based on the lessons learned from other municipalities who have seen change occur overnight and are quickly trying to adapt their transportation system to accommodate these uses.

While micromobility solutions seem straight forward for implementation, addressing the competition for roadway space between users, looking at the difference in travel speeds that result between road users, and addressing clutter associated with parked scooters around street corners can quickly become important.

Moose Jaw may want to regulate the use of electric scooters and electric bikes as these solutions become more used in the city. Considerations should include:

- Designated lanes: Designated lanes for e-scooters and e-bikes to ensure the safety of riders and pedestrians. These lanes can be combined with bike lanes.
- Speed limits: Implementing speed limits for e-scooters and e-bikes in crowded pedestrian zones can help improve safety and reduce the severity of injury in the case of a collision. Try and group users by speed of travel where possible.
- Restricted zones: There may be specific areas where e-scooters and e-bikes should be restricted or prohibited altogether, such as pedestrian-only zones, parks, or areas with high pedestrian traffic.
- Parking regulations: Establishing regulations for parking e-scooters and e-bikes can help prevent clutter on sidewalks and ensure accessibility for pedestrians.

The City should investigate current regulations around micromobility use in other jurisdictions, examine best practices around integration of micromobility into the transportation network and identify issues around incorporating different micromobility solutions. The City of Moose Jaw should try to strike a balance between promoting innovation while addressing the challenges associated with the introduction of new micromobility solutions within the transportation network.

Micromobility Recommendations:

(1.62) Monitor regulations, best practices, and integration of micromobility in Moose Jaw's transportation network.

ASSET MANAGEMENT

4.0 ASSET MANAGEMENT

Asset Management involves systematically assessing, maintaining, and optimizing the various components of the city's transportation network, such as roads, bridges, traffic signals, and transit systems. It entails collecting data on the condition, performance, and lifecycle costs of these assets to inform the decision-making processes, prioritize investments, and maximize the lifespan and efficiency of the infrastructure.

Municipalities need to determine how to allocate limited resources in the most cost-effective manner to provide the greatest benefit to residents and stakeholders. In any municipality, there are completing needs for budget resources which highlights the need for decision-making criteria and understanding where financial investment may have the greatest impact.

By implementing proactive maintenance strategies and leveraging technology, Moose Jaw can ensure that their transportation assets operate safely, reliably, and cost-effectively, thereby enhancing the overall mobility and quality of life for residents.

4.1 Road Renewal Program

A block-by block road condition assessment was completed for all 227 km of roadway within Moose Jaw. The roads were inspected for types of pavement distress and each road was rated according to its severity and density.

Existing Conditions

Moose Jaw has seen improvements on its overall road network, notably on its arterial roads, where the percentage of road segments assessed as in 'Good' condition has doubled between 2018 and 2023. Local and Collector roads have seen an improvement as well. The average pavement condition for the overall network is considered in 'Fair' condition.

Arterial roads experienced the greatest overall improvement since 2018; whereas local roads saw the least overall improvement. There are still areas that require attention on the road network.

The City of Moose Jaw uses a classification-based system with specific road condition targets to help guide road renewal and assess the state of the road infrastructure system. Typically, a local road with lower traffic volumes will have a lower sufficient rating whereas compared to an arterial road, with heavy commercial vehicles and transit, would require a higher road condition to meet the intended function.

The review indicates that there is a significant quantity of roads that are not meeting the intended road condition targets. The overall results indicate a need to invest in arterial, all collector road types, and local roads based on the metrics assigned to the road network by the City.

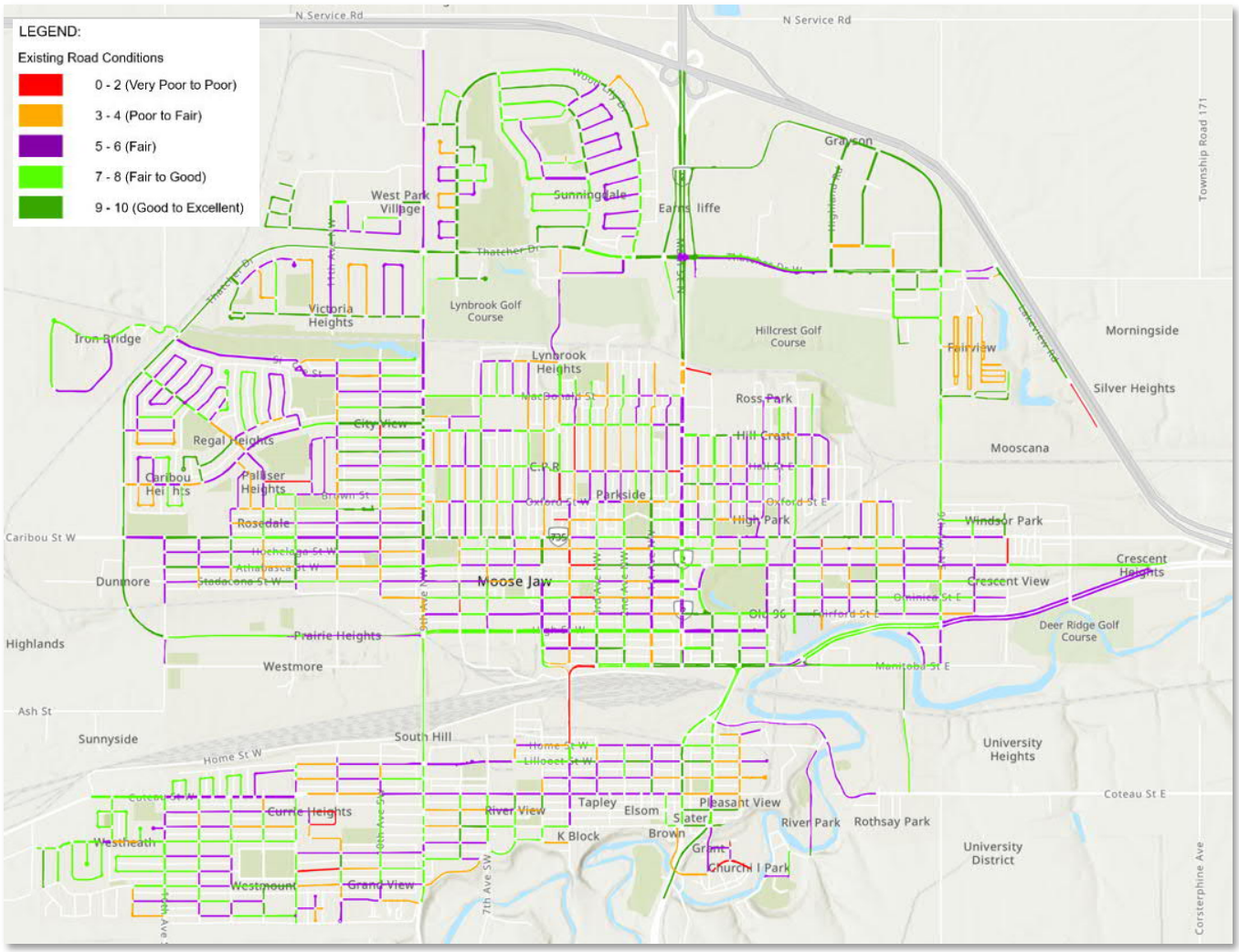
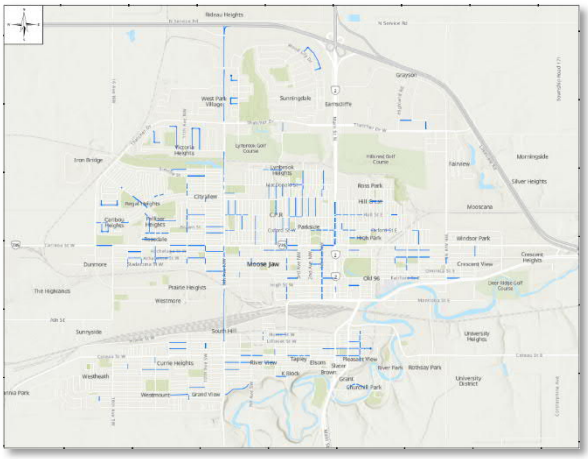


Figure 4-1: Existing Pavement Condition Rating

Road Renewal Prioritization

Municipalities need to determine how to allocate limited resources in the most cost-effective manner to provide the greatest benefit to residents and stakeholders. As in any municipality, there are completing needs for budget resources which highlights the need for decision-making criteria and understanding where financial investment may have the greatest impact. Applying an outcome-based approach to capital planning, project selection can identify where and how resources can be applied for the greatest positive impact.

The locations have been analyzed along with the road condition results to accommodate and align with the infrastructure renewal program. Understanding the timing of infrastructure improvements and aligning road renewal program is a cost-effective approach so that underground projects may be completed prior to pavement renewal efforts.

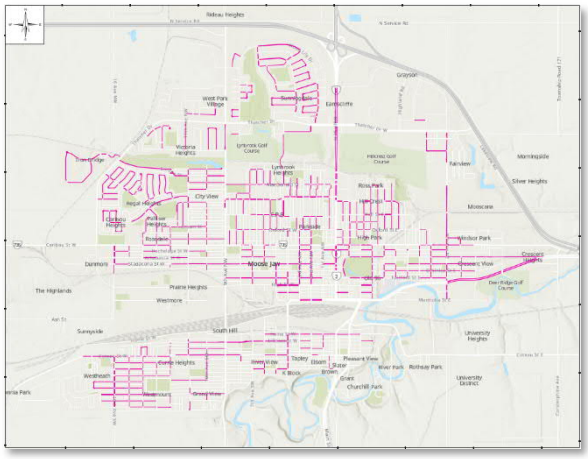


Short-term Road Improvement Areas

Renewal Strategy & Budgeting

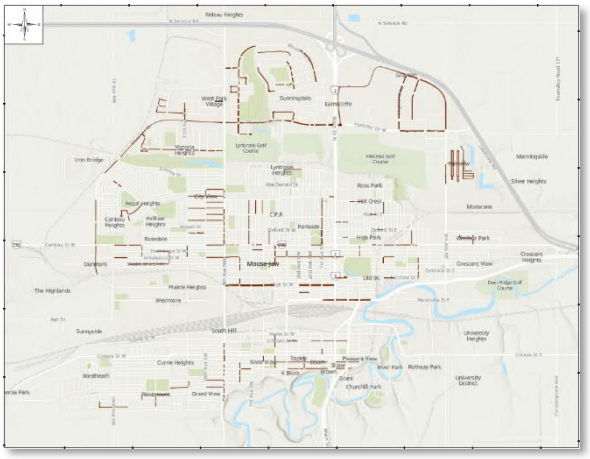
Several options were assessed for Moose Jaw's 10-year road renewal strategy. Ultimately, it was determined that a municipality may extend the useful life of a pavement surface with early interventions where cost effective preventative maintenance can be an effective renewal strategy.

By adjusting the road condition targets for arterials and major collectors, this allows for further investment into local roads and minor collectors that predominantly have destinations serving vulnerable uses along their corridors. Shifting the targets shifts the investment into safe routes to school and increasing accessibility across the transportation network. Furthermore, this approach provides for a more consistent road surface quality across the network and promotes preventative maintenance.



Medium-term Road Improvement Areas

This option balances investment across road classifications, continues investment to maintain key arterials, and allows for additional investment into local roads. This balance of investment recognizes the desire for safer cycling routes, safer connections between major destinations, and a desire for better transit by increasing the target PCR for local roads.



Long-term Road Improvement Areas

The estimated budget required is similar to the status quo, with the difference of front-loading the investment to raise the condition of local and minor collector roads. The increase

in the level of investment is intended to raise the network standard to a position where more cost-effective maintenance and resurfacing strategies may allow for an overall reduction in the level of investment to maintain a higher PCR target. Factors such as inflation will impact the level of investment over time.

Road Renewal Recommendations:

(1.63) Incorporate a prioritization matrix to select road improvement projects.
(1.64) Implement the 10-year road renewal strategy.

4.2 Sidewalk Renewal Program

The City's 240 kilometers of sidewalk network was last assessed in 2019 and included evaluating the sidewalk, curb, gutter, median and accessible ramps. Over 6,500 defect points were identified during the assessment. Sidewalks were grouped into priority ratings based on the condition and severity of the defects for each of the sidewalk blocks.

Existing Conditions

The condition of the sidewalk network was assessed based on the presence of trip hazards, missing structure, or other defects that may result in public safety hazards. Approximately 25% of the sidewalk network has been identified as having some sort of tripping hazard. A high concentration of tripping hazards was generally observed in three general locations across the City:

- 9th Avenue Northwest to Main Street from Saskatchewan Street West south to Manitoba Street West
- Main Street to 8th Avenue Northeast from Saskatchewan Street East to Fairford Street East
- 9th Avenue Southwest to 1st Avenue Southeast from Home Street West south to Grandview Street West.

These areas represent a significant portion of the city covering approximately 50% of the city sidewalk network.

Sidewalk Renewal Prioritization

Municipalities need to determine how to allocate limited resources in the most cost-effective manner to provide the greatest benefit to residents and stakeholders. Applying an out-come based approach to capital planning project selection can identify where and how resources can be applied for the greatest positive impact.

The sidewalk renewal project selection for Moose Jaw should be based on a prioritization matrix that places priority on renewals in proximity to major destinations, supports vulnerable users, and supports transit.

The sidewalk renewal project selection should not be done in isolation. Coordinating the sidewalk renewal with the road renewal programs can be an effective manner to improve accessibility and safety through the City's transportation network. Sidewalks act as primary transportation routes for users that do not drive, including children and seniors, and are a part of providing safe routes to schools and community facilities.

Furthermore, integrating the sidewalk and road renewal program may result in economies of scale and an opportunity to address any changes in road design that may be considered based on development standards and construction specifications.

Renewal Strategy & Budgeting

Given the significant coverage area of defects identified, the City may consider a renewal strategy that focuses on addressing priority areas in proximity to schools, and destinations that serve vulnerable users such as seniors facilities, and health care facilities. Overall, the sidewalk renewal strategy for the sidewalk network should prioritize:

- Addressing tripping hazards and sidewalk defects in locations where the defects represent a higher risk of injury during a fall such as around health care facilities, seniors homes, and parks.
- Addressing sidewalk improvements that align with the Safe Routes to School program and addressing the areas around Central Collegiate, William Greyson, Ecole Ducharme, King George, Agnes School, Clark Gillies Park, St Mary School, and Cornerstone Christian School.
- Focusing on the downtown Main Street business corridors to provide a high-quality pedestrian environment.
- Incorporating sidewalk renewals into the road improvement capital plans. Combining sidewalk repairs with the road improvement capital plan may provide cost efficiencies through coordination of projects.

Sidewalk Renewal Recommendations:

(1.65) Sidewalk renewal project selection should be based on a prioritization matrix that places priority on renewals in proximity to major destinations, support vulnerable users, support transit.

(1.66) Coordinate sidewalk renewal and rehabilitation projects with road infrastructure capital projects so to realize cost efficiencies by grouping projects.

(1.67) Assess the extent and severity of the sidewalk block taking into consideration the impact of the defects on persons in wheelchairs or other mobility aids.

(1.68) Future sidewalk infrastructure condition assessments should be completed on a block-by-block basis to establish the severity and extent of the defects and to better align sidewalk renewal projects with road infrastructure capital projects.

4.3 Traffic Signal Equipment

The City of Moose Jaw has done an excellent job of upgrading and replacing signal hardware and controller equipment. In general, pedestrian facilities are lacking in many instances (updated push buttons at the intersections, continuous sidewalk or pathway facilities, visible crosswalk markings, ramps, etc.). The traffic signal controllers and cabinets have generally been upgraded, but some are still in need of upgrades, and a systematic approach should be taken to complete the installation of uninterruptable power supplies at critical intersections along Thatcher Drive, Main Street, as well as at railway crossings or adjacent to Fire Halls.

Along Thatcher Drive it was noted that the pedestrian push buttons were located facing the road. The pedestrian push buttons should be relocated to the approaching pedestrian and to keep the pedestrian away from the road until it is safe to cross.

Traffic Signal Equipment Recommendations:

(1.69) Systematically update outdated traffic signal control equipment and install uninterruptable power supplies at critical intersections.

(1.70) Review location of pedestrian push buttons along Thatcher Drive.

4.4 Operations and Maintenance

Investment in new infrastructure and expansion of the transportation network cannot solely accommodate future growth and demands. Strategies and initiatives to enhance the existing road network in Moose Jaw must also be implemented. There are opportunities within Moose Jaw to that would be beneficial to apply city-wide.

- Stakeholders identified a concern over operation of the one-way streets on Moose Jaw's South Hill and requested that additional one-way street signage be provided for guidance purposes.
- Review road paint and select product based on wear longevity.
- Replace worn or outdated signage (yield, stop, etc.) with new signage that meets current industry standards.
- Ensure that sign installation meets current industry standards (i.e. stop signs on separate poles, 4-way tab signs below the stop sign, correct height and size).
- Establish a signal head orientation and implement consistently across the city.
- Systematically update damaged signal equipment (i.e. backer plates).

Moose Jaw should expand the existing transportation asset management program to respond to current infrastructure maintenance requirements.

Operations and Maintenance Recommendations:

(1.71) Expand the existing transportation asset management program to respond to current and anticipated infrastructure maintenance requirements.

IMPLEMENTATION STRATEGY

5.0 IMPLEMENTATION STRATEGY

5.1 Timing of Initiatives

Figure 5-1 summarizes the recommendations identified throughout the TMP, providing the timeframe of the action within the immediate, short-, medium-, and long-term. Actions denoted with a ← symbol indicate that the recommendation should be initiated over time. In order to implement the TMP, Moose Jaw should identify a TMP coordinator to strategically oversee and integrate the various transportation initiatives in future, ensuring that all aspects of mobility and infrastructure align with the city's long-term vision and operational needs. This position can be through a new staff role or dedicating hours related to an existing staff position.

TABLE 5-1: TIMING OF RECOMMENDATIONS

Priority	Recommendation
Immediate Priority	
Roads	Develop and adopt guidelines for Transportation Impact Assessments (TIAs).
Roads	Require new developments to prepare a TIA to assess all aspects of the network.
Roads	Classify Athabasca Street East as a collector and update the Winter Maintenance Policy, if required, to allow Athabasca Street East to be cleared at the same time as other arterials.
Roads	Classify Diefenbaker Drive and 5th Avenue Northwest, between High Street West and Thunderbird Viaduct, as a collector road.
Roads	Adopt general cross-sections based on road classification.

Priority	Recommendation
TMP	Assign a TMP Coordinator
Roads	Protect the right-of-way to allow for future widening along key corridors.
Roads	Update lane configuration and signage on Thatcher Drive between Blue Sage Drive and 4th Avenue Northwest.
Roads	Install a RRFB to improve pedestrian crossing at the Thatcher Drive and 4th Avenue Northwest intersection.
Peds / Bikes	Implement speed reduction to 30 km/h in school zones.
Transit	Establish a Transit-Live App.
Transit	Complete a Transit Master Plan.
Asset Management	Incorporate a prioritization matrix to select road improvement projects.
Asset Management	Implement the 10-year road renewal strategy.
Asset Management	Sidewalk renewal project selection should be based on a prioritization matrix that places priority on renewals in proximity to major destinations, support vulnerable users, support transit.
Asset Management	Coordinate sidewalk renewal and rehabilitation projects with road infrastructure capital projects so to realize cost efficiencies by grouping projects.
High Priority	
Roads	Adopt the updated road network classification.
Roads	Develop an Intersection Traffic Control Policy.
Roads	Coordinate with the Ministry of Highways to ensure that the road right-of-way is protected for future potential interchanges along located along Highway 1.
Roads	Implement bulb-outs along Main Street at Caribou Street, Manitoba Street, and completing the remaining corners at Fairford Street.
Roads	Implement a leading pedestrian interval along Main Street.
Roads	Assess the potential for permitting left-turning traffic from Fairford Street onto Main Street
Roads	Conduct further review regarding implementation requirements for the presented recommendations along the Thatcher Drive corridor.
Roads	Provide a new signalized access on Thatcher Drive to provide access to the Hillcrest Golf Course and other business located along the south side of Thatcher Drive.

Priority	Recommendation
Roads	Extend sidewalks, provide accessible pedestrian ramps, and update pedestrian crossing at the Thatcher Drive and 11th Avenue Northwest intersection and provide accessible pedestrian ramps.
Roads	Implement bulb-outs on 1st Avenue Northwest between High Street West and Caribou Street West.
Roads	Complete detailed design and implement a centre two-way left-turn lane on 9th Avenue Northwest between High Street West and Caribou Street West.
Roads	Review the potential of extending the centre two-way left-turn lane on 9th Avenue Northwest, from Caribou Street West to Simcoe Street.
Roads	Develop consistent signal timing parameters to be used on the network.
Roads	Coordinate with CN Rail regarding upgrading rail crossing warning systems.
Roads	Investigate a pay-by-app system for parking.
Peds / Bikes	Implement pedestrian ramps at schools and near key destinations.
Peds / Bikes	Add a leading pedestrian interval to signalized intersections along Main Street in the downtown.
Peds / Bikes	Establish standard for crosswalk widths.
Peds / Bikes	Update school zone signage to be consistent with current standards.
Peds / Bikes	Adopt National Traffic Calming guidelines.
Transit	Expand weekday hours of service and frequency.
Transit	Provide enhanced bus stop elements.
Transit	Update the City's Paratransit Application form to meet current industry standards and guidelines.
Transit	Extend weekday Paratransit service.
Asset Management	Assess the extent and severity of the sidewalk block taking into consideration the impact of the defects on persons in wheelchairs or other mobility aids.
Asset Management	Future sidewalk infrastructure condition assessments should be completed on a block-by-block basis to establish the severity and extent of the defects and to better align sidewalk renewal projects with road infrastructure capital projects.
Asset Management	Review location of pedestrian push buttons along Thatcher Drive.
Medium Priority	
Roads	Prepare a Complete Streets Policy.
Roads	Implement gateway treatments at the northern and southern boundaries of the downtown.
Roads	Implement a roundabout at the Thatcher Drive and 9th Avenue Northeast intersection.

Priority	Recommendation
Roads	Explore implementing angled parking on High Street West between Main Street and 1st Avenue Northwest.
Peds / Bikes	Develop a comprehensive on-street cycling network plan.
Peds / Bikes	Develop a set of cycling facility standards.
Asset Management	Provide regular transit service on Saturdays and pilot an on-demand service on Sundays.
Asset Management	Improve paratransit scheduling and increase hours for paratransit dispatcher.
Low Priority	
Roads	24th Avenue southwest should be upgraded as development occurs in the west.
Roads	Protect the land at the 24th Avenue Southwest and Railway crossing for a potential future flyover.
Transit	Establish an enhanced branding and marketing strategy for the transit system.
Ongoing	
Roads	Ensure downtown continues to be pedestrian friendly by maintaining wide sidewalks with a centre median.
Roads	Maintain River Street, Fairford Street, and Cordova Street as key pedestrian corridors from the Downtown.
Roads	Ensure upgrades to the Thunderbird Viaduct consider all modes, including pedestrians, cyclists, transit and vehicles.
Roads	Update intersection geometry and traffic control over time as traffic volumes grow.
Roads	Periodically review and update signal timing plans on the network.
Roads	Work with local law enforcement to ensure posted limits are adhered to.
Roads	Coordinate with CP Rail and CN Rail regarding maintenance around railways and upgrading faded or damaged signs.
Roads	Periodically review and evaluate the need for upgrading railway crossing warning systems.
Roads	Continue to incorporate railway crossings into the annual pavement markings program.
Peds / Bikes	Address gaps in the sidewalk network as part of regular operations and maintenance.
Peds / Bikes	Improve pedestrian crossings at key crossings throughout the network.
Peds / Bikes	Ensure all pedestrian crossings meet current industry standards.
Peds / Bikes	Address gaps in the trail and pathway network as identified in the trails master plan.

Priority	Recommendation
Peds / Bikes	Monitor regulations, best practices, and integration of micromobility in Moose Jaw's transportation network.
Transit	Review and update transit stop locations.
Transit	Improve the overall maintenance condition of all transit stops.
Asset Management	Systematically update outdated traffic signal control equipment and install uninterruptable power supplies at critical intersections.
Asset Management	Expand the existing transportation asset management program to respond to current and anticipated infrastructure maintenance requirements

5.2 Funding

The TMP provides a list of recommendations to provide a robust transportation network serving the needs of Moose Jaw well into the future.

Project funding must consider the various needs of residents and visitors over time. The purpose is to provide a list of projects that can be implemented as money comes available, as priorities dictate, and as provincial and federal infrastructure funding programs get announced. The TMP recommendations are intended as a roadmap, allowing an understanding of the magnitude of need and allow staff to focus on those initiatives deemed most urgent.

Capital costs for the major components recommended in the plan include:

- Roads $12.8M to $16.3M
- Pedestrian and Bicycle $1.9M to $2.7M
- Transit $7.3M to $9.4M

The costs above do not include recommended planning studies (e.g. transit master plan, bike network plan) nor construction of the bike network as its extent and costs would be a result of the bike network plan. Transit costs are very preliminary and will, as well, require careful consideration through more detailed study. Finally, the ongoing operating and maintenance budgets for roads and sidewalks are outside of the identified estimate.

While the above estimate represents a considerable amount of investment in transportation, good can be accomplished by forming a plan and having a targeted approach to implementation. Items involving safety and consistency should be considered first. Further, more work is required by City of Moose Jaw Council to understand the trade-offs between these modes and the value they provide to all residents when growing a vibrant community.

5.3 Plan Review and Monitoring

The Transportation Master Plan provides the City with an inventory of the existing conditions and forms an important step in documenting road network requirements to accommodate future development. The Transportation Master Plan includes a checklist of action items for the City of Moose Jaw to utilize in assessing initiatives for transportation infrastructure. The plan should be periodically reviewed and updated as development occurs, and priorities may be changed.

The Transportation Master Plan has identified infrastructure modifications, studies, reviews and policy assessments, as well as potential staging that will ensure the effective and efficient movement of traffic in the long term. There are several quick wins that will demonstrate the City's recognition of the importance of transportation to economic growth and prosperity for the public and businesses located within city limits.

Moose Jaw is currently at an advantageous size where there are opportunities to proactively address future transportation infrastructure and establish policies within a logical implementation schedule. The extensive public consultant identified a latent demand for cycling and transit within the City. Moose Jaw should continue to prioritize use of active modes throughout the city as an alternative to regular motorized travel.