



# MULTIMODAL TRANSPORTATION PLAN

MOVING RED DEER FORWARD

RED DEER 2017

 THE CITY OF  
Red Deer

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# EXECUTIVE SUMMARY

Providing viable, attractive transportation alternatives for citizens, including walking, cycling and transit, is critical in building a healthy, sustainable community. This doesn't mean driving shouldn't - and won't - continue to be the primary mode of transportation for most residents, it simply means that we need to work towards a balanced network that gives Red Deerians choice when it comes to how they move in our city.

And that's what Moving Red Deer Forward, our new multimodal transportation plan, sets out to do. The plan puts all of The City's past work on multimodal transportation into action and is the foundation for how we will improve our transportation network today, tomorrow and in the future. Enabling us to plan, prioritize and evaluate transportation projects, this plan aims to improve the safety, quality, comfort and connection of all modes, and provide more choice for residents.

## Key features of the plan include:

- Outcomes for each transportation mode (driving, walking, cycling, transit and future rail)
- Priority routes for each mode
- A new tool to measure and evaluate the walking, cycling and transit experience
- A focus on community engagement

This plan looks at each mode individually, but also considers how they work together to create a balanced network: a network that provides choice, takes advantage of existing infrastructure when possible, doesn't try to make all modes equal on all routes, and contributes to the well-being and enjoyment of all users.

## MOVING RED DEER FORWARD: OUR MULTIMODAL TRANSPORTATION PLAN

Our transportation system is the network we use to move around the city. There are several ways to reach destinations where we live, work, and play, whether by vehicle, bus, foot or bike, or any combination of these modes.

The quality and efficiency of the system is important and is defined by how safe, connected, comfortable and accessible the route is for the travel mode you are using.

The overall goal of this plan is to improve safety, quality, comfort and connection of all modes, and provide more choice for citizens.



### BACKGROUND

Red Deer is a city of opportunity with a strong emphasis on the quality of life in the community<sup>1</sup>. The City's transportation system contributes to this quality of life.

Specific to transportation, our community's vision is one that provides for the safe and efficient movement of people and goods; encourages alternative ways to move throughout our city; and coordinates land use and transportation in city planning efforts, as stated in The City of Red Deer's *Municipal Development Plan*<sup>2</sup>.

The *Mobility Playbook*, approved in 2013 by City Council as a planning tool, identified six plays to meet this vision:

- 1) Put pedestrians first
- 2) Create a balanced network
- 3) Tie land use and mobility together
- 4) Make transit part of the journey
- 5) Connect the trails
- 6) Nurture a culture of change

Further, all modes must be safe, accessible and enjoyable for people to use. The *Mobility Playbook* identifies criteria to help assess the attractiveness of various modes of transportation. When people find a given mode of transport enjoyable, they are more likely to use it.

Council also adopted mode-specific mandate statements for vehicles, pedestrians, cyclists and transit riders in 2014, providing further direction leading to the development of this plan.

Moving Red Deer Forward aligns with the vision and mandate statements. The plan defines safety, connection, quality and comfort for each of the modes. We score the current system with a made-in-Red Deer tool called the **Multimodal Transportation Index (MTI)**, which applies these criteria to routes in the system. The scores tell us something about where we are now, which will help us measure as we progress. Areas with low scores are identified for future improvements. This data-based approach provides consistency and objectivity in determining improvements to the overall system for each mode.

The intention is to have the various modes contributing together toward greater mobility choice and enjoyment, and a more desirable city to live and work in.

Within this plan, each mode has stated outcomes to describe what a future user of the transportation system will experience in Red Deer. The outcomes are separated by travel type (mode) for clarity and can be found in the specific mode sections.

The plan's success will be measured against stated outcomes through ongoing monitoring and application of the MTI and related scoring criteria and indicators for each mode.

<sup>1</sup>City of Red Deer - Municipal Development Plan (2013)

<sup>2</sup>Ibid

## BENEFITS OF THE PLAN

There are many benefits this plan provides The City:

- 1** Data-based, methodical approach to measure quality
- 2** An overall view of how we move in the city
- 3** Consideration for land use in transportation planning
- 4** Multimodal direction for operational implementation
- 5** Flexibility in speed and degree of implementation
- 6** Ensures the community is engaged in decision making at the appropriate time

A description of these benefits with related examples is included below.

### 1 DATA-BASED, METHODOLOGICAL APPROACH TO MEASURE QUALITY

The Mobility Playbook identified mobility quality criteria to make it more attractive for people to walk, cycle, drive or take transit. All modes must be safe, accessible and enjoyable for people. Quality encourages the use and enjoyment of a given mode of travel.

The plan defines criteria for safety, connection, quality, and comfort for each mode. It applies these criteria to measure each mode and evaluate how well it is working.

These criteria are described below in general. Each of the mode sections have specific measures related to these criteria. The MTI provides the ability, at any point in time, to see if quality is improving for each mode or in the overall transportation system:

#### Safety

Safety refers to evaluating actual and perceived concerns with the transportation system. Safety statistics are used to inform changes that need to occur. There are also physical elements such as signage, connections, rapid-flashing beacons, wheelchair accessibility, or sufficient lighting that contribute to improved safety.

#### Connection

Connection means there is a logical, efficient network that people can use and access to reach desired destinations in the city. Examples of how this can be measured include monitoring trip time, citizen feedback, or the inventory of actual linkages and route geometry.

#### Quality

Quality is measured in terms of the extent to which transportation assets, such as roads, trails, sidewalks, or cycling infrastructure, meet The City's standards related to design, construction, maintenance and usability.

#### Comfort

The comfort of a mode comes from the physical elements that make moving around easy and enjoyable. Elements impacting comfort can include the width of trails and sidewalks, closeness to other transportation modes, whether the tree canopy is continuous, the amount of light and number of benches, and how effectively signs or markers help people find their way. Each mode has different elements that affect its comfort level.

The table below shows the different elements that can be influenced when designing for the different modes.

SPECTRUM OF MTI ELEMENTS	MOTOR VEHICLES	ACTIVE TRANSPORTATION	TRANSIT
<b>SAFETY</b>			
<b>CONNECTION</b>			
<b>COMFORT</b>			
<b>QUALITY</b>			

The MTI is linked with The City's Geographic Information System (GIS), allowing Administration to make enquiries about the transportation network based on specific community outcomes. For example, it is possible to enquire specifically about transit routes linking population centers, the number of missing sidewalks near schools, or trails linking large parks to neighbourhoods in the city.

The City currently uses two tools to evaluate our system of roads:

- The Geometric Design Guide for Canadian Roads (Transportation Association of Canada)
- The City's Engineering Design Standards

The MTI expands beyond these tools, by looking at how roads connect to other modes of transportation. This makes it possible to identify gaps and find ways to improve the network as a whole.

2

## AN OVERALL VIEW OF HOW WE MOVE IN THE CITY

The plan provides the overall view of where The City is going with multimodal transportation, and considers each mode in future planning of the network. The plan even considers the possibility of rail as a long-term option for citizens. These efforts directly support key plays in the *Mobility Playbook*, including “create a balanced network”, “put pedestrians first” and “make transit part of the journey”.

The physical network is a system that integrates the different mode options, but which still identifies priority routes for each of the modes. Pedestrians are now considered in the overall transportation plan and have the option of choosing a quality route where they may choose to walk, bike or take any other self-propelled method. Transit continues to be an integral, reliable and comfortable option with stops that are located based on density, and key origins and destinations.

It is important to clarify that not all routes will accommodate all modes of travel equally. As an example, a high-quality route for motor vehicles such as an expressway will not be a high-quality route for pedestrians, and nor should it be.

As the image below illustrates, a route that is identified as a priority route for motor vehicles, such as the future expressway, or 67th Street, will have improvements completed that increase quality criteria for vehicles such as speed or minimal stops. It will still be designed to accommodate other modes, but the highest level of quality may not be achieved for these other modes.

Conversely, a priority pedestrian route, such as Little Gaetz Avenue, is planned for the highest level of quality for the pedestrian. While this benefits the pedestrian primarily, it requires a decreased speed limit for motorists.

3

## CONSIDERATION FOR LAND USE IN TRANSPORTATION PLANNING

The *Mobility Playbook* recognized the need to “tie mobility and land use together.” The type of land use must be considered in mode connection and quality criteria, as particular land uses will generate the number of users for the given modes of travel. For instance, higher-density land uses should be located near neighbourhood entrances and along arterials to support integration with our transit system, as density is needed to support transit viability and efficiency.

The transit section of this plan specifically recognizes the major destinations in the city where many people live, work or visit. The transit system needs to connect with hubs, centres of education, and centres of employment in an integrated, efficient, and logical manner.

4

## MULTIMODAL DIRECTION FOR OPERATIONAL IMPLEMENTATION

Administration has separate technical design documents, policies and procedures that support designing and building infrastructure. This plan serves as the baton-toss to Administration to implement the vision and update these documents.

The vision has been translated into quantifiable quality criteria and has guided the identification of priority routes for each mode. Administration has direction to implement this vision through policies, procedures, design standards and budget recommendations.

The plan allows departments to now continue their work in their specific areas. As an example, the *Engineering Design Standards* will need to be updated to reflect and implement this direction. *Moving Red Deer Forward* guides the development of project lists and details for trails and pathways, transit, and transportation. This administrative document updates the previous Trails and Pathways, Transit, and Transportation Master Plans and brings them all into one document.



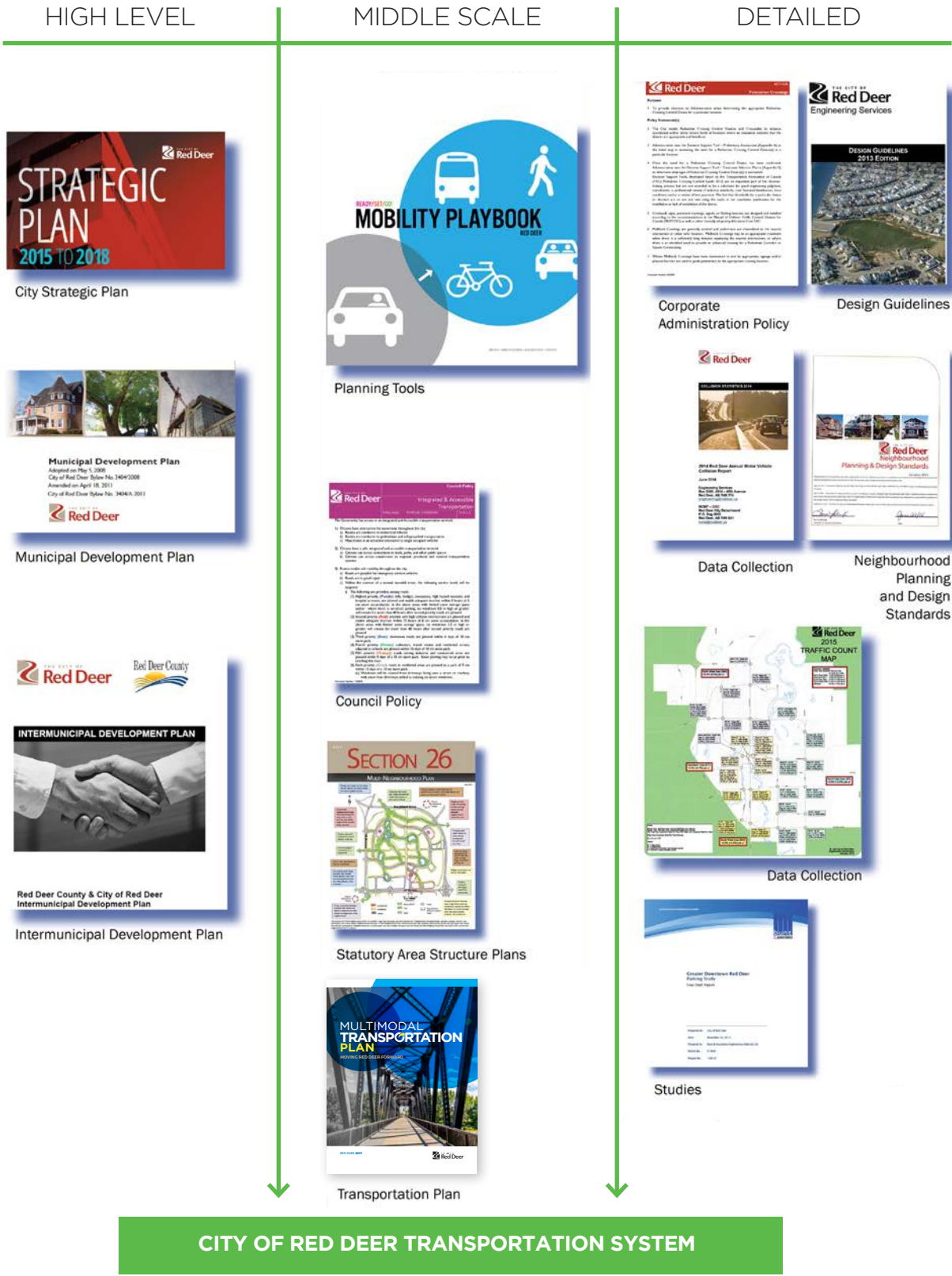
EXAMPLE OF A PEDESTRIAN PRIORITY STREET



EXAMPLE OF A MOTOR VEHICLE PRIORITY ROAD

The plan outlines key improvements for each mode to increase overall quality throughout our transportation system. These will be recommended by Administration in the budget.

DIAGRAM OF EXAMPLE POLICIES AND PRACTICES INFORMING MOVING RED DEER FORWARD



5

FLEXIBILITY IN SPEED AND DEGREE OF IMPLEMENTATION

The plan provides Council the flexibility to determine the speed of implementation and the level of quality desired to achieve a particular transportation system improvement through the budget process.

This plan differs from other plans in that it doesn't prescribe specific projects and timelines, but instead takes an outcome-based approach. Further, the MTI allows us to measure and demonstrate the progress on these outcomes.

By not having specific detailed timelines and project lists, Council has the ability to account for strategic priorities and their influence on transportation planning.

For example, the 2019 Canada Winter Games is a priority for The City. As key amenity projects are being built, it may be efficient to recommend transportation improvements around or between these facilities. A potential budget recommendation would be improving the route between the Red Deer Arena and Central School to encourage walking and cycling between the destinations.

6

ENSURES THE COMMUNITY IS ENGAGED IN DECISION MAKING AT THE APPROPRIATE TIME

Based on the scope and scale of the project, and the degree of improvement, we will engage the community in decision making at various stages of project planning.

As projects go forward through the budget process, the public will have the opportunity to provide feedback through our budget consultation process. Additionally, other larger scale projects will have opportunities for community engagement to ensure they meet the needs of the community.

# MOVING RED DEER FORWARD: MULTIMODAL CHOICE



## MOTOR VEHICLE

Motor vehicles are one of the community's preferred modes of travel. Motor vehicle travel requires a network of road types to accommodate different classifications of vehicles, land uses, speeds, and volumes of traffic. Transit is one of the classifications of vehicles. Other documents, such as the Land Use Bylaw, need to consider what to do with motor vehicles when they arrive at their destination.

Currently, The City has a motor vehicle network comprised of roads classified as local, collector and arterial. There are several elements that differentiate the experience - speed, width, signage, pavement quality, signals, and sight lines.

The mandate for motor vehicles seeks to achieve a network whereby:

*“Drivers in Red Deer will drive on quality roads. Trips will be efficient and unimpeded by frequent stops, blind spots, and other mode users. The driving experience will be safe and convenient.”*

### Outcomes

With the implementation of this plan, future users of the motor vehicle network will experience:

- Safe travel on roads designed for the posted speed limit
- A network that anticipates future capacity needs and considers all modes
- Roads that are well-maintained year round

### Measuring Quality

The quality criteria for motor vehicles is defined below. The list of criteria, applied in the MTI will enable standard evaluation of a given transportation asset and identify what can be improved.

#### QUALITY

**Pavement quality** - The Pavement Quality Index is a tool currently used within The City which monitors for defects in pavement quality, acting as an important data-set and trigger for The City to take preventive measures to ensure quality roadways.

#### COMFORT

**Visual Interest** - Landscaping, trees and visual aesthetics create an appealing, comfortable experience. This can be measured by assessing density of streetscaping over a given distance.

#### CONNECTION

**Volume** - Vehicular volume impacts user experience in high-demand corridors between destinations. The existing level of service score for each road or street is used to monitor road capacity.

**Destinations** - The directness of routes between destinations such as work and home can impact connectivity and user experience. Closer origins and destinations mean less travel time, less congestion, and therefore more efficient use of land and transportation resources. Land-use mix is an important indicator of the need for efficient transportation system connections.

**Trip time** - Trip time is recognized as a measure of connectivity between key destinations, and is a percentage of expected time to travel versus actual. This measure can be used to understand the flow of motor vehicles and to assure routes are connected in ways that minimize trip time.

## SAFETY

**Intersections** - Intersections create the overall transportation network effect, and are required to permit the safe connections for motor vehicles. Lights and signals will be maintained to a high standard which results in low collision rates and high level of service scores. Traffic engineers measure the flow of traffic through intersections using a level of service standard that gives a score related to how long a vehicle waits an intersection.

**Wayfinding** - Signs and markings will be maintained to national standards to indicate to motorists possible directions of travel and opportunities adjacent to roadways to minimize driver inattention. Adequate wayfinding will be monitored and measured through the MTI, ongoing assessments, and community feedback.

**Sight Lines** - Sight lines refer to the range of view for a motorist approaching intersections, permitting awareness of oncoming traffic or pedestrians. Sightlines at intersections will be enhanced, as required, to national standards based on the speed limit and volume.



**Roads connect citizens' movements throughout the city and all roads will continue to be improved to meet standards. The City will continue to invest in the quality of this overall vehicle network with projects such as crown paving, repairing pot holes, signage and intersection improvements.**

The map on the following page highlights the existing and future routes within the network where the quality of the experience for the driver will be high in terms of safety, connection, quality, and comfort. As an example, future projects along these routes will decrease trip time, increase pavement quality and/or increase wayfinding.

The projects will range from small to large scale, such as adding signage and line painting to grade-separated interchanges along the expressway. The public consultation process will vary based on the scale of the project.

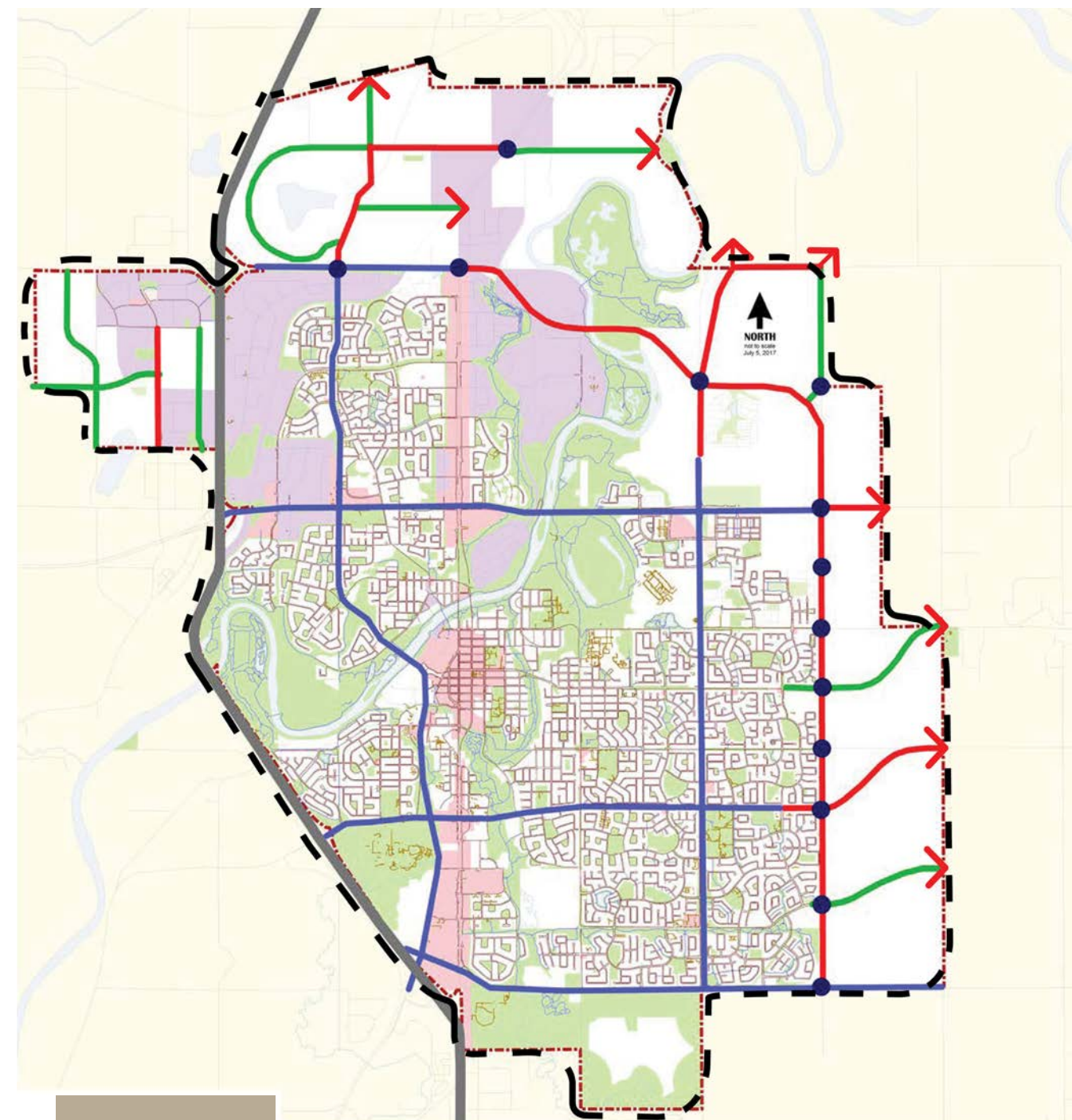
The future road network extensions are based on approved planning documents such as Major Area Structure Plans and Area Structure Plans. These projects will occur as the city grows in size and population.

Administration will use this map and traffic data to inform budget recommendations for future improvements to the motor vehicle network. The timing or speed and degree of implementation will be determined by Council in the budget process.

If approved, the physical design of the road cross section is determined by Engineering Design Guidelines and the Geometric Design Guide for Canadian Roads (Transportation Association of Canada).

## MOTOR VEHICLE NETWORK MAP

## MULTIMODAL CHOICE



### LEGEND

- FUTURE EXTENSIONS TO THE ROAD NETWORK BASED ON GROWTH
- PRIORITY ROUTES IN THE EXISTING ROAD NETWORK FOR VEHICLES
- PRIORITY ROUTES IN THE FUTURE ROAD NETWORK FOR VEHICLES
- FUTURE INTERSECTION IMPROVEMENTS THAT WILL BE COMPLETED WHEN GROWN OCCURS
- A CONNECTION OUTSIDE OF THE CITY'S MUNICIPAL BOUNDARY TO THE REGIONAL NETWORK
- INVESTMENT WILL CONTINUE IN EXISTING ROAD NETWORK





## ACTIVE TRANSPORTATION WALKING, BIKING AND OTHER SELF-PROPELLED MODES

Active Transportation is the use of self-propelled means (bicycle, walking or other) to travel to work, school, or for daily errands. Currently, we have an active transportation network comprised of trails, sidewalks and some on-road infrastructure. It is the interconnection between these that is important as outlined in the “connect the trails” play in the Mobility Playbook.

There are several elements which add to the experience and use of the network, such as high-quality, well-maintained surfaces of sufficient width, lighting, seating and wayfinding. The City further promotes urban design components to encourage pedestrian and cyclist accessibility by providing functional and attractive linkages for travel within and between neighbourhoods, and other parts of the city.

The mandate statements for active transportation envision a network whereby:

“Pedestrians in Red Deer will have high quality footpaths that are well maintained, continuous, and connected to all destinations; pathways will be designed for safety and comfort, and accessible to all ages and abilities.”

And whereby:

“Cyclists in Red Deer will be able to move through the city on separated or designated pathways that are free of barriers, well lit, clear of snow

and debris, and connected to key destinations and amenities. Pathways will be safe, comfortable, enjoyable and understood by Red Deerians.”

### Outcomes

With the implementation of this plan, future users of the network will experience active transportation options for pedestrians and cyclists that:

- Are free from gaps
- Provide direct routes to key destinations
- Ensure the best use of existing infrastructure (e.g., multi-use trail system)
- Are connected to transit stops
- Are well-maintained year-round
- Are accessible for all ages and abilities
- Are well-signed and easy to navigate
- Are designed for safety of all users
- Are connected to regional trails

### Measuring Quality

The quality criteria for active transportation are defined below. The list of criteria, applied in the MTI, will enable a standard evaluation of an asset and identify what can be improved.

To enable active transportation, engineering guidelines and standards shall promote quality, comfort, connection, and safety on concrete or asphalt sidewalks, multi-use trails and park trails with the following elements:

### QUALITY

Surface conditions free of trip hazards and inaccessible slopes (with exceptions).

### COMFORT

Sufficiently wide sidewalks and trails, located away from fast vehicle movements.

Amenities such as benches, lighting, public art, wayfinding and garbage bins.

### CONNECTION

Building-facade elements such as multiple openings, weather protection and building to the front lot line.

Using ‘walk-score’ to give a high level account of local destinations in combination with a weighted matrix to evaluate the ratio of ‘mixed land use’.

Fill the missing sidewalks (245), trail gaps or extensions (140), crosswalks (138), pedestrian signals (13), Rectangular Rapid Flashing Beacons (19), and marked crossings on multi-use trails.

### SAFETY

Intersection crossings are well-marked and signed with geometric curb treatments as required.

Universally Accessible to all ages and abilities.

Separation between bicycles and pedestrian as well as bicycles and motor vehicles.



The Active Transportation Map represents opportunities to use the sidewalks, multi-use trails and park trails to offer a grid of safe and convenient corridors for active modes. The future is a connected network.

Small changes to crosswalks, street trees, signs, curb locations and height, or other details will lift these routes to a common standard.

The map on the following page highlights the existing and future routes within the network where the quality of the experience for the pedestrian, cyclist or other self-propelled modes will be high in terms of safety, connection, quality, and comfort. As an example, future projects along these routes will have safer intersection crossings, have a sufficient width to accommodate many users, and/or increase wayfinding. Additional connections may be warranted as opportunities arise and should be explored even if they are not shown on the map.

The routes are classified as 1, 2 and 3 to distinguish between priority levels, though the speed of implementation is determined by Council.

The projects will range from small to large scale; from connecting transit stops to sidewalks, to the potentially iconic Riverwalk in the Riverlands Area. The public consultation process will vary based on the scale of the project.

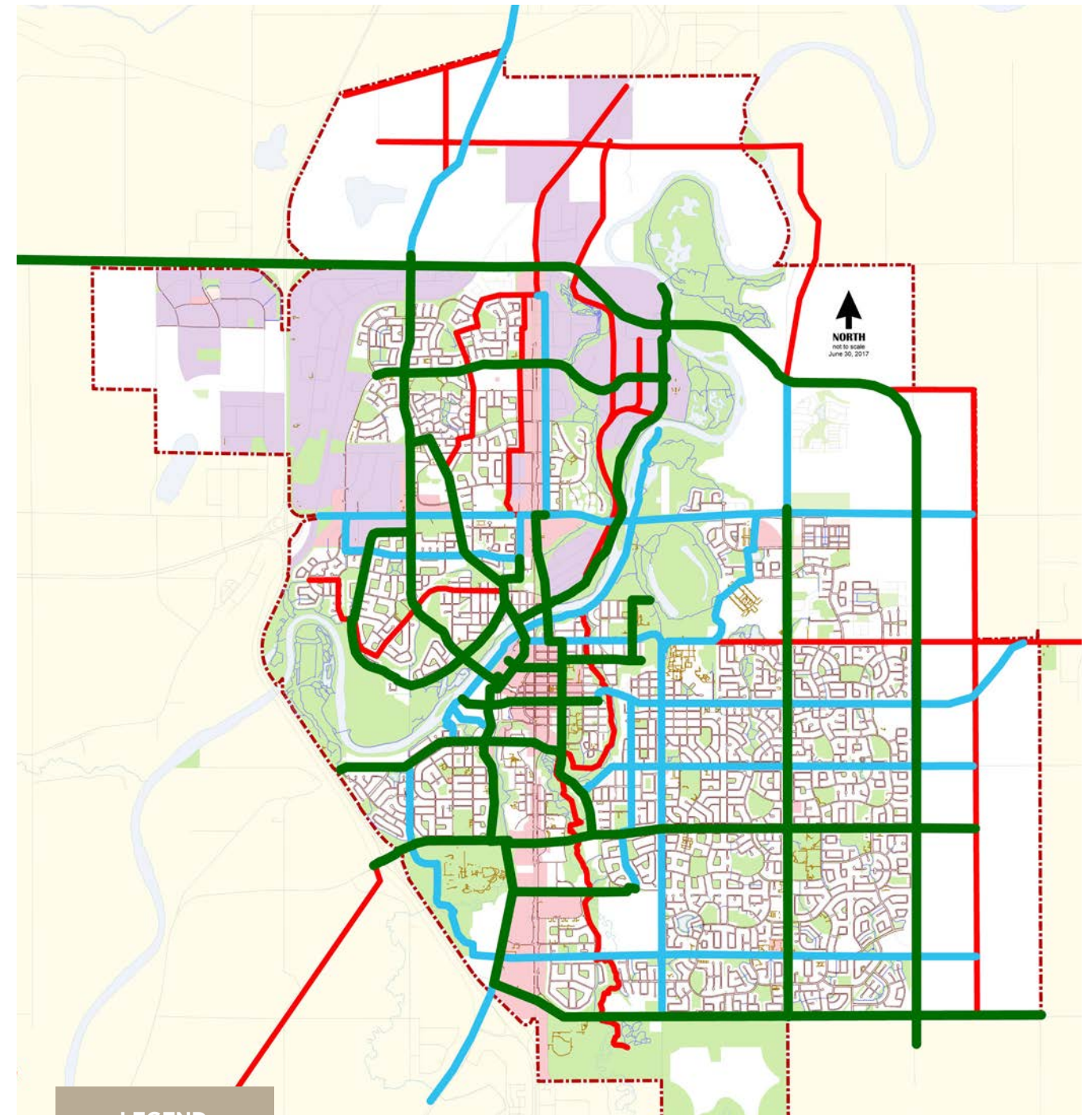
The future network extensions are based on approved planning documents such as Major Area Structure Plans, Area Structure Plans and the River Valley Tributaries Plan. These projects will occur as the city grows in size and population.

Administration will use this map, usage data, and community feedback to inform budget recommendations for future improvements to the active transportation network. The timing or speed and degree of implementation will be determined by Council in the budget process.

If approved, the physical design of the infrastructure is determined by *Engineering Design Guidelines*.

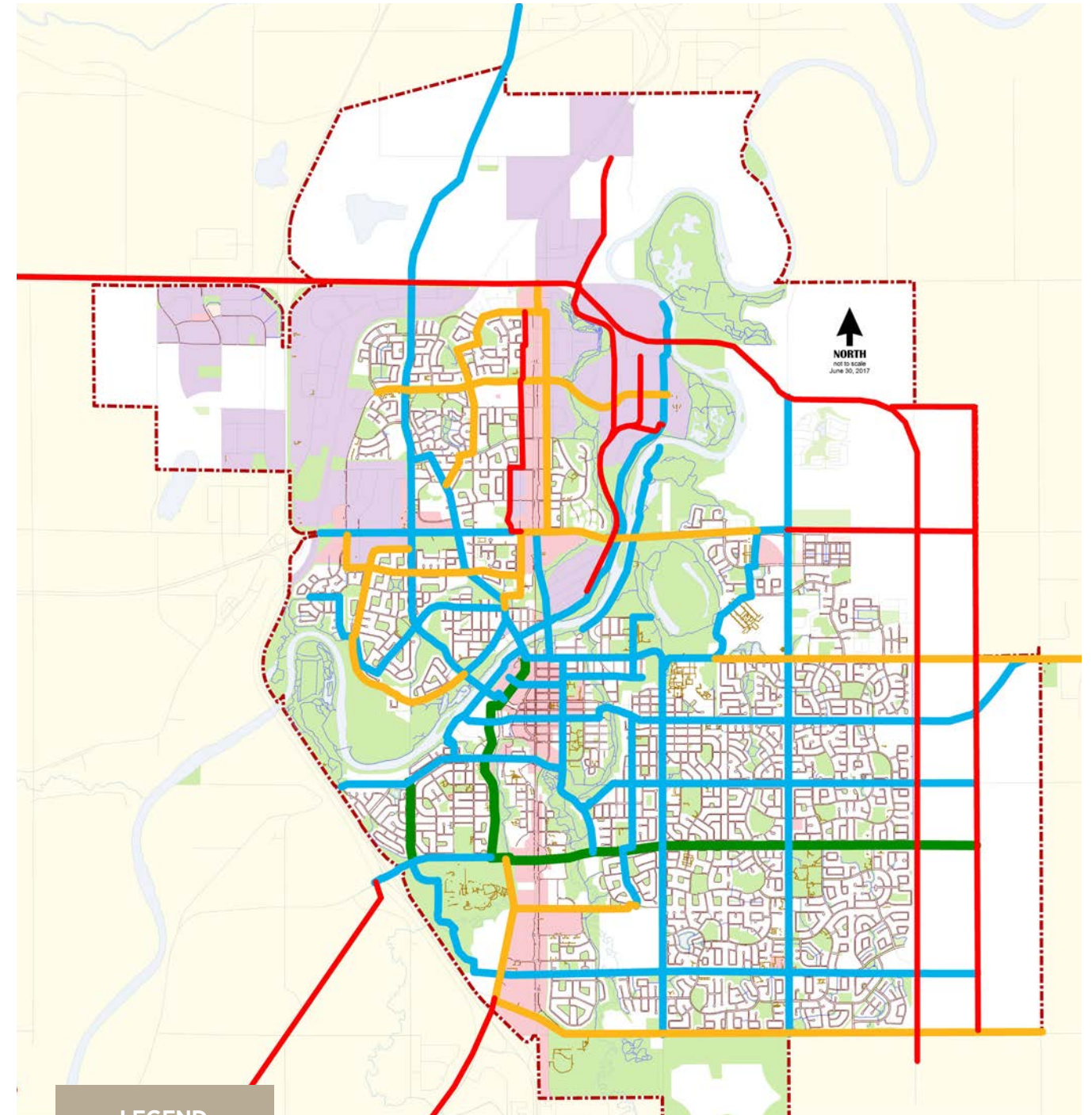
## ACTIVE TRANSPORTATION MAP

## MULTIMODAL CHOICE



### LEGEND

- PRIORITY 1 ROUTES WHERE IMPROVEMENTS WOULD BE MINOR BUT HAVE AN IMMEDIATE IMPROVEMENT TO THE NETWORK
- PRIORITY 2 ROUTES WHERE IMPROVEMENTS WOULD BE MORE COMPLEX, AND OCCUR AFTER DARK GREEN LINE ROUTES ARE BETTER ESTABLISHED
- PRIORITY 3 ROUTES WHERE FUTURE IMPROVEMENTS ARE DEPENDENT ON GROWTH, SEQUENCING IN RELATION TO OTHER IMPROVEMENTS AND CORRIDOR AVAILABILITY.



LEGEND

- A** THE ROUTE IS WELL CONNECTED, OF A HIGH QUALITY, SAFE AT INTERSECTIONS, AND COMFORTABLE TO USE.
- B** THE ROUTE EXISTS, BUT THERE ARE SIGNIFICANT GAPS IN PHYSICALITY OR QUALITY; THESE GAPS ARE EASILY FILLED.
- C** THE ROUTE EXISTS, BUT IS OF LOWER QUALITY, HAS INCONSISTENT TREATMENT AT INTERSECTIONS, AND COULD REQUIRE POTENTIAL REDESIGN OR RETROFIT TO IMPROVE.
- D** THE ROUTE DOES NOT EXIST.



## TRANSIT

The City works to ensure the coordination of safe roads, transit, bicycling and pedestrian facilities to maintain the ability for all citizens to move throughout Red Deer. Quality transit is acknowledged as an option to the private automobile and one that contributes to improved air quality. Bus Rapid Transit (BRT) is an express-type service, and Administration will identify key corridors as potential routes and determine the appropriate right-of-way requirements of roadways, land use and urban design that will support a successful BRT line. Regional transportation considerations shall include bus, rail and air service and the development of a high speed passenger rail service with a stop in or near Red Deer.

The mandate statement for transit envisions a network whereby:

“Transit Riders will have access to a frequent, connected and friendly transit service. Transit stops will provide a comfortable and safe waiting experience protected from the elements and provide current information that is easily attainable by riders.”

### Outcomes

As the implementation of this plan proceeds, transit users will experience:

- A bus transit network which is fast and frequent, linking destinations along arterial routes, with excellent timetable information at well-lit and comfortable shelters.

- Transit routes that link the commercial, retail and institutional destinations in assisting the Neighbourhood Planning and Design Standards to support mixed-use, high activity nodes.
- One or two Bus Rapid Transit-like routes being direct and frequent, with quality shelters and presence in the right-of-way (dedicated lanes, advanced lights).
- A bus transit network which extends to other communities in a regional approach to mobility.

### Measuring Quality

Administration will determine the best locations for stops and timetabling for the transit routes, while also evaluating the service on the following criteria:

#### QUALITY

Direct-routing, taking people to destinations with few detours, and shortened travel time.

#### COMFORT

Frequent services, low headway, and shortening the wait time for the transit user.

#### CONNECTION

Bus routes link to multiple destinations, making the routes useful to more users.

Bus stops have timetable information, with wayfinding signage, on continuous firm surface of asphalt or concrete linked to trails and other sidewalks, and have a bicycle lock-up.

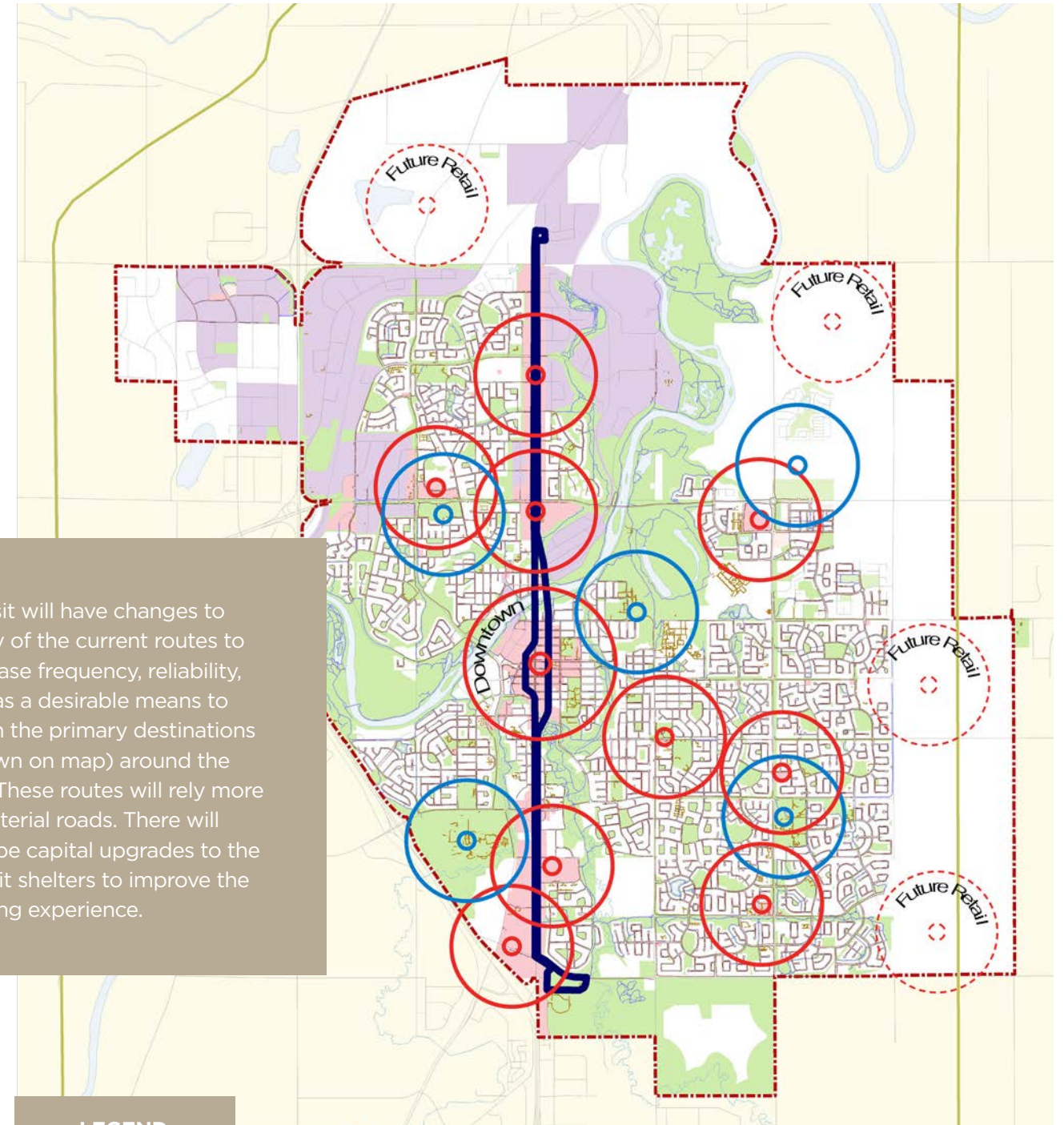
#### SAFETY

Universally accessible stops clear of debris and snow/ice.

Well-lit stops with garbage bins.

## BUS TRANSIT: BUS RAPID TRANSIT AND DESTINATIONS MAP

## MULTIMODAL CHOICE



Transit will have changes to many of the current routes to increase frequency, reliability, and as a desirable means to reach the primary destinations (shown on map) around the city. These routes will rely more on arterial roads. There will also be capital upgrades to the transit shelters to improve the waiting experience.

### LEGEND

- THE POTENTIAL BUS RAPID TRANSIT LINE ALONG THE GAETZ AVENUE CORRIDOR.
- MAJOR INSTITUTIONAL DESTINATIONS, INCLUDING RECREATION FACILITIES, SCHOOLS, AND THE COLLEGE.
- MAJOR RETAIL/COMMERCIAL DESTINATIONS, WHICH INCLUDE AREAS SUCH AS LARGE SHOPPING CENTRES, GROCERY STORES, AND THE DOWNTOWN.



## RAIL

High Speed Rail linking Red Deer to Calgary and Edmonton is still many years away. Advocating for it needs to be paired with land use plans and design concepts for the stations. Similarly, a Light Rail Transit line in the City of Red Deer requires land use changes in the chosen corridor(s) and plans to integrate it with other public transit.

Red Deer remains part of ongoing discussions regarding Light Rail Transit (LRT) and High Speed Rail (HSR) with other tiers of government and will continue to prepare for changes in technology and plan infrastructure to accommodate changes.

### General Rail Preparation

- Continue working towards positive changes in economic and social well-being, and planning for an increase in population.
- Create incentives in key corridors and nodes to accept higher order transit (trains):
  - Through land use changes.
  - Through maintenance of right-of-ways, keeping these free of development encroachment.

### Light Rail Transit

- Establish the destinations as future higher-density and activity areas through the Land Use Bylaw.
- Creates incentives for land owners to use urban design principles of passive surveillance, multiple openings, more mixes of use and higher-densities on their properties at train stops through the Land Use Bylaw.
- Restrict encroachment into a dedicated right-of-way for Light Rail.
- To be successful the service should be frequent and stop only at one (1) km given time to accelerate, travel for a 750 meter distance at top speed, and decelerate. Land use will help determine stop locations.

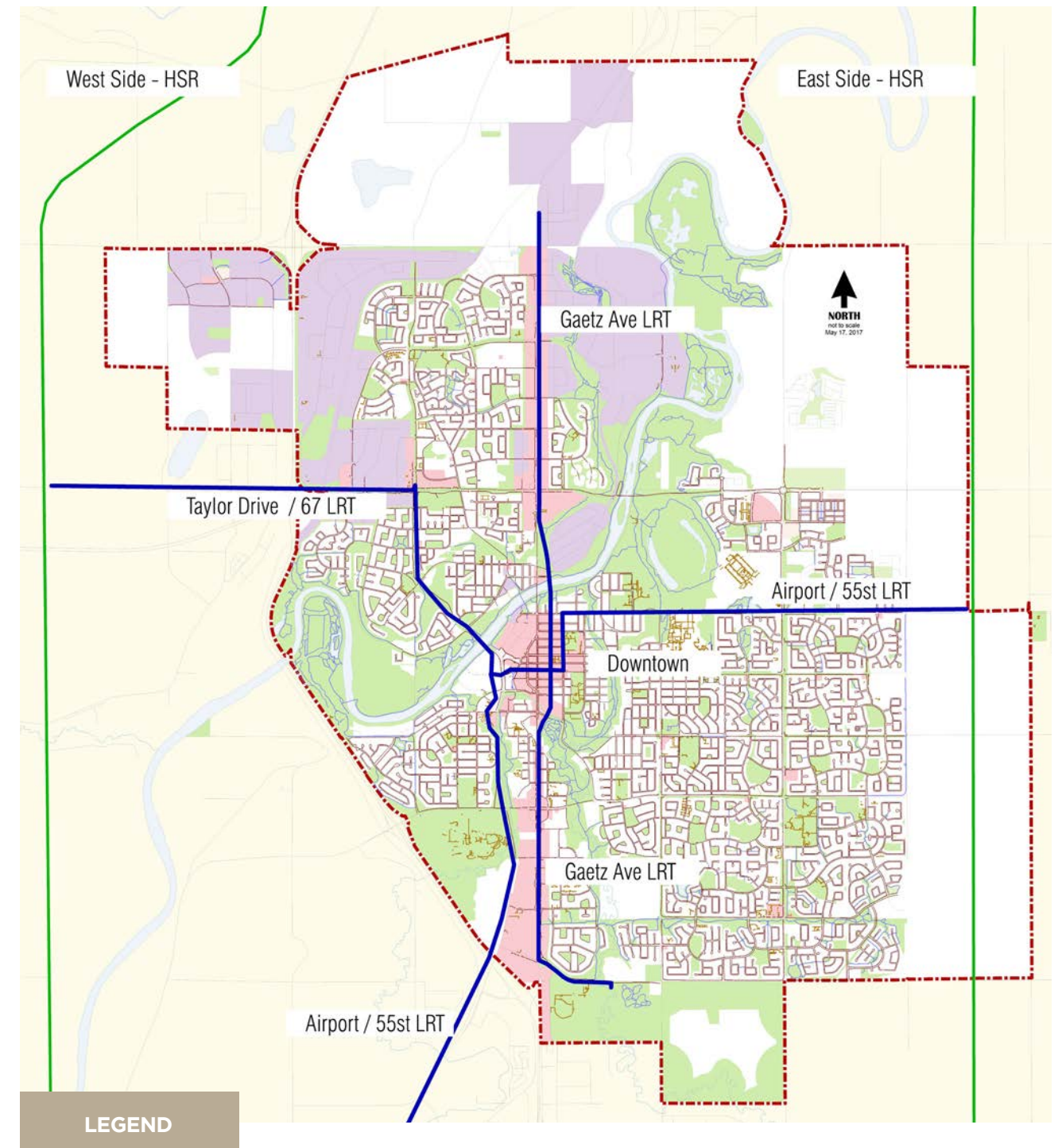
### High Speed Rail (HSR)

- Advocate for inclusion in the decision making process with other tiers of government and/or any third party private partner.
- The City should advocate for research into the emerging technologies available, and not be restricted to any one provider or technology.
- Advocate for the High Speed Rail station to be inside the boundary of Red Deer so that the urban design and multiple benefits of this station rest with the City.
- The Station must be significant and welcoming
  - The station should be architecturally designed to announce its location and importance.
  - The station precinct should have food services, other traveler services, clear pedestrian access from parking lots, appropriate signage, and lighting.
  - To be successful the HSR service should be frequent and have station spacing at one hundred (100) km or more. This station spacing gives the train time to accelerate, travel at top speed for a good distance, and decelerate.
  - Given this, there may be a stopping pattern which skips Red Deer on a small-station pattern, but as Red Deer is the major link in the route between Calgary and Edmonton it fits into the ideal station spacing distance.

The options for Light Rail Transit are shown to demonstrate the potential routes either north/south or east/west depending on the needs of The City and location of a High Speed Rail station. The High Speed Rail lines could be situated on either side of the city, depending on studies and decisions made across multiple levels of government.

## POTENTIAL RAIL MASS TRANSIT: LONG TERM OPTIONS MAP

## MULTIMODAL CHOICE



# MOVING RED DEER FORWARD: PUTTING IT ALL TOGETHER

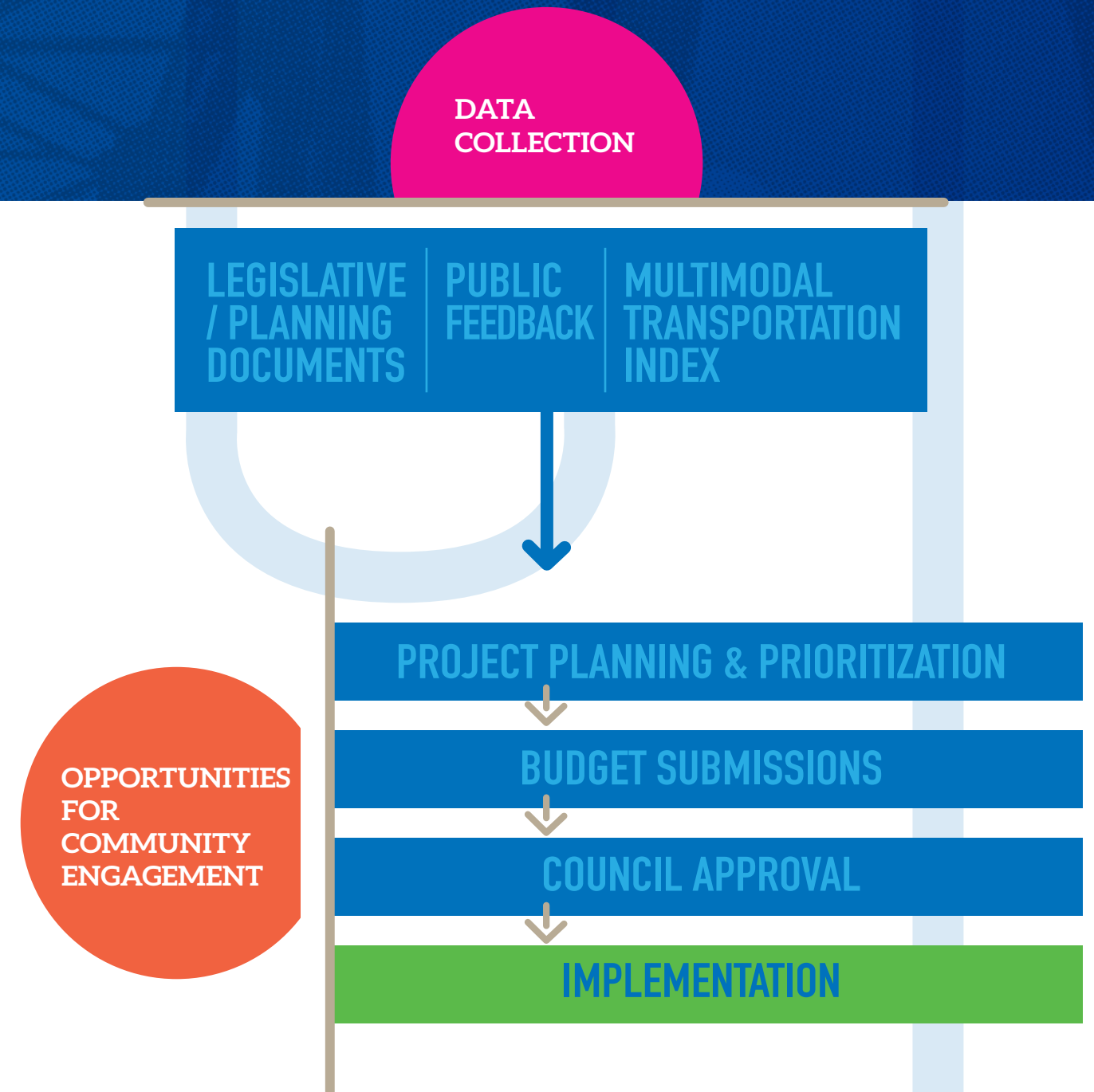
This diagram highlights how we will plan, prioritize and evaluate transportation projects in a coordinated way and bring them forward for approval and public consultation through our budget process.

One of the key benefits of the plan is that it is data-driven, and has many sources to draw on including:

- Legislative and planning documents (Municipal Development Plan, Strategic Plan, Environmental Master Plan, etc.)
- Feedback received from the public about traffic, safety concerns, specific routes/modes, etc.
- The Multimodal Transportation Index (MTI), a tool we've developed to measure and evaluate

the walking, cycling and transit experience based on specific criteria including, safety, connection, quality, comfort, and cost. Much like the Pavement Quality Index is used to evaluate and identify areas for improvement in our road network, the MTI will be used to evaluate and identify gaps in our trail, sidewalk, cycling and transit networks.

This data will then assist Administration to plan and prioritize multimodal transportation projects as we prepare our annual budget submission. Next, Council will review these budget submissions and, if approved, projects will be implemented. Throughout this process, there will be opportunities for community engagement to ensure the needs of the community are reflected in the decisions.





MULTIMODAL  
**TRANSPORTATION**  
**PLAN**

RED DEER 2017