Tri-Municipal Regional Transit Plan

City of Spruce Grove | Town of Stony Plain | Parkland County

February 2018

WATT Consulting Group

ACKNOWLEDGEMENTS

In collaboration with the City of Spruce Grove, the Town of Stony Plain and Parkland County, Watt Consulting Group and our project partners would like to thank all those Tri-Municipal Region municipal staff, stakeholders and service providers who provided their feedback and ideas into this process.

In particular, we are grateful to the contributions of the project Steering Committee Members Erin Felker (Parkland County), Patrick Inglis (City of Spruce Grove), and Miles Dibble (Town of Stony Plain).

The project also appreciatively acknowledges the support of the Canada-Alberta Public Transit Infrastructure Fund (PTIF).

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EXECUTIVE SUMMARY

Introduction

The Tri-Municipal Regional Transit Plan seeks to deliver a unified vision for future transit service and its supporting infrastructure and strategies for the City of Spruce Grove, theTown of Stony Plain and Parkland County, Alberta (the "Tri-Municipal Region").

Developed by Watt Consulting Group in collaboration with these municipalities, the Regional Transit Plan encompasses all forms of transit in the local communities, as well as connections to the Edmonton Metropolitan Region.

In Focus: Regional Transit Plan Goals

- Provide a **clear outline for the continued evolution of transit** to effectively and efficiently increase community transportation options.
- **Determine transit priorities and funding implications** into the long term for cost estimates to be built into municipal plans.
- Provide immediate guidance and recommendations with respect to **current issues and opportunities** facing transit in the area.

Project Process and Timeline

Undertaken from April to December 2017, the project was guided by a Steering Committee made up of staff representatives from the three partner municipalities. With many previous transit plans and materials undertaken for the respective individual communities, the Regional Transit Plan mainly focused on consolidating existing information and ensuring alignment on a regional scale.

The Plan project team also conducted interviews with key local government staff, community stakeholders and existing transportation providers throughout the area to confirm transportation needs, issues and opportunities. Detailed analysis of existing transit service performance and community plans further supported the process, as did review and perspective on findings provided by Brian Mills & Associates.

Multiple Steering Committee workshops were used to shape the plan, as well as service provider and stakeholder workshops conducted in October 2017 to review and refine final recommendations. The project was framed by an overarching Intermunicipal Collaboration Committee for the three area municipalities, which ensured alignment with larger organizational goals and communication with senior staff and elected officials. The plan process was also cognizant of other larger discussions related to transit and transportation integration at the Edmonton Metropolitan Region level.

Existing Transit

Transit in the Tri-Municipal Region currently consists of a number of different services:

- **Conventional Transit** providing scheduled weekday commuter service on routes between Spruce Grove, Acheson and Edmonton operated through contract with the Edmonton Transit System (ETS) and funded by the City of Spruce Grove and Parkland County.
- **Acheson Shuttle** providing demand responsive connection between ETS services and employer locations in the Acheson area, operated by Southland Transportation and funded by a utility fee imposed by Parkland County.
- **Spruce Grove Specialized Transit Service** (STS) providing local and regional door-to-door service for people with a disability and seniors living in Spruce Grove and select areas of Parkland County, operated by the Spruce Grove Specialized Transit Society and funded by the City of Spruce Grove and Parkland County.
- **Stony Plain HandiBus** providing local and regional door-to-door service for people with a disability and seniors living in Stony Plain, funded and operated by the Town of Stony Plain.

In Focus: Transit Issues and Opportunities

The Plan determined three overarching priorities for improved transit in the Tri-Municipal Region:

1. The need for local service to connect communities within the Tri-Municipal area, in particular to serve the needs of youth, commuters, seniors and families.
2. Significant opportunities to better coordinate / integrate the various transit services.
3. The desire for more regional connection with Edmonton and Acheson, supported by continued growth of school and work commuter markets.

The Future: Proposed Service Improvements and Long-Term Network Strategy

Building from the identified issues and opportunities and overarching community plans, a long-term network strategy and layers of transit service are proposed for the Tri-Municipal Region.

This strategy defines the most important transit corridors for future development and road network improvement decisions to reinforce the corridors. Similarly, by describing service and corridors in terms of layers and the long term vision, the reason why different levels of investment may be applied to some areas over others is highlighted.

The layers of service types are described in the table below and map on the facing page.

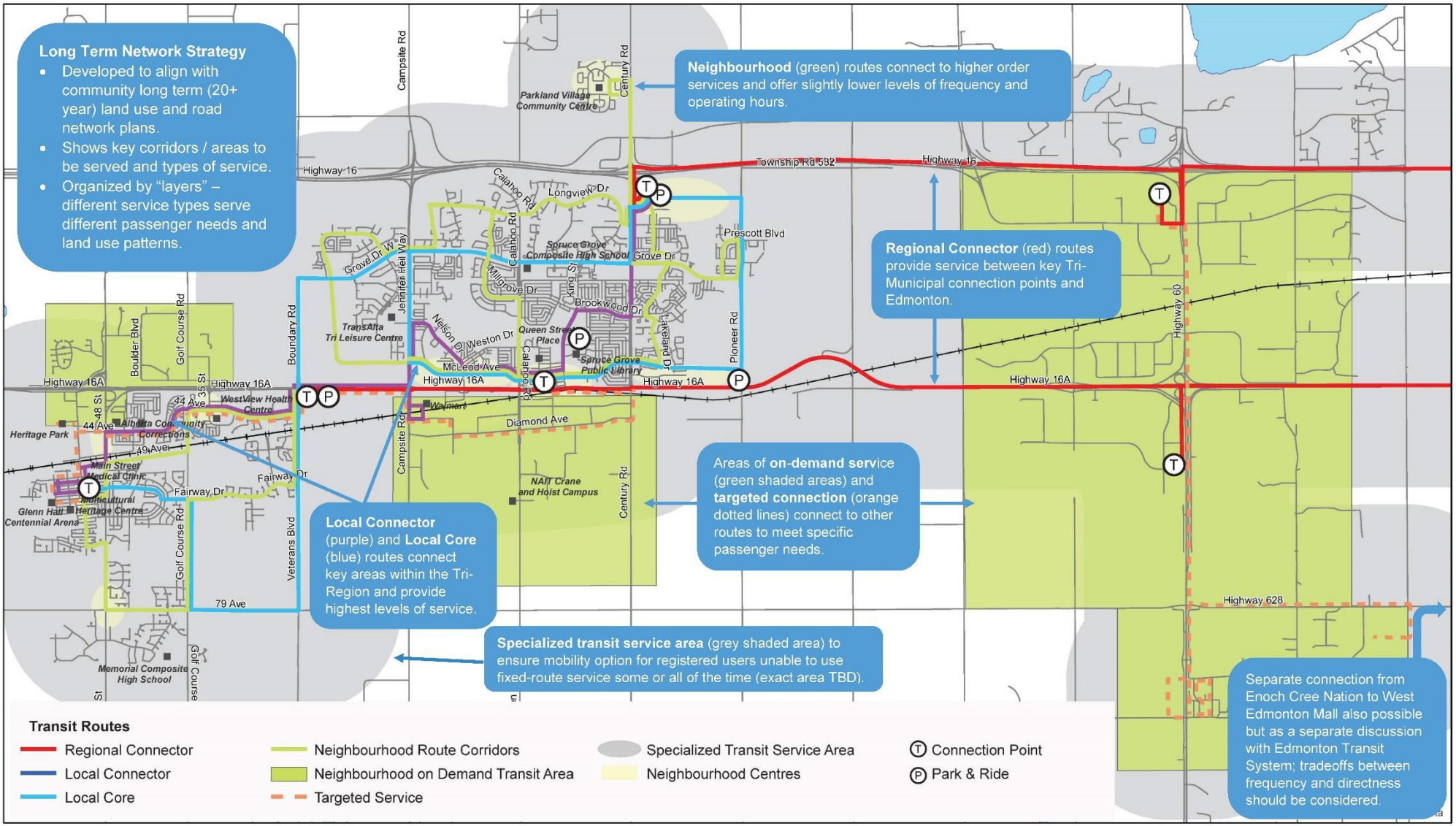
The strategy is complemented by supporting measures (infrastructure, vehicles, passenger information, fares, etc.) and service options described on the following pages.

PROPOSED LONG TERM TRI-MUNICIPAL REGION TRANSIT NETWORK SERVICE LAYERS

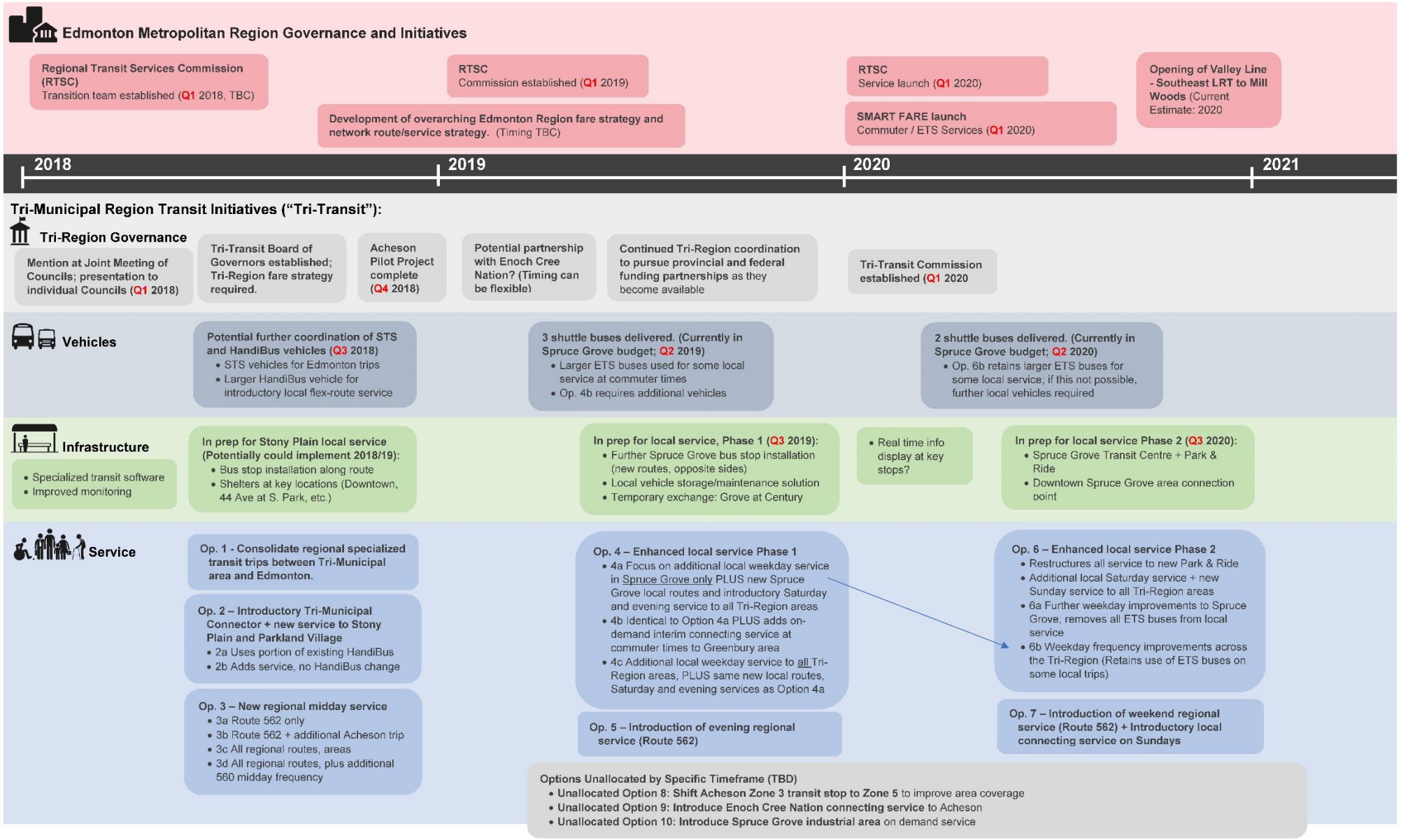
Service Layer	Definition	Service Types
Regional Connector	High quality* service between Tri-Municipal Region (Stony Plain, Spruce Grove and Acheson) and the Edmonton Metropolitan Region (EMR).	• Conventional Express
Local Connector	Higher frequency service (every 15 minutes or better) connecting key destinations and higher population corridors within the Tri-Region, particularly between Stony Plain and Spruce Grove.	• Fixed Route using smaller vehicles • Flex Route and Deviated Service are possible during non-commute times, especially to start
Local Core	Higher frequency service on key corridors within municipalities connecting to Regional and Local Connectors.	• Fixed Route • Primarily smaller vehicles; potentially Regional Connector vehicles
Neighbourhood	Service to lower density residential and industrial areas that connects to the higher order local and regional network at key points.	• Fixed Route using smaller vehicles • Demand Responsive (with or without trip windows)
Targeted Transit	Service targeted for specific users and markets, such as industrial area commuters or special events.	• Fixed Route • Flex Route

*"High quality" and "higher frequency" service thresholds and amenities are defined in Section 9.0 Service Design Standards and Performance Guidelines.

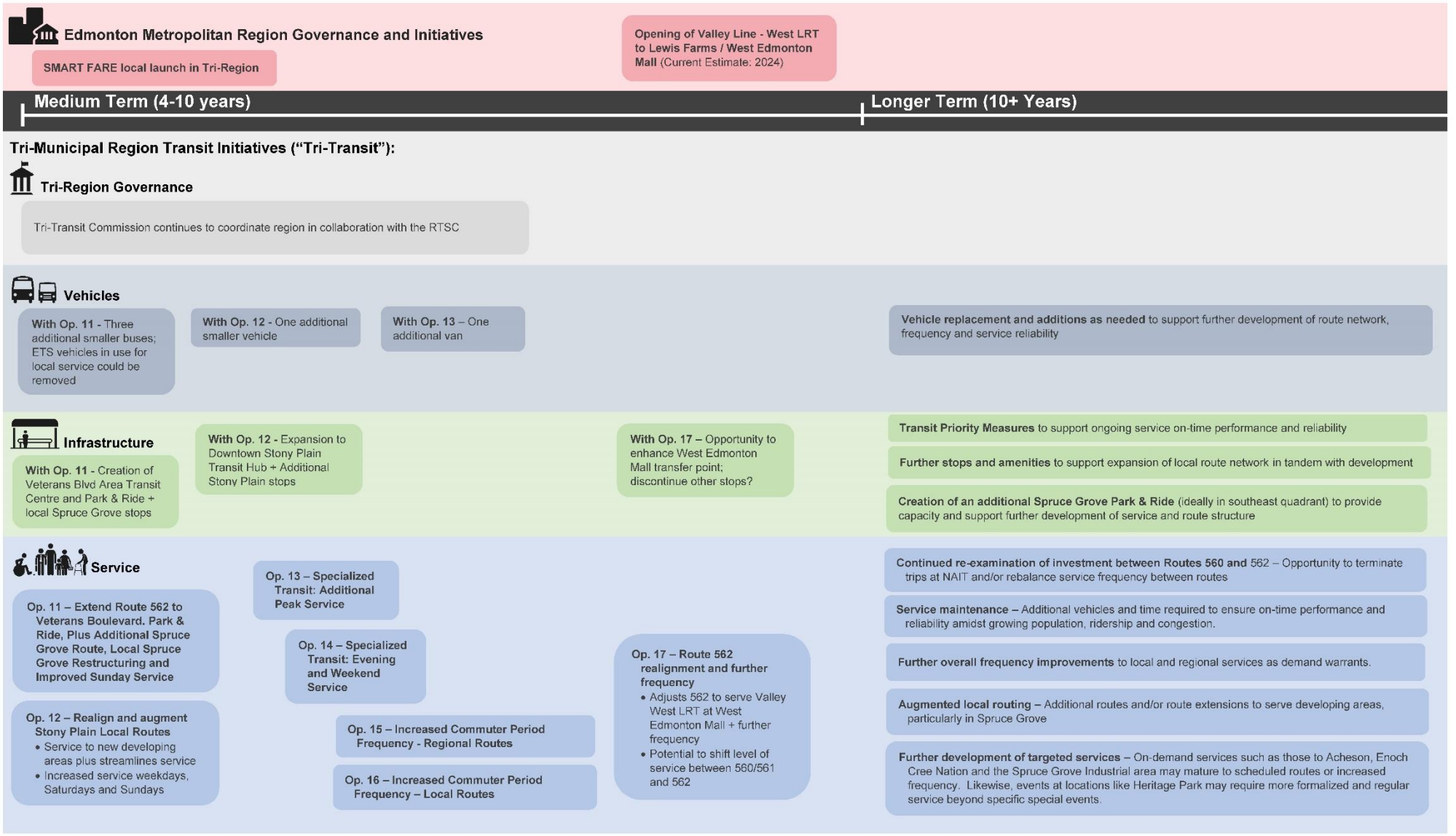
TRI-MUNICIPAL REGIONAL TRANSIT PLAN – LONG TERM NETWORK STRATEGY AND SERVICE LAYERS



HOW INITIATIVES RELATE:
TRI-MUNICIPAL REGIONAL TRANSIT SERVICE OPTIONS AND SUPPORTING MEASURES – SHORT TERM (NEXT 1-3 YEARS)



HOW INITIATIVES RELATE:
TRI-MUNICIPAL REGIONAL TRANSIT SERVICE OPTIONS AND SUPPORTING MEASURES – MEDIUM AND LONGER TERM (4+ YEARS)



Detailed Service Options – Additional Annual Impacts

The following presents the financial and performance details for each short- and medium-term option. Costs are based on 2016 actuals for services that exist or peer averages for new services and would be in addition to existing municipal transit budgets.

Tri-Municipal Regional Transit Plan
Service Option Summary: Preliminary Estimated Additional Impacts**

Service Option	Vehicles ***	Annual Total Kms	Annual Service Hours	Annual Rides	Total One Time Vehicle Capital Costs	Annual Operating Costs	Annual Total Revenue	Annual Net Operating Costs	Operating Roadways^ City of Spruce Grove	Town of Stony Plain	Parkland County
Options for Short Term Consideration (1-3 years)											
Option 1: Consolidate Regional Specialized Trips Between Tri-Municipal Area and Edmonton	0	0	0	400	$0	$0	$6,000	-$6,000	X	X	X
Option 2: Introductory Tri-Municipal Connector Options (Choice of One):											
Option 2a: Introductory 1 Tri-Municipal Connector Using a Portion of Existing HandiBus Service	0	48,000	1,600	8,500	$0	$113,400	$25,500	$87,900	X	X	X
Option 2b: Introductory 1 Tri-Municipal Connector With No Change to Existing HandiBus Service	1	75,000	2,500	12,800	$225,000	$180,000	$38,400	$141,600	X	X	X
Option 3: Regional Midday Improvements (Choice of One):											
Option 3a: Midday Improvements on Route 562 only	0	36,000	1,200	7,200	$0	$181,700	$38,800	$142,900	X		
Option 3b: Select Route 562 Midday Improvements + Additional Acheson Trip	0	36,000	1,200	7,800	$0	$181,700	$42,000	$139,700	X		X
Option 3c: Midday Improvements for All Regional Routes and Areas	0	39,000	1,300	9,100	$0	$196,800	$49,000	$147,800	X		X
Option 3d: Midday Improvements for All Regional Routes, Plus Further 560 Frequency	1	69,000	2,300	18,400	$600,000	$348,200	$99,200	$249,000	X		X
Option 4: Revised and Enhanced Local Service, Part 1 (Choice of One):											
Option 4a: Enhanced Local Service, Phase 1: Spruce Grove Focus + Introductory Evenings & Saturdays	3	282,000	9,400	67,700	$675,000	$996,700	$142,200	$854,500	X	X	X
Option 4b: Enhanced Local Service, Phase 1: Spruce Grove Focus + Greenbury On Demand	3	318,000	10,600	77,400	$675,000	$1,122,800	$162,500	$960,300	X	X	X
Option 4c: Enhanced Local Service, Phase 1: Improvements Across Region Using Contracted Vehicles	5	459,000	15,300	114,800	$675,000	$1,703,100	$241,100	$1,462,000	X	X	X
Option 5: Evening Service on Route 562	0	27,000	900	5,400	$0	$136,200	$29,100	$107,100	X	X	X
Option 6: Revised and Enhanced Local Service, Part 2 (Choice of One):											
Option 6a: Spruce Grove Focussed Phase 2 Local Improvements	2	30,000	1,000	-7,200	$450,000	-$59,500	-$15,100	-$44,400	X		
Option 6b: Region-Wide Local Improvements (Costs additional to Option 6a)	2	162,000	5,400	40,500	$450,000	$573,400	$85,100	$488,300	X	X	X
Option 7: Weekend Service on Route 562	0	45,000	1,500	9,000	$0	$283,800	$48,500	$235,300	X	X	X
Unallocated Option 8*: Adjust Acheson Transit Stop from Zone 3 to Zone 5	Cost Estminates TBD Pending Further Discussion with Parkland County Staff.										X
Unallocated Option 9*: Extend Connecting Service to Enoch Cree Nation	Cost Estminates TBD Pending Further Discussion with Municipal and Enoch Nation Staff.										X
Unallocated Option 10*: Introduce Spruce Grove Industrial Area On-Demand Service	1	36,000	1,200	4,800	$90,000	$87,900	$10,100	$77,800	X		
Options for Medium Term Consideration (4-10 years)											
Option 11: Extend Route 562 to Veterans Boulevard Park & Ride, Plus Additional Spruce Grove Route & Restructuring	3	249,000	8,300	66,400	$675,000	$881,100	$139,400	$741,700	X	X	
Option 12: Realign and Augment Stony Plain Local Routes	1	162,000	5,400	42,100	$225,000	$482,400	$88,400	$394,000		X	
Option 13: Specialized Transit Additional Peak Service	1	57,000	1,900	3,200	$90,000	$137,500	$12,800	$124,700	X	X	X
Option 14: Specialized Transit Weekend and Evening Service	0	48,000	1,900	2,100	$0	$134,700	$8,400	$126,300	X	X	X
Option 15: Additional Commuter Period Frequency: Regional Routes	4	48,000	5,300	58,300	$2,400,000	$802,300	$314,200	$488,100	X	X	X
Option 16: Additional Commuter Period Frequency: Local Routes	5	48,000	8,100	72,900	$1,125,000	$865,800	$153,100	$712,700	X	X	X
Option 17: Route 562 Edmonton Realignment + Further Frequency	0	0	0	5,300	$0	$0	$28,600	-$28,600	X	X	X
Total of All Options (Including 2a, 3d, 4b and 6b)	**23**		**59,100**	**452,100**	**$6,330,000**	**$6,549,800**	**$1,289,500**	**$5,260,300**			

Notes:

* Option is currently not allocated to a specfic year within the short term and could be introduced at any point.

** Based on 2016 system actuals and peer averages. Final costs may vary based on detailed budgets, year of implementation and final operational details.

*** Vehicle requirements shown include spares and may vary at time of implementation based on system fleet standards. ^ "Operating Roadways" refers to where service physically operates; as a regional system, all service benefits all partners.

Next Steps

The Tri-Municipal Regional Transit Plan outlines a path for the municipalities to provide area residents with even more viable transportation options and to grow transit service in a coordinated and integrated way.

Now is the time to move from plan to action.

The Plan will be presented to the individual municipal councils with the recommendation to:

- Receive the Tri-Municipal Regional Transit Plan for information.
- Allocate resources and direct staff to form an Implementation Committee to undertake roll out of further transit improvements and steps toward integration.
- Request that staff report back on budget implication for near-term implementation options, service integration opportunities and progress by Q2/Q3 2018.

In Focus: Creating a Framework for the Future

Complementing the transit service options and supporting measures, the Plan also presents elements to support decision making, monitoring and integration with other municipal plans and policies.

These include:

- Recommended processes to ensure that **land development and municipal road network improvements** support transit.
- Policies to support the **integration of transit** with other forms of travel.
- **Service design standards** to guide future transit system decision making.
- **Performance measures** and guidelines to monitor transit system health and determine when adjustments are required.
- Proposed approaches to **governance structures** and **service delivery models** at the Tri-Municipal level stemming from a parallel process undertaken by the Intermunicipal Collaboration Committee in tandem with this Plan.

1.0 INTRODUCTION

The Tri-Municipal Regional Transit plan seeks to deliver a unified vision for future transit service and its supporting infrastructure and strategies for the City of Spruce Grove, the Town of Stony Plain and Parkland County, Alberta (the “Tri-Municipal Region”).

Developed by Watt Consulting Group in collaboration with these municipalities, the Regional Transit Plan encompasses all forms of transit in the local communities, as well as the connection to the Edmonton Metropolitan Region.

In line with the project goals defined below, the Plan seeks to evaluate each community’s unique transportation needs, consider existing transit services and resources, and present a path to effectively and efficiently grow transit in the region. In particular, the Plan highlights opportunities where increased integration and coordination between area services and local governments can deliver even greater value to area residents.

In Focus: Regional Transit Plan Goals

- Provide a **clear outline for the continued evolution of transit** to effectively and efficiently increase community transportation options.
- Provide immediate guidance and recommendations with respect to **current issues and opportunities** facing transit in the area.
- **Determine transit priorities and funding implications** into the long term for cost estimates to be built into municipal plans.

1.1 Project Process, Involvement and Timeline

Undertaken from April to December 2017, the project was guided by a Steering Committee made up of staff representatives from the three partner municipalities: Pat Inglis (City of Spruce Grove), Miles Dibble (Town of Stony Plain) and Erin Felker (Parkland County).

With many previous transit plans and materials undertaken for the respective individual communities, the Regional Transit Plan mainly focused on consolidating existing information and ensuring alignment on a regional scale. The Plan project team also conducted interviews with key local government staff, community stakeholders and existing transportation providers throughout the area to confirm transportation needs, issues and opportunities. Detailed analysis of existing transit service performance and community plans further supported the process. Supporting the project team led by Watt Consulting Group, Brian Mills & Associates also provided review and perspective to key Plan findings.

Multiple Steering Committee workshops were used to shape the Plan's recommendations, as well as service provider and stakeholder workshops conducted in October 2017 to review and refine final recommendations. The project was framed by an overarching Intermunicipal Collaboration Committee for the three area municipalities, which ensured alignment with larger organizational goals and communication with senior staff and elected officials. The Plan process was also cognizant of other larger discussions related to transit and transportation integration occurring at the Edmonton Metropolitan Region level.

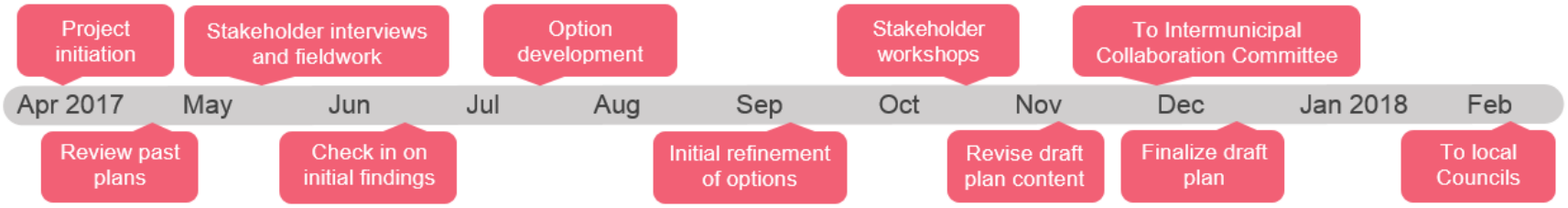
In Focus: Community Involvement

The Tri-Municipal Regional Transit Plan process included involvement of the Planning, Engineering, Public Works, Recreation and Economic Development staff of the City of Spruce Grove, the Town of Stony Plain and Parkland County.

It also included outreach to the staff and representatives of the following organizations:

- Acheson Business Association
- Enoch Cree Nation
- Edmonton Transit System (ETS)
- Spruce Grove Specialized Transit Services Society
- Town of Stony Plain HandiBus
- Southland Transportation Ltd.
- Spruce Grove Family and Community Support Services
- Stony Plain Family and Community Support Services
- Spruce Grove & District Chamber of Commerce
- Stony Plain Chamber of Commerce
- Parkland School Division

PROJECT PROCESS AND TIMELINE



1.2 Initial Engagement Results

In addition to direct outreach to municipal staff and stakeholder organizations confirming transportation needs in the community, the Tri-Municipal Regional Transit Plan conducted two workshops to discuss and refine the draft Plan's recommendations.

- A **Service Provider** workshop on October 17, 2017 (10:00 a.m. - 2:00 p.m., 10 participants) brought together representatives from the existing transit service providers, including Stony Plain HandiBus, Spruce Grove Specialized Transit Services Society and the Edmonton Transit System (ETS).
- A **Key Stakeholder** workshop on October 18, 2017 (10:00 a.m. - 12:00 p.m., 14 participants) brought together staff from various roles within the partner municipalities of the City of Spruce Grove, the Town of Stony Plain and Parkland County, as well as representatives from Enoch Cree Nation, Acheson Business Association and Stony Plain Family and Community Support Services.

In general, workshop participants were supportive of the Plan's process and recommendations. Participants suggested a number of additions or amendments to the Plan, with some of the broader areas of discussion centering on integration opportunities between the various services and clarifications and questions about routing, particularly in Stony Plain

All workshop feedback was further discussed by the Steering Committee, a summary prepared (see Appendix A) and any resulting changes were incorporated into this final Plan.

Workshops with municipal staff and representatives from area stakeholders (top) and area transit service providers (bottom) reviewed and provided feedback on draft Tri-Municipal Regional Transit Plan key findings, service options and supporting strategy recommendations.

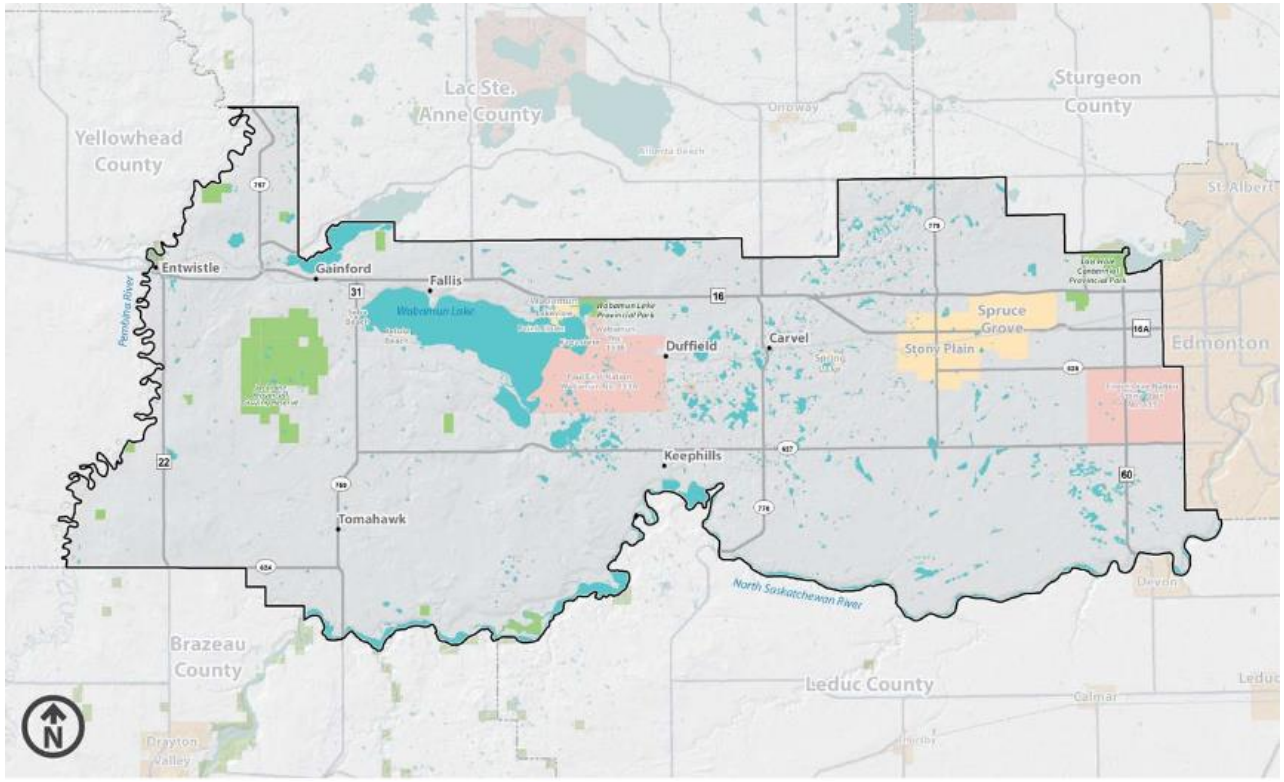
2.0 COMMUNITY CONTEXT

2.1 Community Overview and Population

The municipalities of the City of Spruce Grove, the Town of Stony Plain and Parkland County are directly adjacent to each other and have an overall combined population of 83,352.[1] Parkland County is extremely large in scale (2,390.23 km^2) and includes seven rural hamlets that are more than 30 minutes away from Stony Plain / Spruce Grove.

At the direction of the project Steering Committee, while the Tri-Municipal Regional Transit Plan takes the overall long term needs of all municipalities into account, its main focus within Parkland County is on built-up areas directly adjacent to Spruce Grove and Stony Plain or between those communities and the City of Edmonton. This includes the residential community of Parkland Village and the Acheson industrial area.

Subsequent to this Plan's initiation, the neighbouring Enoch Cree Nation has also expressed interest as a potential transit partner and therefore the analysis and regional service options also include this community.



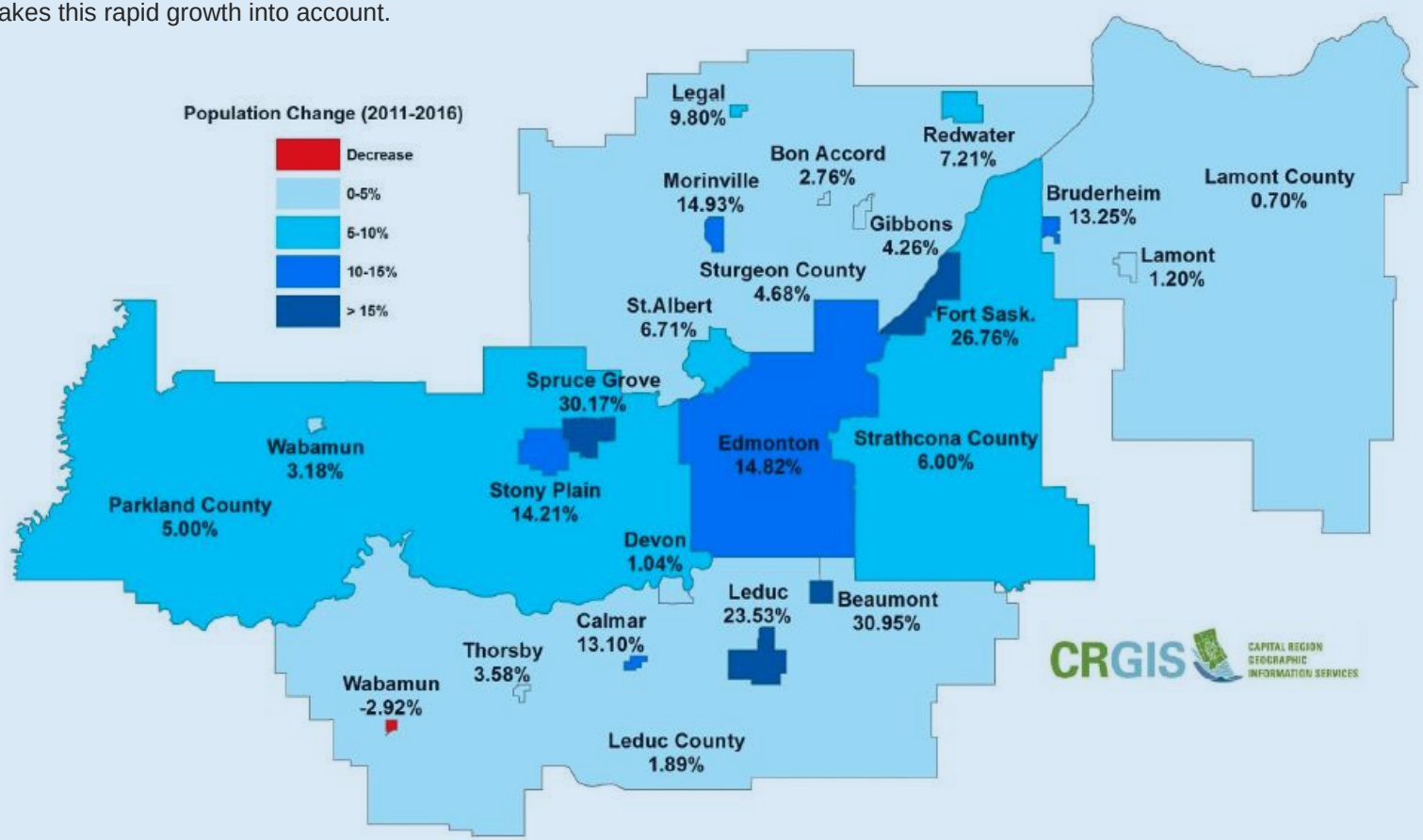
Plan municipal community scope and location. (Source: Parkland County 2017 Municipal Development Plan)

[1] Source for all population and demographic information except where noted is the Statistics Canada 2016 Census.

In Focus: Population Growth

This map from the Capital Region Board (now the Edmonton Metropolitan Region Board) shows the population increase for all muncipalities between the 2011 and 2016 Statistics Canada Census.

Of these, the City of Spruce Grove experienced the second highest rate of growth in the region (30.17%) with the Town of Stony Plain at 14.21% and Parkland County at 5.00%. The extent of options presented in **Section 7.0**—particularly within the urban area of Spruce Grove—takes this rapid growth into account.



Edmonton Metropolitan Region population growth by municipality, 2011 to 2016. (Data Source: Statistics Canada; Map Source*: Edmonton Metropolitan Region District Growth Plan: Monitoring and Reporting Indicators, March 9, 2017 Draft*)

2.1.1 Area Population Growth by Typical Transit Market

The following tables summarize population for study-area communities. Population is grouped into age categories that roughly align with typical transit customer market types. The upper table compares the total Tri-Municipal Region population with that of the overall Edmonton Census Metropolitan Area (CMA) and the City of Edmonton, while the bottom table shows details for each of the Tri-Municipal Region municipalities, plus Enoch Cree Nation.

Beyond the overall growth in population for the area, particularly for Spruce Grove, the information in the tables shows:

- The proportion of **older seniors** age 75 years and over is increasing at a faster rate in the Tri-Municipal Region than in the entire Edmonton CMA and the City of Edmonton (33% versus 13% and 9% respectively). This 75+ age category is often when citizen accessible transit need tends to increase due to declines in mobility or cognitive function or ability/desire to drive.
  - While in terms of real numbers the population is not large, this higher proportion of growth in older seniors is evident in each of the Tri-Municipal communities, particularly Spruce Grove (57%) and Enoch Cree Nation (67%). This growth has implications for transit, particularly local access to goods and services, regional access to health care, the need for accessible bus stops and buses, and specialized transit.

AREA POPULATION COMPARISONS BY TYPICAL TRANSIT MARKET AGE GROUPINGS

Comparison of Study Region to Edmonton Census Metropolitan Area and City of Edmonton

	Edmonton CMA			City of Edmonton			Tri-Municipal Total		
Characteristics	2011	2016	% Change	2011	2016	% Change	2011	2016	% Change
Total private dwellings	482,249	537,634	11%	324,756	387,950	19%	28,459	32,973	16%
Total Population	1,159,875	1,321,425	14%	812,210	932,545	15%	71,800	83,355	16%
Average age of the population	36.5	37.8	4%	36	37.7	5%	114	115	1%
Population by Age Group									
0 to 14 years	204,915	243,195	19%	135,435	164,520	21%	14,390	16,895	17%
15 to 24 years	164,255	168,040	2%	116,800	119,965	3%	9,520	10,150	7%
25 to 59 years	599,560	675,035	13%	426,060	486,100	14%	35,915	40,510	13%
60 to 74 years	129,885	165,875	28%	87,410	111,380	27%	9,135	11,990	31%
75 years and over	61,260	69,290	13%	46,505	50,590	9%	2,840	3,780	33%

Comparison by Study Area Municipality / First Nation

	Parkland County			City of Spruce Grove			Town of Stony Plain			Enoch Cree Nation		
Characteristics	2011	2016	% Change	2011	2016	% Change	2011	2016	% Change	2011	2016	% Change
Total private dwellings	12,150	12,910	6%	10,105	13,109	30%	6,204	6,954	12%	378	576	52%
Total Population	30,580	32,095	5%	26,175	34,070	30%	15,045	17,190	14%	987	1,690	71%
Average age of the population	42.2	40.4	-4%	33.7	35.1	4%	37.7	39.4	5%	n/a	28	n/a
Population by Age Group												
0 to 14 years	5,870	5,885	0%	5,660	7,685	36%	2,860	3,325	16%	325	535	65%
15 to 24 years	3,790	3,775	0%	3,610	4,255	18%	2,120	2,120	0%	165	305	85%
25 to 59 years	15,465	15,545	1%	13,380	16,990	27%	7,070	7,975	13%	485	715	47%
60 to 74 years	4,450	5,635	27%	2,740	3,885	42%	1,945	2,470	27%	75	120	60%
75 years and over	1,005	1,250	24%	785	1,235	57%	1,050	1,295	23%	15	25	67%

- The growth of **younger seniors** aged 60-74 years in the Tri-Municipal Region is just slightly higher than Edmonton's CMA and its City (31% versus 28%/27%). Spruce Grove and Enoch Cree Nation have been experiencing a higher rate of growth in this category (42% and 60%), with growth in Parkland County and Stony Plain in line with the larger Edmonton Region (27% for each).
  - This population group tends to rely more heavily on automobiles and can be less likely to take transit. However, the growth in this group is a predictor of future accessible transit need.
  - This group tends to be more amenable to taking transit for longer distances, particularly in winter. Continuing to improve and promote regional transit services can be a way to build a "transit habit" that encourages use of transit locally, particularly as they age.
- The growth in **adults** aged 25-59 years in the Tri-Municipal Region is in line with that of the larger Edmonton Metropolitan Region and City (13% versus 13%/14%).
  - This population group tends to encompass commuters, as well as non-working adults who use transit to access local goods and services, particularly as parents with children or people with a disability.
  - Building quality regional and local transit at peak commuting times is key to attracting this market, particularly with messaging about saving on household transportation costs, gaining personal time (reading, email, etc.) or as part of a sustainable lifestyle.
  - To attract non-working adults and their families, local and regional transit ideally provides consistent schedules across the day.
- The growth in **youth** aged 15 to 24 is slightly higher in the Tri-Municipal Region than the Edmonton CMA and City (7% versus 2%/3%), with growth static in Parkland County and Stony Plain but rising in Spruce Grove (18%) and Enoch Cree Nation (85%).
  - This group includes some of the most frequent users of transit, including secondary students and post-secondary students. Even in communities like the Tri-Municipal Region where school bussing is provided, local transit will attract secondary students who want more flexibility to travel to extracurricular activities and work and increased independence.
  - Likewise, older youth will seek local and regional transit to access post-secondary education and jobs. As their schedules will be more variable than those of adults, they require reliable transit at commuter times and consistent service across the day and evening.
- The growth in **children** aged 0-14 years is lower in the Tri-Municipal Region than elsewhere (17% versus 19%/21%). However, Spruce Grove and Enoch Cree Nation experienced higher growth (36%, 66%), with Parkland County static and Stony Plain in line (16%) with the CMA.
  - This group is a predictor of future transit demand among youth, meaning that creating a system that better serves the needs of youth now will continue to serve this market in future. Providing local transit throughout the day also better enables positive outcomes for children whose families who do not have access to a car (for choice or economic reasons) to access social and recreational opportunities and the basics of life.

2.2 Community Planning Framework

Established community policies, plans, and strategies from both the Tri-Municipal Region and Edmonton Metropolitan Region provide the framework for transit and direction on how best to develop service to complement larger objectives. The Plan process reviewed applicable community documents to determine overarching community policies and objectives for transit in the Tri-Municipal Region, particularly elements guiding land use, areas of future development and transportation.

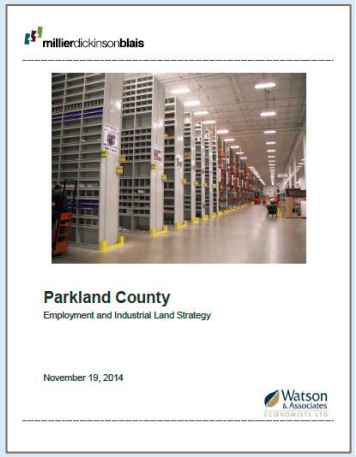
It should be noted that the three Tri-Municipal Region partner communities all have overarching sustainability strategies and strategic direction documents, which were also reviewed. Each of these strategy documents has language that broadly supports the following:

- Enhancement of transit services and active transportation.
- Creation of more livable communities.
- Increased collaboration between the municipalities.

The summary on the following pages provides an overview of the municipal plans and their specific direction regarding community form, transit and transportation.

Existing transit plans and studies for the project municipalities and the Edmonton Metropolitan Region were also reviewed to help develop this Plan and these documents are summarized in **Section 3.2 Existing Area Transit Plans**.

In Focus: Complementing Area Plans Examined


millierdickinsonblais

Parkland County

Employment and Industrial Land Strategy

November 19, 2014

Watson & Associates Economists Ltd.


Enoch Cree Nation

Maskêkosak – "people of the land of medicine"

STRATEGIC PLAN 2015-2017

Vision Statement

We strive to be a self-sufficient, unified, and prosperous Nation.

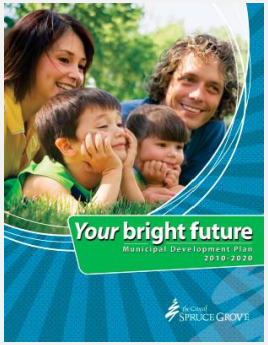
Mission Statement

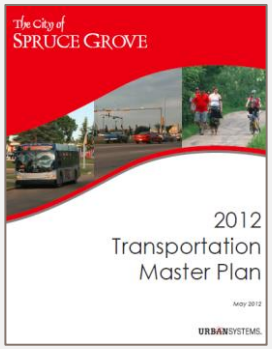
Our Core Values

In addition to the review of overall municipal plans within the study area, the project also examined plans relevant to specific areas within the region. This included Area Structure Plans for specific neighbourhoods, as well as planning documents pertaining to the Acheson Industrial Area and areas within jurisdiction of Enoch Cree Nation.

SUMMARY OF RELEVANT MUNICIPAL PLAN POLICIES AND DIRECTION

Plan / Study		Relevant Policy Direction	Policy / Plan Reference

	City of Spruce Grove Your bright future - Municipal Development Plan 2010 – 2020.	• Expand and integrate public transit and other alternative and active transportation infrastructure and services.
		• Develop a transit network that provides transit stops within 400m walking distance of 90% of homes by 2040 with connections to major employment and shopping areas.
		• Locate transit stops in proximity to other key land uses, as follows:
		  • Community and neighbourhood gathering places
		  • Concentrations of higher density gathering places
		  • Secondary schools
		  • Major parks and sports fields
		  • Major employment and shopping areas
		  • The industrial area south of Highway 16A
		• Explore public transit options and work with the [Edmonton Metropolitan Regional Board] and neighbouring municipalities to increase local and regional transit service.
			• Policy 5.6.1.1, pg. 41.
			• Policy 5.6.3.1, pg. 44.
			• Policy 5.6.3.4, pg. 44.
			• Policy 5.6.3.5, pg. 44.

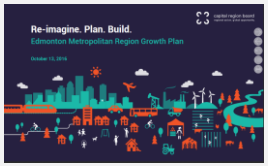
	City of Spruce Grove 2012 Transportation Master Plan	• Develop and improve public transit, including Objective 3: “Adopt a long-range transit service network plan to meet the needs of the City”. • Develop a Transit Expressway (BRT) service with service every 10-15 minutes in peak periods and every 30 minutes for rest of the day, seven days a week. • Develop Transit Arterials on streets including King Street, Jennifer Heil Way, McLeod Avenue and Grove Drive due to their higher residential and commercial density. • Establish Transit Centres and Park & Ride Facilities at places such as the Gateway, East Urban Village and Columbus Park.	• Section 5.2.1, pg. 40. • Section 5.2.2, pg. 40. • Section 5.2.4, pg. 41-42.

SUMMARY OF RELEVANT MUNICIPAL PLAN POLICIES AND DIRECTION

Plan / Study		Relevant Policy Direction	Policy / Plan Reference
	Town of Stony Plain Uniquely Stony Plain – Municipal Development Plan 2013	• Provide a future commuter service. • Explore possible bus stop locations and facilities and encourage intensification along main corridors and potential future transit route. • Serve the transportation needs of seniors and residents with disabilities.	• Policy 4.3a, pg. 39. • Policy 4.3b, pg. 39. • Policy 4.3c, pg. 39.

	Town of Stony Plain Transportation Study (2011)	• Ensure new communities are built with consideration for future transit service to meet the Town's overall objectives.
		• Ensure redevelopment and intensification of main corridors and the Town centre to support future transit service.
		• Further develop transit, with the following considerations:
		  • The existing HandiBus for seniors and the disabled should continue to be operated while also exploring feasibility of replacing this with alternative services, including regular fixed-route services, regional integration and special event services.
		  • A fixed-route or flexible route community bus service may be warranted in the medium to long term to meet the mobility needs of seniors.
		  • While there may be limited demand for local transit today, the project population [of 22,525 by 2030] will likely warrant service in the long term, particularly for the post-secondary market.
		  • There will continue to be limited demand for work-based transit trips internal to Stony Plain; however a growing demand for regional commuter service can be expected and guided by the [Edmonton Metropolitan Regional Board's Intermunicipal Transit Network Plan.
			• Section 10.2.1, pg. 10-11.

SUMMARY OF RELEVANT MUNICIPAL PLAN POLICIES AND DIRECTION

Plan / Study		Relevant Policy Direction	Policy / Plan Reference
	Parkland County Municipal Development Plan – One Parkland: Powerfully Connected (2017)	• Ensure the creation of an efficient transportation network and land use pattern that makes use of existing assets and infrastructure as much as possible. • Undertake a future Transportation Master Plan. • Support a safe, resilient and reliable transit service that provides connections to the County's major employment areas, including Acheson Industrial Area. • Support and encourage community-led transit service programs in rural areas, especially those for the elderly and people with accessibility needs. • Support innovative service delivery by exploring public transit innovations to delivery service to the County's businesses and residents in an effective and efficient manner. • In the case of rural hamlets, growth and provision of municipal services should be prioritized in the County's only Priority Growth Hamlet of Entwistle, followed by the Growth Hamlets of Duffield and Tomahawk.	• Policy 9.1.1, pg. 83 • Policy 9.1.2, pg. 83 • Policy 9.3.1, pg. 86 • Policy 9.3.2, pg. 86 • Policy 9.3.4, pg. 86 • Policy 6.0.1, pg. 54-55
	Re-imagine. Plan. Build. Edmonton Metropolitan Region Growth Plan	• Develop a regional transportation system to support and enhance growth and regional and global connectivity • Encourage mode shift to transit, high occupancy vehicles and active transportation modes as viable and attractive alternatives to private automobile travel, appropriate to the scale of the community. • Ensure effective coordination of regional transportation policies and initiatives between all jurisdictions.	• Policy 5.1.1b, pg. 70 • Policy 5.2.1b, pg. 74 • Policy 5.2.2c, pg. 74 • Policy 5.5.2a, pg. 74

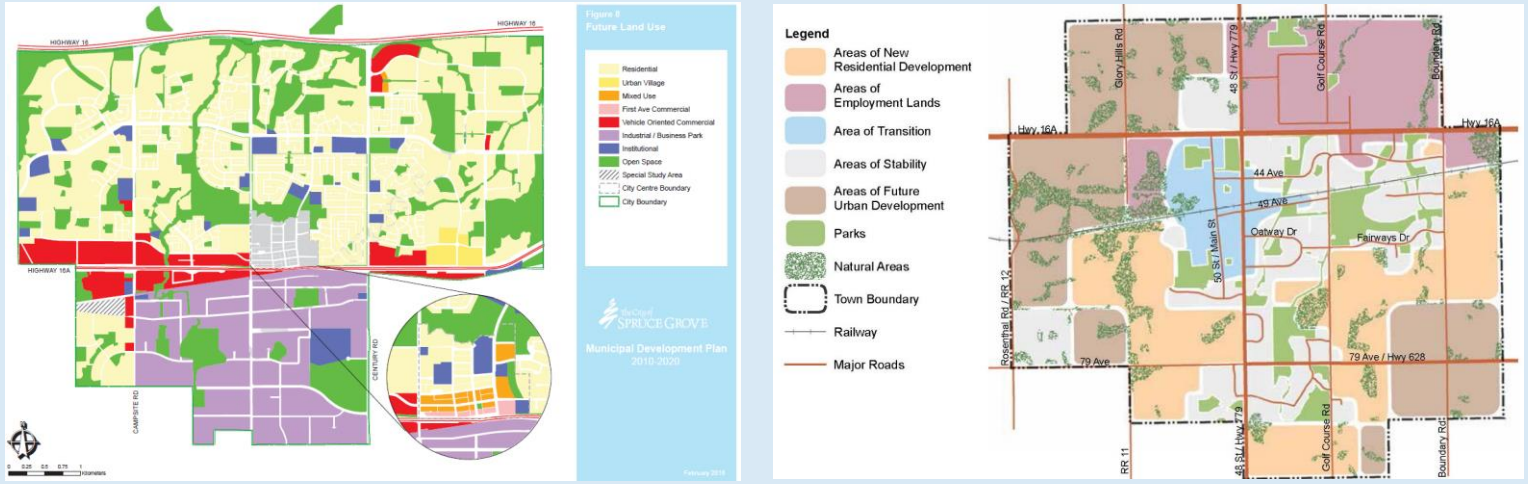
2.3 Land Use and Transportation Key Conclusions

Targeting population and employment density and building an efficient road network are steps integral to creating efficient and effective transit. All local and regional land use and transportation plans reviewed for this project support these larger development and road network goals.

Beyond the residential areas that are developing in Spruce Grove (Greenbury, Aspen Glen, Harvest Ridge) and Stony Plain (The Brickyard, South Creek, Westerra) requiring transit service, the following **areas and corridors are noted for zoning, density and destinations** that will most likely generate ridership:

- **Within Spruce Grove**, the commercial core along McLeod Avenue, as well as destinations and residential density along Grove Drive, Jennifer Heil Way and King Street.
  - A number of existing and emerging commercial areas will also attract demand for transit (Hwy 16A at Campsite Road, Hwy 16 and Century Road, Hwy 16A and Century Road/Pioneer Drive). **However, in order to serve these areas effectively it is imperative that these areas be designed with a road and pedestrian network supportive of transit.**

In Focus: Approaches to Land Use Zoning



Zoning maps from City of Spruce Grove (let) and Town of Stony Plain (right) Municipal Development Plans.

Each of the Tri-Municipal Region communities have written policies that focus development in key areas. However, they tend to less-explicitly define the placement of multi-family residential density *within* residential zoning boundaries. Wherever possible, future higher-density housing within residential developments should be defined and encouraged *on* the higher-order transit corridors outlined in **Section 6.2** of this Plan through policies, processes and potentially consideration of separate gradations of residential zoning.

- **Within Stony Plain**, the existing Town Centre, services and residential areas on Main Street, 44 Avenue, South Park Drive, 48 Street and 79 Avenue.
  - Existing residential density in the vicinity of Oatway Drive and the larger "Zones of Transition" in the Town's land use map are also key future drivers of transit. **However, in particular the "Special Study Area" west of Downtown should be carefully considered in terms of supportive road network to ensure that transit vehicles can efficiently serve it.**
  - Future intensification in the vicinity of Veterans Boulevard at Hwy 16A, The Brickyard and in the longer term around Veterans Boulevard at 79 Avenue.
- **Within Parkland County**, Parkland Village and the Acheson Industrial Area, with potential future limited rural transit connection in Entwistle, Duffield and Tomahawk.

In terms of the **road network and infrastructure**, the following planned changes should be noted as they will impact the future transit network:

- A new overpass in Acheson to eliminate delays on Hwy 60 currently caused by rail traffic and more reliably connect its zones spanning from Hwy 16 to Hwy 16A.
- Extension of Pioneer Road to Grove Drive, extension of Grove Drive to Boundary Road/Veterans Boulevard, the future connection from Avonlea Way/Longview Drive to Jennifer Heil Way and extension of Brickyard Drive to 57 Avenue, as well as capacity improvements to Veterans Boulevard.

In Focus: Major Regional Destinations

Beyond the many residential areas and employment/service locations that have more local travel patterns, the following destinations were most commonly cited by Plan stakeholder interviewees as major destinations for which Tri-Municipal residents travel outside their home municipality.

Edmonton Metropolitan Destinations

Employment / Shopping / Recreation
(Plus Health and Education employers).
- Downtown Edmonton
- West Edmonton Mall

Education
- NAIT
- University of Alberta
- MacEwan University
- NorQuest College

Health
- Royal Alexandria Hospital
- Misericordia Community Hospital
- University of Alberta Hospital
- Grey Nuns Community Hospital

Tri-Municipal Destinations Commonly Attracting Regional Travel

Employment / Shopping
- Downtown Spruce Grove
- Downtown Stony Plain
- Acheson Industrial Area
- Walmart (Spruce Grove)

Education
- NAIT Crane & Hoist School (Spruce Grove)
- Spruce Grove Composite High School
- Memorial Composite High School (Stony Plain)
- Connections for Learning (Stony Plain)

Health
- WestView Health Centre (Stony Plain)
- Queen Street Place (Spruce Grove)
- Various area medical and dental clinics

Recreation
- TransAlta Tri Leisure Centre (Spruce Grove)
- Spruce Grove and Stony Plain Libraries

Community Support
- Queen Street Place (Spruce Grove)
- WestView Health Centre day programs (Stony Plain)
- Parkland Food Bank Society (Spruce Grove)
- Rehoboth placements (Tim Hortons, Library, Whispering Waters: Stony Plain)
- Alberta Provincial Courts (Stony Plain)
- Alberta Community Corrections (Stony Plain)
- Bredin Centre for Learning (Spruce Grove)
- Early Interventions (Spruce Grove)

3.0 EXISTING TRANSIT SYSTEM OVERVIEW AND PERFORMANCE

3.1 Overview of Transit Services

Transit in the Tri-Municipal Region currently consists of a number of different services:

Conventional Transit providing scheduled weekday service on routes primarily operating at commuter times between Spruce Grove, Acheson and Edmonton. Service is operated through contract with the Edmonton Transit System (ETS) and funded by the City of Spruce Grove and Parkland County.

Acheson Shuttle providing demand responsive connection between ETS services and employer locations in the Acheson area. Service is operated by Southland Transportation and funded by Parkland County.

Spruce Grove Specialized Transit Service (STS) providing local and regional door-to-door service for people with disability and seniors living in Spruce Grove and select areas of Parkland County. Service is operated by the Spruce Grove Specialized Transit Society and funded by the City of Spruce Grove and Parkland County.

Stony Plain HandiBus ("HandiBus") providing local and regional door-to-door service for people with a disability and seniors living in Stony Plain. Service is funded and operated by the Town of Stony Plain.

In addition to these primary transit services—which are the focus of analysis in **Sections 3.3** and **3.4**—Parkland County also provides a Specialized Transit Grant Program to community organizations to provide a limited amount of transportation for residents of the rural hamlets Tomahawk and Entwistle.

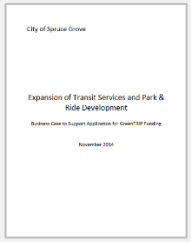
3.2 Existing Area Transit Plans

A number of past transit plans have guided the development of existing transit services in the Tri-Municipal Region. The following provides an overview of their findings and how they relate to the options recommended in this plan.

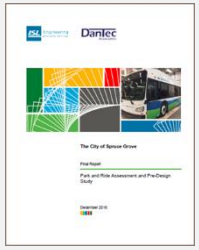
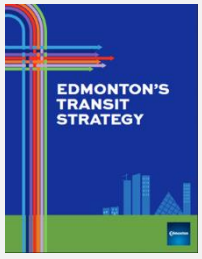
This project reviewed community context and developed preliminary service options first (to ensure an objective analysis), before then reviewing past transit plans to determine the level of alignment between older and newer recommendations. This methodology acted as a double check to ensure that direction either aligned or that it diverged based on compelling rationale.

Other background transit documentation reviewed included customer survey findings and information from other Edmonton Metropolitan Region plans, in particular the Edmonton - St. Albert Regional Commuter Service Assessment which foreshadows the creation of a Regional Transit Services Commission (now in development) and further regional transit integration.

SUMMARY OF RELEVANT TRANSIT PLANS

Plan / Study	Summary
 **Spruce Grove & Stony Plain Transit Feasibility Study (2007)**	This study undertook the development of options and supporting measures to implement local service within the Tri-Municipal Region (including Parkland Village and the Acheson Industrial Area). Options were also presented to refine the Spruce Grove to Edmonton regional service which had just begun the preceding year. In the case of internal transit within Stony Plain, the Study recommended a Dial-a-Bus service. Local service within Spruce Grove and Parkland Village was projected as two fixed route loops, with another fixed route operating between key locations in Spruce Grove and Stony Plain.
 **Expansion of Transit Services and Park & Ride Development - Business Case to Support Application for GreenTRIP Funding (2014)**	This business case outlines the City of Spruce Grove's plans to use GreenTRIP capital funding to improve regional and local service. Proposed investments include purchase of additional transit vehicles for regional and local service, purchase of land and construction of a Park & Ride, and construction of a local bus storage facility in the Spruce Grove area. The funding application included a detailed list of service improvements that have been driving recent system changes and project others in the future. This Tri-Municipal Regional Transit Plan has taken the GreenTRIP and existing City budget commitments into account for the timing and scope of service options presented in **Section 7.0 Service Options**.

SUMMARY OF RELEVANT TRANSIT PLANS

Plan / Study	Summary
 **City of Spruce Grove Park & Ride Assessment and Pre-Design Study (2016)**	This study evaluated five potential Park & Ride sites within Spruce Grove, as well as provided perspective on capacity requirements, design, pay parking policies, and other supporting measures. The evaluation recommended a site in the planned Westwind development near Century Road and Hwy 16 (currently known as the proposed Multi-Use and Sport Event Centre). It also recommended the need for a central transit hub, ideally in the vicinity of Downtown Spruce Grove. A potential Park & Ride location at Century Crossing at Hwy 16A ranked second in the evaluation, underscoring the usefulness of a hub on the southeast corner of the City. The study also presented a local Spruce Grove route structure that is more direct than that in the initial feasibility study and more in alignment with the recommendations of this plan.
Capital Regional Board [now Edmonton Metropolitan Region Board] 30 Year Transit Service Plan (2011)	An assessment of the needs and opportunities for transit across the Edmonton Metropolitan Region, including options for implementation of an integrated inter-municipal transit system and supporting infrastructure that complements the projected Edmonton LRT network. This initial service plan and its subsequent updates to the long term 2044 regional transit network (most recently in the Edmonton Metropolitan Region Growth Plan) projects a transit priority corridor from Edmonton to Acheson, Spruce Grove and Stony Plain via Hwy 16, Century Road, Hwy 16A and 48 Street, with Park & Rides in the vicinity of Hwy 16 at Hwy 60, Century Road at Hwy 16 and 48 Street at Hwy 16A. **A notable difference between that projection and more recent Tri-Municipal Region transit plans (including this one) is the recommendation that the primary connection between the Tri-Municipal Region and Edmonton be instead prioritized via Hwy 16A to connect to the proposed Valley Line - West LRT.**
 **Edmonton's Transit Strategy (2017)**	A high-level strategy for the Edmonton Transit System, including objectives related to supportive community planning, funding, transit network design, improving the customer experience and organization capacity. Most importantly with respect to Tri-Municipal Region transit goals, the Strategy defines the City's proposed conceptual primary transit network and its hierarchy of LRT, precursor BRT, Rapid Bus, and Crosstown services. Recommendations in this plan align with the Strategy's proposed conceptual network.

3.3 Existing Conventional Transit

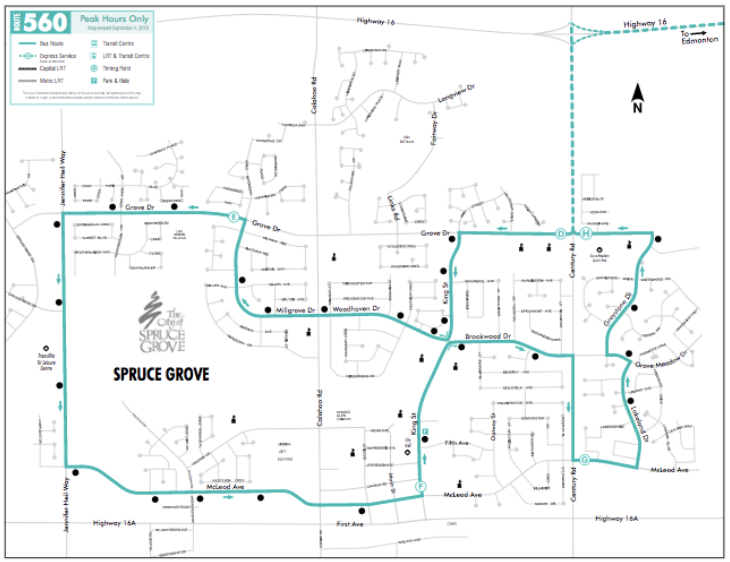
3.3.1 Conventional Transit Route Overview

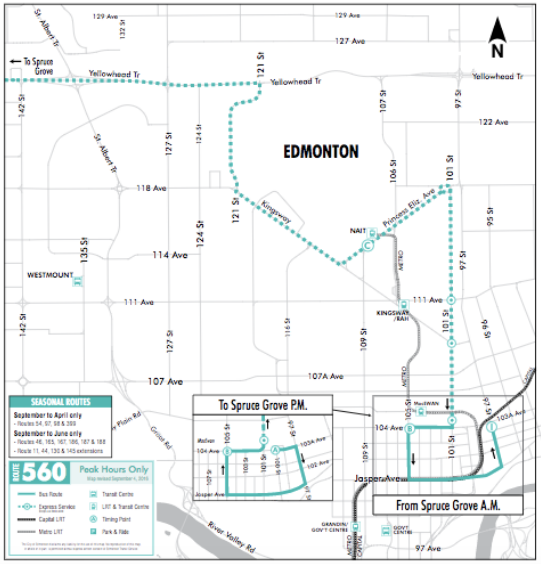
Conventional services operated by the ETS currently consist of three routes summarized below, with maps on the following pages. Since the Acheson Shuttle exists entirely to support and connect with the conventional routes, it is also summarized here.

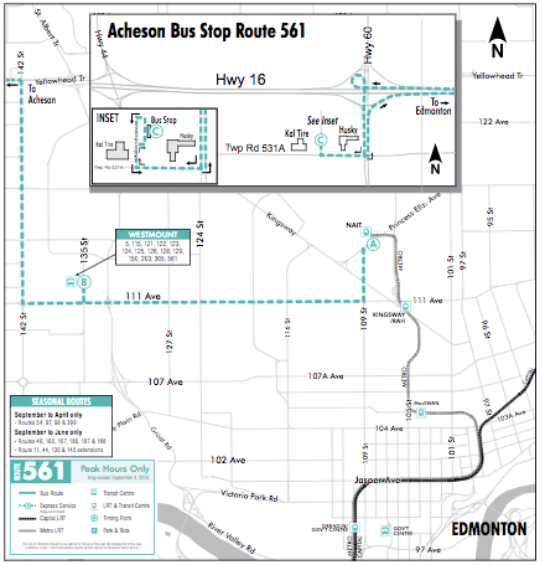
SUMMARY OF EXISTING CONVENTIONAL TRANSIT ROUTES

Characteristic	Route 560 Spruce Grove – Downtown	Route 561 NAIT – Westmount - Acheson	Route 562 Spruce Grove – Acheson – West Edmonton Mall – South Campus	Acheson Shuttle
Synopsis	Operating since 2006, this is currently the primary regional route operating between the Tri-Municipal Region and Edmonton on **Hwy 16.**	Implemented in April 2016 and operating on **Hwy 16**, these trips make efficient use of ETS vehicles otherwise travelling not-in-service from the garage to Spruce Grove to start or end Route 560.	Implemented in February 2017 and operating on **Hwy 16A**, this route connects Spruce Grove to Edmonton and offers service to Acheson in one direction at a Zone 3 transit stop.	Provides door-to-door connection on demand within Acheson to Route 561 and 562 services.
Key Destinations Served	Local loop of Spruce Grove, Downtown Edmonton, NAIT, and Royal Alexandra Hospital.	Acheson, Westmount and NAIT; also connects to Spruce Grove but this is not shown in public schedules.	Local loop of Spruce Grove, Acheson, West Edmonton Mall, and University of Alberta South Campus / Fort Edmonton.	Anywhere within Acheson Zones 1-5 (No additional fare for transfers).
Key Connections	Edmonton Metro Line LRT (NAIT, multiple downtown stations).	Edmonton Metro Line LRT (NAIT), Acheson Shuttle (Zone 1 stop).	Edmonton Metro Line LRT (South Campus), West Edmonton Mall, Acheson Shuttle (Zone 3 stop).	Acheson Zone 1 and 3 transit stops.
Operates	Weekdays: • 9 morning peak trips • 1 midday trip • 8 afternoon peak trips	Weekdays: • 3 morning peak trips • 3 afternoon peak trips	Weekdays: • 4 morning peak trips • 4 afternoon peak trips	On demand
One-way Trip Time	45 minutes (80 minutes westbound in afternoon)	30 minutes	45 minutes (80 minutes WB in afternoon)	On demand
Peak Frequency	20 - 35 minutes	30 - 40 minutes	20 - 35 minutes	On demand

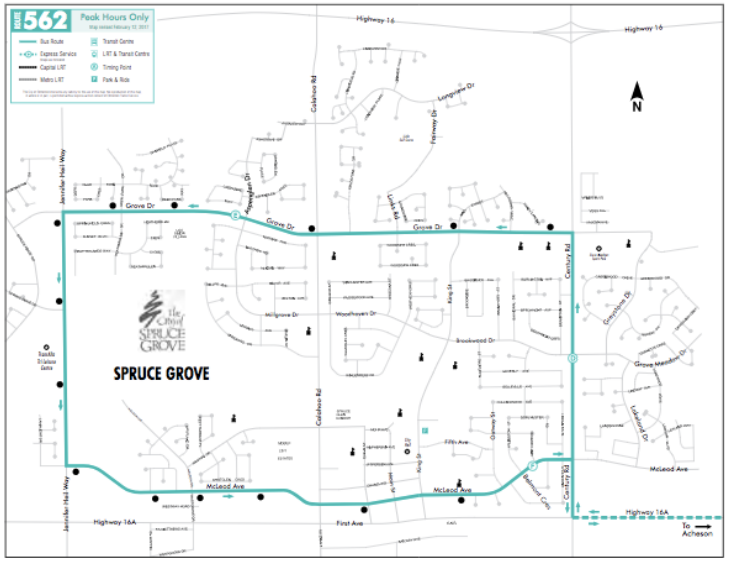
EXISTING CONVENTIONAL TRANSIT ROUTE MAPS: ROUTES 560 AND 561 (OPERATING REGIONALLY VIA HWY 16)

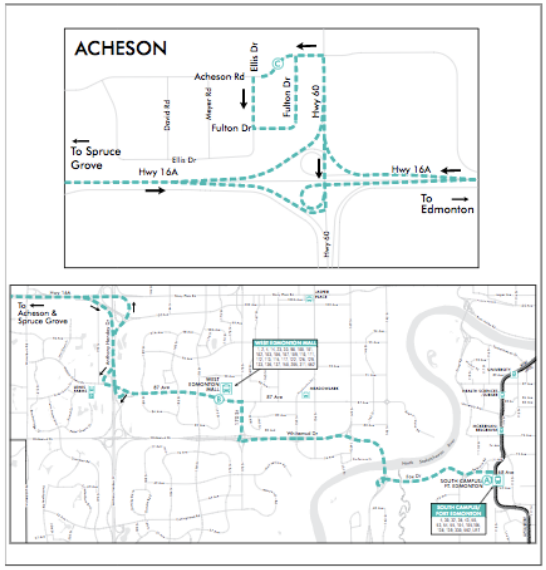






EXISTING CONVENTIONAL TRANSIT ROUTE MAPS: ROUTE 562 (OPERATING REGIONALLY VIA HWY 16A)





3.3.2 Conventional Transit Performance

Ridership on all conventional routes was evaluated for performance by trip and stop. Historical performance was reviewed but information is somewhat limited given the relative newness of Route 561 and 562 services. Projections are used in the table below for the newer routes to try to provide a sense of annual performance across a full year.

SUMMARY OF ANNUAL PERFORMANCE - 2017*

Service	Annual Service Hours	Annual Ridership	Ridership per Hour
Route 560	10,035	94,678	9.43
Route 561	1,714	1,322	0.77
Route 562	4,145	11,567	2.79
Acheson Shuttle	n/a	1,260	n/a
Total	15,894	108,827	6.85

* Note that as Route 562 only started in February 2017, ridership figures do not include January or the first half of February 2017.

Statistical analysis was complemented by the project team riding all routes and speaking with front line transit staff, passengers and stakeholders.

Some key conclusions for each route are:

Route 560

- Ridership has been increasing steadily. Since the implementation of UPASS, with year-to-date boardings for 2017 (January – October) up 8.5% over 2016.
  - 26% of passengers are using a UPASS.
- By far the strongest ridership stops for this route in both directions are at the TransAlta Tri Leisure Centre stop on Jennifer Heil Way in Spruce Grove and at the NAIT stop (109 Street & Princess Elizabeth Avenue) in Edmonton.
- The Tri-Leisure Centre stop has strong travel demand for two reasons: it is surrounded by dense residential and it also functioning as an informal Park & Ride location.

In Focus: Highest Ridership Stops

The following stops experience the highest levels of passenger activity—boarding and alighting buses—on Route 560. Morning travel patterns are shown; stops that also experience strong activity on afternoon return trips are shown in **bold**.

Top Route 560 Morning Boarding Locations (Top Afternoon Alightings in Bold)

- **Jennifer Heil Way & Tri Leisure Centre**
- Century Road & Grove Drive
- King Street & Brookwood Drive
- Greystone Drive & Grove Drive
- **Jennifer Heil Way & Spruce Ridge Drive**
- King Street & Fifth Avenue
- **King Street & Grove Drive**
- **King Street & Woodhaven Drive**

Top Route 560 Morning Alighting Locations (Top Afternoon Boardings in Bold)

- **109 Street & Princess Elizabeth Avenue (NAIT)**
- 101 Street & 105 Avenue
- **105 Street & 104 Avenue**
- 105 Street & Jasper Avenue

- A number of peak period trips have been experiencing overcrowding, particularly on the last one or two inbound trips in the morning period.
  - Additional trips have been added to this time period to manage demand but adding additional frequency in the midday—particularly the mid-morning—may also help more evenly distribute ridership with more choice for passengers trying to arrive in Edmonton prior to noon.
- The existing 560 route operates a large loop within Spruce Grove that makes travel less direct and a number of stops are spaced less than 400m apart (the ideal urban stop spacing). Likewise, the existing loop in Downtown Edmonton takes considerable time to serve for a comparatively short distance, particularly during the afternoon peak.
  - Making service more direct and reducing the number of duplicate stops would reduce travel time and make service more attractive. It would also enable use of transit for customers travelling locally.

Route 561

- Ridership is highest on the last morning trip and the first afternoon trip.
  - Stakeholder discussions indicated that adding an earlier afternoon return trip to Edmonton—particularly at around 3:00pm—should be a priority to grow ridership by enabling service to better match earlier Acheson shift end times.
  - The proposed types of development being planned for Acheson Zone 5 and in the vicinity of Hwy 60 at Hwy 16A will likely attract a larger potential transit passenger market. Consider moving the Zone 3 stop to Zone 5 to facilitate more direct service to capture this ridership.
- Passengers appear to be using Route 561 to travel between Edmonton and Spruce Grove even though this connection is not formally shown in public schedules. Likewise, while the flow of commuters from the Tri-Municipal Region to Acheson is much less than that from Edmonton, service to Acheson in both directions should be a system goal.
  - Adjusting Route 561 schedules to show the terminus point as Century Road at Grove Drive in Spruce Grove rather than Acheson would be an easy way to show that service connects and attract more riders.

Route 562

- Within Edmonton the majority of passengers are boarding and alighting at the South Campus station, while within Spruce Grove, boardings and alightings are evenly distributed.
- The Spruce Grove loop for Route 562 is different than Route 560 and several stakeholders indicated that they find this inconsistency confusing.
- Spruce Grove Specialized Transit Service staff noted that they have seen a decline in ridership on their monthly scheduled shopping trips to West Edmonton Mall since this route was implemented, with a number of clients now using this route to access the mall. This is a positive indicator supporting the utilization of expanded local and regional conventional service by current specialized transit clients.

3.3.3 Conventional Transit Customer Feedback

The City of Spruce Grove periodically reviews its transit service to inform future planning. Surveys have been conducted four times in the last six years (2011, 2014, 2015 and 2016). These surveys have used one or both of on-board and online surveys. The surveys focus on monitoring ridership profiles, service satisfaction and opportunities for service improvement.

Key findings from the 2016 on-board and online survey:

- 32% of on-board and 25% of total respondents were in the 18-24 age range.
- 55% of on-board respondents identified themselves as students.
- 58% of respondents were satisfied with the bus frequency.
- 85% of respondents were satisfied or very satisfied with bus and shelter cleanliness and bus comfort.
- The two areas of must dissatisfaction **were not having adequate space on the bus** (26%) and **buses being on time** (18%).
- On-board survey respondents indicated that the majority of them would ride more if service beyond peak hours or evening and weekend service was introduced.
- Online respondents indicated that 26% would regularly use a service between Parkland Village, Spruce Grove, and Edmonton and 22% would regularly use a service with a stop in Acheson during the peak hours, and 20% during the midday.

In Focus: Recurring Survey Themes (2011-2016)

The analysis summary prepared by the survey consultant noted the following recurring themes:

Passenger Information

- Most respondents are using the internet to access transit information, primarily via mobile phones. Providing real time schedule information was identified as a priority request, which is now available within the City of Edmonton but not yet for stops within the Tri-Municipal Region.
- Buses later in the morning, earlier in the afternoon and later in the evening were noted as priorities for additional service.
- The implementation of expanded **local** service was also a priority, with respondents in 2015 and 2016 noting that the most common reason for not taking transit was lack of ability to connect to daily activities.
- Riders are sensitive to overcrowding on the regional routes, with respondents from 2014 forward agreeing that buses are overcrowded and that standing on the bus on the highway is “uncomfortable” or “unsafe.”

3.4 Existing Specialized Transit

3.4.1 Specialized Transit Overview

The following table summarizes and provides a comparison of the study area's two specialized transit providers—Spruce Grove Specialized Transit Services Society and Stony Plain HandiBus—and their existing service levels and operational details.

SUMMARY OF EXISTING AREA SPECIALIZED TRANSIT: STRUCTURE AND SERVICE DETAILS

Operating Aspect	Spruce Grove Specialized Transit Service	Stony Plain HandiBus
Operating Structure and Funding	Operated by Spruce Grove Specialized Transit Service Society (STS), a non-profit entity guided by a Board of Directors. • The City of Spruce Grove funds the majority of service, has one STS Board of Director position, and provides in kind support (vehicle storage, maintenance, procurement, etc.). • An annual grant from Parkland County and charitable sources also helps fund the service.	Operated by the Town of Stony Plain as a program of its Community & Protective Services department. • The service is funded through the Town's municipal budget and decision making is provided by Stony Plain Council. • Vehicle maintenance, storage and procurement services are also provided by the Town.
Eligibility criteria	Age 55+ or mobility challenges.	Age 65+ or mobility challenges.
Typical Operating Hours	Generally, 7:00am to 4:00pm, weekdays only. However, shifts often extend to 6:30pm/7:00pm, particularly for dialysis patient return travel from Edmonton.	Generally, 8:00am to 4:00pm, weekdays only. Some occasional later end times to accommodate return from regional appointments.
Frequency of Trips to/from Edmonton	Service to Edmonton typically two to three trips per weekday, sometimes four. The bus usually returns to Spruce Grove between trips.	Typically, service to Edmonton two to three days per week in winter, fewer in summer. The bus often stays in Edmonton to wait for the return trip.
Local Service and Speciality Trips	• Local service as requested within Spruce Gove, plus Parkland Village. • Trips to Stony Plain: in particular WestView Health Centre appointments and day program, other health providers. • Scheduled local shopping trips twice per week, social trips approximately bi-weekly.	• Local service as requested within Stony Plain. • Trips to Spruce Grove: in particular appointments and resources at various destinations at Queen Street Place plus the Tri-Leisure Centre. • Occasionally scheduled shopping trips and outings, such as to Walmart.

SUMMARY OF EXISTING AREA SPECIALIZED TRANSIT: OPERATING DETAILS

Operating Aspect	Spruce Grove Specialized Transit Service	Stony Plain HandiBus
Number of Vehicles and Composition	• One 20-Passenger Shuttle (Can carry up to four passengers using wheelchairs). • Two 2-3 Passenger Vans (Can carry one passenger using wheelchair). • Previous "spare" minivan now being replaced.	• One 16-Passenger Shuttle (Can carry up to two passengers using wheelchairs). • One 2-3 Passenger Van (Can carry one passenger using wheelchair).
Vehicle Storage and Maintenance	Three vehicles stored at the STS garage, with the spare at City of Spruce Grove Public Works. All maintained by Public Works.	Vehicles are stored at the Town of Stony Plain Public Works yard and maintained by Public Works.
Vehicle Fueling	Fueled by drivers at a commercial supplier (UFA).	Fueled by drivers at Stony Plain Public Works.
Dispatch Method	Paper scheduling, plus record keeping in Excel.	Recently acquired new dispatch and client management cloud-based software.
Staffing	One manager/dispatcher, with contracted part-time drivers.	One clerk/dispatcher (plus Program Manager oversight), with contracted part-time drivers.

In Focus: Transit as More Than Transportation

Staff, passengers and stakeholders throughout this process emphasized that transit in the Tri-Municipal Region is often more than just "transportation," especially in the case of specialized transit.

Taking the bus is connecting to community and reducing isolation since residents have the opportunity to interact with the service dispatcher, drivers and other passengers. It also promotes positive health outcomes by connecting people to services and others. Whether providing access to health appointments or to the daily activities that make good health possible (getting groceries, participating in social outings, etc.), Spruce Grove STS and Stony Plain HandiBus already play a critical role in ensuring fundamental civic participation and health of area residents.

3.4.2 Specialized Transit Performance

Spruce Grove STS and Stony Plain HandiBus each track ridership and performance metrics using different methodologies, making it harder to compare the two services to each other or to other peer Alberta services.

The following table uses information extrapolated from actual ridership and shift information for each service to provide a sense of annual hours of service provided and ridership.

SUMMARY OF PROJECTED ANNUAL PERFORMANCE - 2017*

Service	Annual Service Hours	Annual Ridership	Ridership per Hour
Spruce Grove STS	4,319	5,775	1.34
Stony Plain HandiBus	1,764	2,808	1.59
Total	6,083	8,583	1.41

* Based on actuals where provided, with forecast for months not available.

This look at performance shows that while the scale of operation and number of service hours operated by STS is over double that of HandiBus—in general alignment with the ratio of population for the areas each serves—performance is relatively similar between the two in terms of average number of passengers carried per hour of service (1.34 rides per hour for STS versus a slightly higher 1.59 for HandiBus, with a Tri-Municipal Region total across both services together of 1.41).

Performance for the STS is impacted by the number of regional trips provided since they are longer and require more hours. In the case of HandiBus, ridership increased from an average monthly 1.38 rides per hour in the first half of 2017 to 1.81 in the second due a number of changes implemented.

The regional total annual rides per hour for 2017 generally aligns with historical ridership trend tracked by Spruce Grove STS and presented for 2014 - 2016 in the following table.

SPRUCE GROVE SPECIALIZED TRANSIT SERVICE ANNUAL RIDERSHIP - 2014 to 2016

Year	Total Vehicle Hours	Total Ridership	Rideship Per Hour
2014	4,083	5,809	1.42
2015	3,986	6,132	1.54
2016	4,320	5,775	1.34

The review of ridership, shift composition and operating details was complemented by the project team riding both specialized transit operations and speaking with front line transit staff, passengers and stakeholders.

Some key conclusions based on all of the information collected are:

- All transit staff, volunteers and stakeholders connected to the services interviewed for this process were **extremely passionate about the larger role** that specialized transit provides in the lives of community members. They also expressed openness to opportunities to serve even more citizens better, as long as the needs of their existing clients could continue to be met.
- **There appears to be capacity in the system to serve more people with existing resources**. As described above, overall ridership per hour for the Tri-Municipal Region specialized services is 1.41. This is lower than Edmonton Metropolitan Region peers, with the reported

2016 Canadian Urban Transit Association specialized transit rides per hour actuals for communities in the region surrounding Edmonton as follows: St. Albert 1.89; Strathcona County 2.13; Leduc 3.05.

- Performance in specialized transit is impacted by many different factors, including distance of travel, dispatch techniques, the prevalence of group trips and how service is matched to demand. There may be a few different strategies for consideration to improve performance, including:
  - Coordinating some or all regional trips since trips to Edmonton take the greatest amount of time and each regional trip removes a vehicle from the local area for shorter trips. Similarly, there may be an opportunity to further coordinate the regularly-scheduled longer trips that each is providing between Spruce Grove and Stony Plain.
  - Considering shared investment in the dispatch software recently purchased by Stony Plain HandiBus and implementing the same zone system across the entire operating area. Dispatch "zones" ascribe a name or number to similar geographic areas and make it easier for multiple people to dispatch together. For instance, WestView Health Centre and the shopping centre at South Park Drive in Stony Plain would likely be in the same zone.
  - Coordinating to serve major destinations that tend to attract multiple passengers at the same time, such as day programs for seniors and people with a disability.
- Both services are "pre-scheduling" special trips for shopping and recreational trips and are publishing those schedules or "trip windows" ahead of time, which is very positive. Using trip windows is a great initiative by each provider since it makes the service easier to use and also optimizes ridership on each hour of service provided. Specialized services in the Tri-Municipal Region seem like they are at the point where this trip window technique could be applied to more trips, especially those that are regional in nature.
- A huge factor driving travel demand in the Tri-Region is Alberta Health decision-making around where and when health services are offered. Regionally consolidating health services can make those services more cost-effective to deliver but those decisions also have an impact on transportation cost and need for citizens and communities.
  - Dialysis in particular, as well as cancer treatment, are the two trip purposes that are most commonly driving the need for regional specialized transit travel.
  - It would be worthwhile to have Alberta Health staff included in discussion on further ways to consolidate the scheduling of treatment for Tri-Municipal Region patients that are transit-dependent, particularly for dialysis as it occurs regularly.
- The two organizations are already informally sharing emergency spare vehicles between them. This is a great foundation to build from for further sharing knowledge and coordinating service.

3.5 Overall Existing Fares

A number of fare structures are already in place within the Tri-Municipal Region. Particularly in the case of the specialized transit services, fare structures vary widely in terms of how they are expressed. The following table summarizes the fare structures at a very high level to enable general comparison between services.

OVERVIEW OF EXISTING TRI-MUNICIPAL TRANSIT FARES

	Conventional Service (ETS and Acheson Shuttle)		Spruce Grove STS		Stony Plain HandiBus	
Fare Type	**Local**	**Regional**	**Local**	**Regional**	**Local**	**Regional**
Cash fare (one way)	$2.75	$6.25	$4.00 within Spruce Grove $6.00 to Stony Plain +$4/$6 surcharge for travel to Parkland Village	$30-$35	$4.50 within Stony Plain $9.00 to Spruce Grove	$31-$36
Tickets	n/a	$54	n/a	n/a	5 trip Stony Plain Pass: $20 10 trip Stony Plain Pass: $40 10 trip Spruce Grove Pass: $80	n/a
Monthly Pass (Non-Transferable to ETS)	n/a	$135	n/a	n/a	25 trip Stony Plain Pass (roughly equivalent to monthly pass): $100	n/a
Integrated Monthly Pass (Transferable to ETS)	n/a	$176	n/a	n/a	n/a	n/a
Student Monthly Pass (Non-Transferable to ETS)	n/a	$100	n/a	n/a	n/a	n/a
Other Fares	• UPass also available with transferability to ETS • Children 5 and under and CNIB passholders free		n/a	n/a	n/a	n/a

Based on this table and the underlying detailed fare structures, a key opportunity for the region is **to better consolidate and align fares between services** (which enhances system ease of use and therefore increasing ridership).

Other fare-related issues and opportunities include:

- **Opportunity to further integrate fares with the ETS** to better enable transfers between services and therefore potentially more efficient service delivery and routing. (At present, Tri-Municipal Region passengers not using UPass or an Integrated Pass need to pay again to transfer onto Edmonton transit services). Fare integration is being discussed as part of implementation of the Smart Fare electronic fare payment system at the Edmonton Metropolitan Region level.
- **Participation in Smart Fare to improve customer ease of use, revenue security and monitoring.** City of Spruce Grove and Parkland County staff are actively keeping up-to-date on this project to ensure that future plans and capital investment for existing Tri-Municipal Region conventional services align with the regional direction. Future development of local transit services within the Tri-Municipal Region will also need to align with regional fare technology direction.
- **Opportunity to continue expanding fare vendor locations.** The existing network of Spruce Grove fare vendors is quite comprehensive given the community's size (Spruce Grove City Hall, area Mac's Convenience Stores, Shopper's Drug Mart and Border Paving Athletic Centre). However, as scheduled transit service extends to more areas within the Tri-Municipal Region, the network of vendors should likewise be expanded, particularly in Stony Plain and Acheson. This may be mitigated with the implementation of Smart Fare.

In Focus: ETS Smart Fare / Smart Bus Project

Information from the Edmonton Transit System defines the regional Smart Fare / Smart Bus project as:

> *The Regional Smart Fare/Smart Bus project will see an electronic fare payment system implemented for Edmonton, St. Albert and Strathcona County transit systems. The project also includes adding Smart Bus infrastructure for St. Albert and Strathcona County, which is needed to support Smart Fare. Edmonton is already using the Smart Bus system.*
>
> *Smart Fare technology is very similar to the way you use a bank card with your bank. It uses an account-based set-up, meaning the account credit stays online. If riders lose their Smart Fare card, they can replace it without losing their account credit or fare purchase. Loading the Smart Fare account is instant. Once riders add credit, they can use it right away.*

System pilot testing is projected to take place in fall 2019, with full implementation in 2020. It is expected that other ETS area partners will also be invited to participated in the program.

(Source: https://www.edmonton.ca/projects_plans/transit/smart-fare.aspx)

3.6 Other Transportation Providers

Complementing the existing transit services described, a number of other transportation providers also operate within the Tri-Municipal Region. There may be opportunity to consider partnership with these organizations to deliver service and/or these can be considered as other existing transportation resources available to area residents.

OTHER EXISTING TRANSPORTATION PROVIDERS IN THE TRI-MUNICIPAL REGION

Operator	Type	Fare	Service Area
NeighbourLink Parkland	Community service that offers transportation provision by volunteer drivers.	No charge	Spruce Grove and Stony Plain
Ironhorse	Shuttle service	$85/hr	Spruce Grove
Grove Taxi	Taxi (9 vehicles)	Metered rate.	Spruce Grove and Stony Plain
Stony Grove Taxi	Taxi (3 vehicles)	Metered rate	Spruce Grove and Stony Plain
M & M'z Taxi	Taxi (1 Vehicle)	Metered rate	Spruce Grove and Stony Plain
Enoch Casino Shuttle	Hotel guest service	Free (requires hotel stay)	River Cree Casino and West Edmonton Mall
Parkland School Division	School bussing (108 buses)	$0.82 per ride, >2.4 km free	Spruce Grove and Stony Plain
Drive Happiness	Edmonton non-profit volunteer driving organization focussed on serving the needs of seniors	$8 + membership	City of Edmonton
Uber	Ride hailing service	Varies	Areas within the Edmonton Metropolitan Region, including Spruce Grove and a portion of Stony Plain (based on distance from City of Edmonton)

4.0 THE CASE FOR FURTHER INTEGRATION

4.1 Current Areas of Responsibility and Overlap

One strong theme that emerges from the analysis in the preceding section is that the operation and administration of existing transit services within the Tri-Municipal Region already have considerable overlap. These areas of overlap include:

- **Transit services**, as both Spruce Grove STS and Stony Plain HandiBus provide service within each other's jurisdictions and they and the ETS all provide local and regional services.
- **Service delivery resources**, including multiple dispatchers/administrative staff, policies, monitoring methodologies and scheduling/dispatch software.
- **Municipal staff support**, such as planning and monitoring the multiple services, undertaking vehicle procurement and maintenance, and creating and distributing online and printed customer information.
- **Capital infrastructure**, since vehicles are deployed separately with only a minimal amount of sharing between services and separate locations are used to store and maintain vehicles.

The tables on the next page provides an overview of the different transit system functions and responsible organizations for each of the region's existing services.

On the one hand these tables show the amount of duplication between and often within services. On the other hand, **the number of people and organizations currently involved in area transit also indicates an existing local level of comfort with partnerships, a diverse base of knowledge and resources, and redundancies that offer resilience.**

These pre-existing conditions demonstrate a strong foundation for Tri-Municipal organizations not to necessarily "do less" but instead work together to consider how current resources might be deployed differently through increased coordination and integration, as described **Section 4.2.**

Spruce Grove Specialized Transit Service Society Chair Richard Lutz and Stony Plain HandiBus Clerk Sarah Laschuk, some of the participants discussing opportunities for further coordination at the Service Provider Workshop held October 17, 2017.

EXISTING TRANSIT FUNCTION AREAS OF RESPONSIBILITY BY SERVICE AND ORGANIZATION

Transit System Function	Conventional	Acheson Shuttle	Spruce Grove STS	Stony Plain HandiBus
Customer Service				
Responding to Inquiries	SG/PC/ETS	PC/ST	SG/STS	SP
Ride Booking	n/a	ST	STS	SP
Dispatch	ETS	ST	STS	SP
Lost and Found	ETS	ST	STS	SP
Customer Information				
Printed Materials	SG/PC/ETS	PC/ST	SG/STS	SP
Website	SG/PC/ETS	PC/ST	SG/STS	SP
Social Media	SG/PC/ETS	PC	SG/STS	SP
Marketing/Branding	SG/PC/ETS	PC	SG/STS	SP
Promotions	SG/PC	PC	SG/STS	SP
Route Planning/Scheduling				
Scheduling	SG/PC/ETS	ST	STS	SP
Planning	SG/PC/ETS	PC	STS	SP
Detours	SG/PC/ETS	ST	SG/STS	SP
Monitoring	SG/PC/ETS	PC/ST	SG/STS	SP
Fares				
Collection and Processing	ETS	ST	SG	SP
Revenue Reporting	SG/PC/ETS	PC/ST	SG/STS	SP
Vendor Administration	ETS/SG	n/a	n/a	n/a
Fare Media Production	SG			SP
Governance and Decision Making				
Setting Fares	SG/PC	PC	STS	SP
Setting Service Levels	SG/PC	PC	STS	SP

Transit System Function	Conventional	Acheson Shuttle	Spruce Grove STS	Stony Plain HandiBus
Transit Staff				
Human Resources	ETS	ST	STS	SP
Training	ETS	ST	STS	SP
Dispatch Staff	ETS	ST	STS	SP
Vehicles				
Maintenance and repair	ETS	ST	SG	SP
Inspection	ETS	ST	SG	SP
Interior and Exterior Cleaning	ETS	ST	SG/STS	SP
Fueling and Storage	ETS	ST	SG/STS	SP
Assignment	ETS	ST	STS	SP
Procurement				
Vehicles	ETS/SG	ST	SG/STS	SP
Fuel	ETS	ST	SG	SP
Parts	ETS	ST	SG	SP
Bus Stop Amenities	ETS/SG/PC	ST	SG	SP
Contract Management	SG/PC/ETS	PC	SG	n/a
Facility				
Leasing / Maintenance	ETS	ST	SG	SP
Bus Stops				
Establishing Locations	SG/PC/ETS	n/a	n/a	n/a
Installation and Upgrades	SG/PC/ETS	n/a	n/a	n/a
Maintenance	SG/PC/ETS	n/a	n/a	n/a

Abbreviations
SG: City of Spruce Grove
SP: Town of Stony Plain
PC: Parkland County
ETS: Edmonton Transit Service/City of Edmonton
STS: Spruce Grove Specialized Transit Service Society
ST: Southland Transportation, a division of Pacific Western Transportation

4.2 Opportunities for Increased Integration

Rather than “all or nothing,” integration of transit across multiple municipal jurisdictions can actually encompass a spectrum of activities, as described in the graphic at right.

Some aspects of transit integration require minimal formal agreement but can provide a great starting point to increase the overall efficiency or ease of use of transit across a region. These easier aspects of integration include planning and scheduling service in a coordinated fashion (which may or may not have trade-offs for existing services and passengers), as well as consolidating customer information across services.

Often these elements at the “lighter” end of the integration spectrum can be coordinated through a staff-level working group. These aspects can be undertaken as a starting point to build the relationships and momentum that make the more intensive and formal activities such as sharing service delivery or governance structures easier to pursue.

The Tri-Municipal partners already have a strong base to work with given existing collaboration between Spruce Grove and Parkland County on conventional services and joint efforts by all three municipalities on this Plan and the Intermunicipal Collaboration Committee.

Some of the priority areas of integration that could be explored immediately in the Tri-Municipal Region with no formal governance structure change include:

- Continuing to build on the coordination already taking place between the City of Spruce Grove and Parkland County relating to ETS services.

In Focus: The Spectrum of Transit Integration

- Further coordinating STS and HandiBus services:
  - Creating an ongoing structure to share technical knowledge.
  - Aligning or sharing dispatch and client management software.
  - Aligning policies—particularly eligibility policies and processes—and fares.
  - Building on the existing informal process to share spare vehicles/fleet.
  - Coordinating service delivery so that multiple vehicles are not travelling at the same time between the Tri-Municipal Region and Edmonton.
- Consolidating customer information materials for all Tri-Municipal Region transit routes and services (i.e. conventional and specialized) into a single web portal, set of printed materials and promotional items.
- Aligning the service performance monitoring information (ridership, financials) collected for all services.
- Creating an informal structure between the City of Spruce Grove and the Town of Stony Plain Public Works staff to share knowledge about vehicle procurement and maintenance.

The benefit of these measures and others described further in **Section 7.0** and **Section 8.0** is enabling the existing services to attract more riders at current service levels and/or use existing resources more efficiently.

Increased integration and coordination is also the foundation for using new transit investment in the region most effectively. As a *regional* transit plan, all of the recommended options and strategies in the following sections build from the premise of partner municipalities working together because a coordinated approach delivers the most community benefit and service for the least cost.

Complementing these recommendations, information on governance and service delivery models is also presented in **Section 10.0** should partners pursue more formal structural changes to facilitate increased coordination at the more complex end of the spectrum of transit integration.

In Focus: Integration Working Groups

To facilitate increased integration of transit in the Tri-Municipal Region and implementation of solutions, one or more working groups would be helpful. This might include a staff-level working group with representation across all three municipalities to identify initiatives to pursue together.

This group could be complemented by a technical team of area municipal staff and existing transit service providers that would focus on specific opportunities to coordinate service and share knowledge and resources between the specialized transit services. As transit drivers have played a key role in shaping service to date, it is also critical that they participate wherever possible in shaping any future changes.

5.0 SUMMARY OF KEY OPPORTUNITIES

Based on stakeholder input and the analysis of community plans, demographics, transportation need and existing transit services, the following are the priority opportunities to improve transit in the Tri-Municipal Region. Recommendations in the balance of this Plan outline the path to addressing these issues and opportunities over the short- and longer-terms.

KEY TRI-MUNICIPAL REGIONAL TRANSIT OPPORTUNITIES

Implement expanded local service open to all area residents.

- Build on the existing services provided locally by the ETS, Spruce Grove STS and Stony Plain HandiBus to more comprehensively connect Tri-Municipal Region communities and serve local resident needs. In particular:
  - Implement local services with defined routes and schedules operating within and between Spruce Grove, Stony Plain and more populated areas of Parkland County.
  - Consider the travel needs of youth and families, as these groups are currently the most un-served by existing transit.
  - Better serve the needs of local work and post-secondary commuters by enabling travel within the Tri-Municipal Region, as well as a direct connection to regional services.
  - Better communicate available transit options to younger seniors and those seniors new to the community.
  - Rather than deploying service in silos, consider how available resources can be layered together and used in different ways to more effectively deliver service, such as using ETS and specialized transit vehicles to deliver a portion of scheduled local service at certain times of the day.

Increase service integration and coordination to improve ridership and service effectiveness, as described in detail in **Section 4.2**.

Further develop regional service

- Build on the existing growing base of post-secondary and work commuter ridership between the Tri-Municipal Region and Edmonton. In particular:
  - Address immediate over-crowding issues on select route 560 trips.
  - Introduce midday, evening and weekend services to make commuter trips more attractive (by providing more options throughout weekdays), as well as to better serve residents travelling to access health care, shopping, recreation and services in Edmonton.
  - Recognize that there is a growing opportunity to serve commuters in both directions, particularly for Edmonton residents travelling to Acheson and Spruce Grove, as well as commuters travelling from Spruce Grove and Stony Plain to Acheson.
- Improve coordination and effectiveness of specialized transit trips already travelling between the Tri-Municipal Region and Edmonton.
- Consider potential partnership opportunities with Enoch First Nation.

6.0 LONG TERM TRANSIT STRATEGY

Building from the approved long term community land use and transportation plans and identified issues and opportunities, this section describes the proposed service design types, long term 25 year network strategy and layers of transit service for the Tri-Municipal Region. Supporting policies relating to other non-transit forms of transportation are also covered.

This Section frames the overall direction then used by all subsequent aspects of the plan required to reach this long term vision.

6.1 The Transit "Toolbox": Service Design Types

Transit system design draws from a suite of service types. These range based on the degree that service is fixed or flexible. Fixed services operate using a published schedule and route map with set bus stops whereas flexible, demand responsive services offer service to specific locations and times as need arises.

Each of these service design types may be used to serve specific community needs based on expected ridership and commonality of travel patterns, the land use and layout of communities and the level of physical mobility for passengers. They may also be layered together. Using several different types has advantages since fixed route options will normally carry more passengers for a lower cost than demand responsive options but will not meet all community needs.

As a foundation for the proposed long term network and service options, the following table provides an overview of the palette of service design types that could be applied in the Tri-Municipal Region. A number of these are already established in the area, particularly fixed route and conventional express (services operated by the ETS) and demand responsive services (e.g., Acheson Shuttle, Spruce Grove Specialized Transit Service STS and Stony Plain HandiBus), in some cases with trip windows.

THE TRANSIT "TOOLBOX": GENERAL TRANSIT SERVICE DESIGN TYPES

Service Type	Description	Notes
Conventional Express	Service operates on a fixed route and fixed schedule, with a focus on connecting key points. Service may be "limited stop" (>800 m-1,200 m stop spacing) in urban areas.	• Design type most often used for regional service between communities or rapid transit within communities. • Any type of vehicle may be used but more commonly uses standard (12.2 m/ 40 ft) or higher capacity vehicles (double decker or articulated buses or rail).
Conventional / Fixed Route	Service operates on a fixed route and schedule, with regular stop spacing (approximately every 400 m in urban areas).	• Offers clarity and ease of use for passengers but is less flexible to accommodate other passenger needs. May not be suitable for lower densities. • Any type of transit vehicle may be used.
Deviated Service	Service generally operates on a fixed route or schedule but enables the bus to deviate off route to serve *a specific destination* on a "by request" or limited basis.	• Can be a good option to provide some level of service to lower ridership areas between key points as the bus only deviates if there are passengers. • Can use standard transit vehicles but more commonly uses medium-sized buses (<10.7 m/35 ft in length) or smaller.
Flex-Route	Service operates on a general route or schedule, but may deviate off route *at multiple points as needed* to provide service.	• Usually the amount of flex-route available is limited by time, distance and/or passenger type. For instance, service will specify that flex routing is only available during mid-days or evenings, within a 1.5 km distance of the route or only for people with a disability registered with the system. • Typically uses smaller buses less than 9.1 m/30 ft in length.
Demand Responsive with Trip Windows	Service operates door-to-door, but is clustered around specific "trip window" times to help passengers align travel together. For instance, service may be published as operating on specific weekdays or available from 8:00 a.m. to 9:00 a.m. and 2:00 p.m. to 3:00 p. m.	• Particularly for trips that have a longer intervening travel time (such as longer distance travel between communities), it is generally a more efficient way to provide service with a demand responsive component since it clusters similar trips together. • This option can also offer better convenience for passengers as they have a sense ahead of time when transit might be available and can plan their appointments around that. • Typically uses smaller buses less than 9.1 m/30 ft in length or vans.
Demand Responsive	Service is dispatched as needed and serves door-to-door locations. Trips are booked ahead of time by clients.	• Can be the most expensive type of transit to operate and is therefore best reserved for cases serving passengers with a disability or where other types of transit is not practical due to land use/population density. • Typically uses smaller buses less than 9.1 m/30 ft in length or vans.

6.2 Long Term Network Strategy and Service Layers

Building from the service design types, the following Long Term Network Strategy is identified for the Tri-Municipal Region. The strategy is made up of “layers” of service that show how different transit types work together to most effectively serve the diverse needs of the region.

This strategy also shows the corridors proposed to offer the most frequent and direct services: Regional, Local Connector and Local Core routes. By defining what appears to be the most important corridors for transit now, future development and road network improvement decisions can be made to reinforce them where possible.

It should be underscored that this strategy is flexible. In particular, Spruce Grove and Stony Plain are growing rapidly and the development of certain areas and roads may happen more quickly or differently than what is shown here. However, paying attention to the hierarchy of services and consistently aligning short term action as much as possible with the long term network will enable the system to grow effectively.

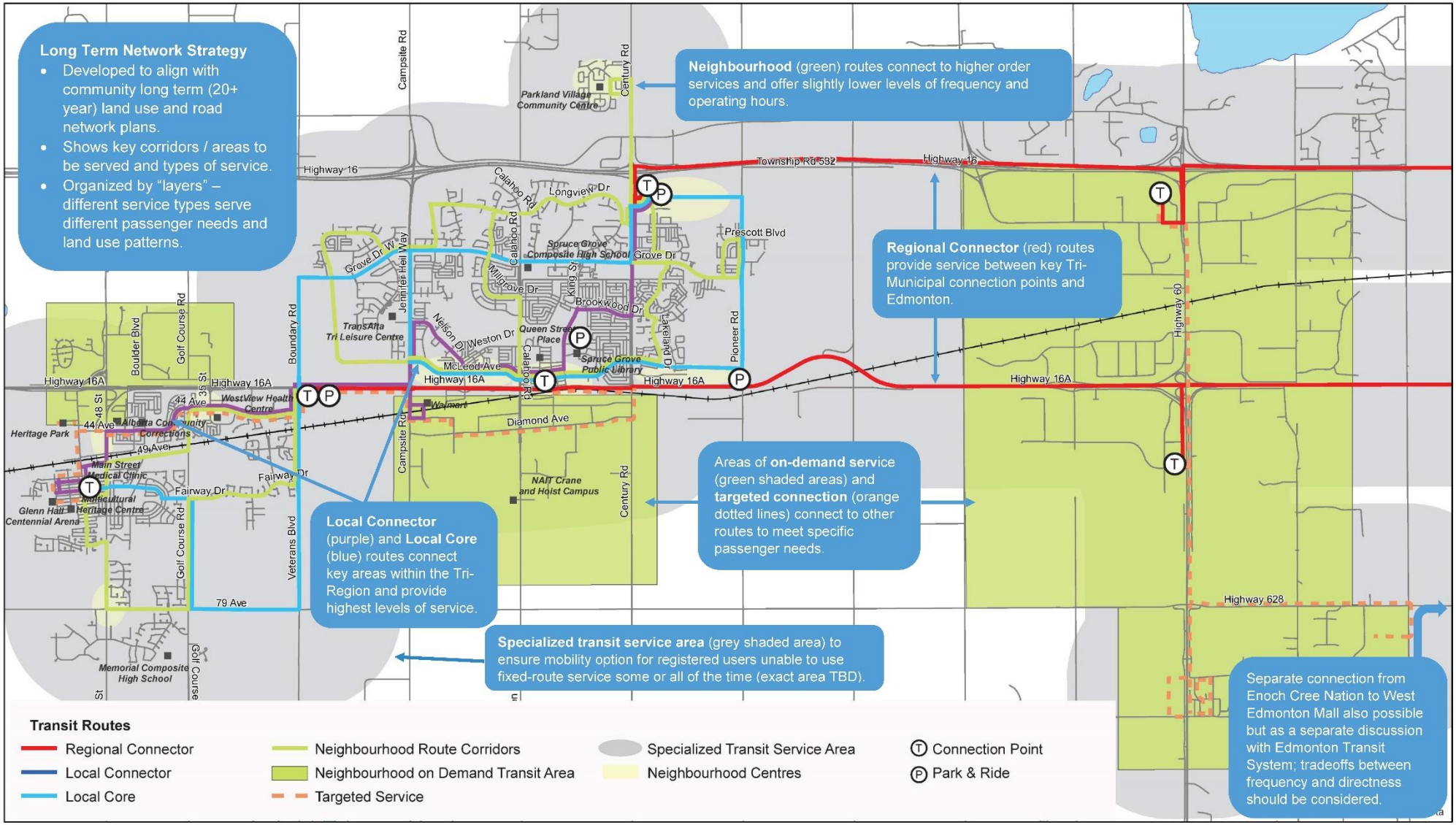
The service layers presented in the table below and the following map correspond to the Service Standards and Performance Guidelines presented in **Section 9.0**. **Section 6.3** presents how the various service, infrastructure and other initiatives relate over time, while **Section 6.4** outlines policies for supporting non-transit transportation options. **Section 7.0** and **Section 8.0** provide information on service options, supporting strategies and suggested system evolution.

PROPOSED LONG TERM TRI-MUNICIPAL REGION TRANSIT NETWORK SERVICE LAYERS

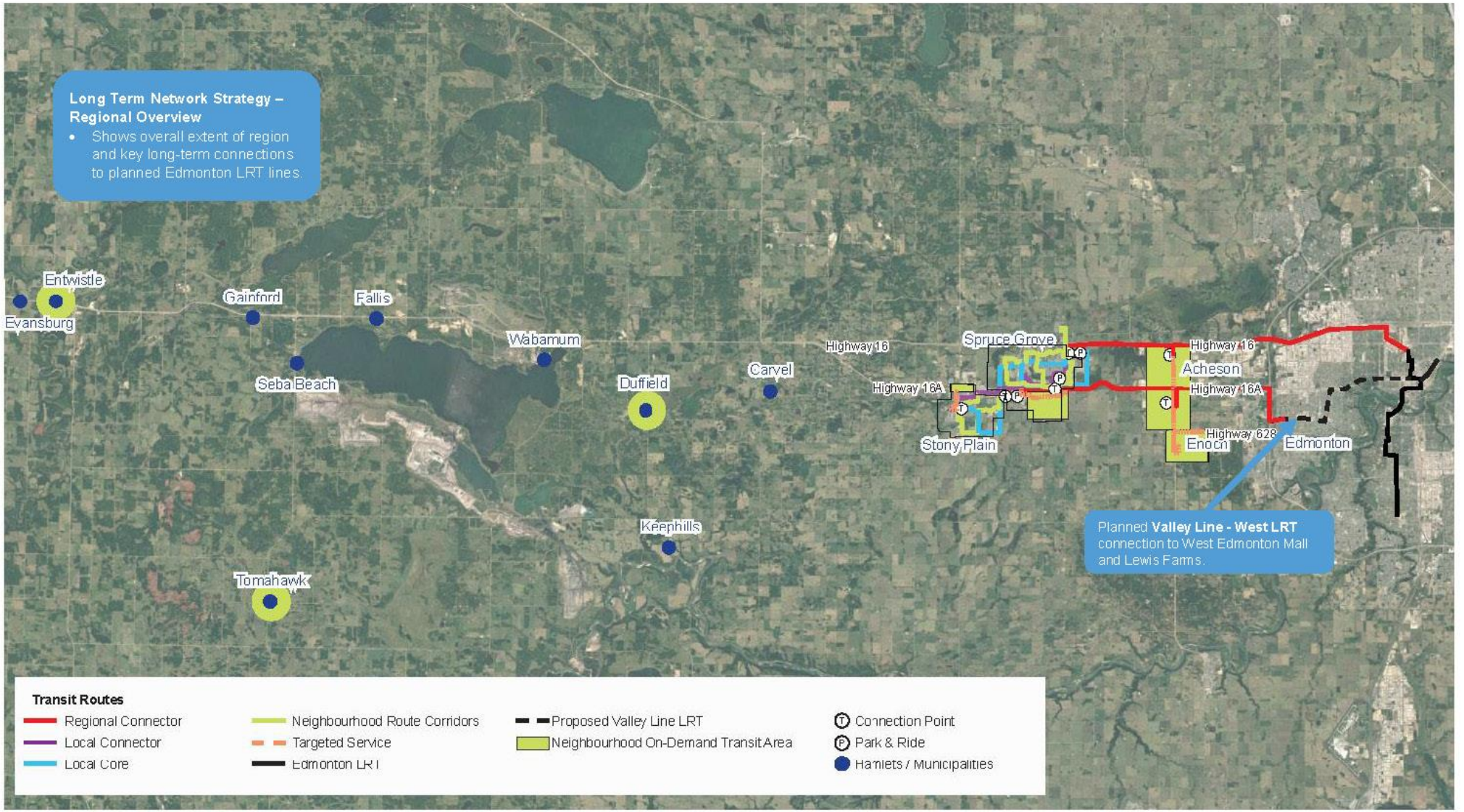
Service Layer	Definition	Service Types
Regional Connector	High quality* service between Tri-Municipal Region (Stony Plain, Spruce Grove and Acheson) and the Edmonton Metropolitan Region (EMR).	• Conventional Express
Local Connector	Higher frequency service (every 15 minutes or better) connecting key destinations and higher population corridors within the Tri-Region, particularly between Stony Plain and Spruce Grove.	• Fixed Route using smaller vehicles • Flex Route and Deviated Service are possible during non-commute times, especially to start
Local Core	Higher frequency service on key corridors within municipalities connecting to Regional and Local Connectors.	• Fixed Route • Primarily smaller vehicles; potentially Regional Connector vehicles
Neighbourhood	Service to lower density residential and industrial areas that connects to the higher order local and regional network at key points.	• Fixed Route using smaller vehicles • Demand Responsive (with or without trip windows)
Targeted Transit	Service targeted for specific users and markets, such as industrial area commuters or special events.	• Fixed Route • Flex Route

*“High quality” and “higher frequency” service thresholds and amenities are defined in Section 9.0 Service Design Standards and Performance Guidelines.

TRI-MUNICIPAL REGIONAL TRANSIT PLAN – LONG TERM NETWORK STRATEGY AND SERVICE LAYERS



TRI-MUNICIPAL REGIONAL TRANSIT PLAN – LONG TERM NETWORK STRATEGY: REGIONAL OVERVIEW



6.3 System Evolution: How Initiatives Relate

The diagrams on the following pages show how the various service options, governance initiatives and supporting measures such as infrastructure, customer information and policies interrelate over the short term (next 1-3 years), medium term (4-10 years) and longer term (10+ years) to grow service.

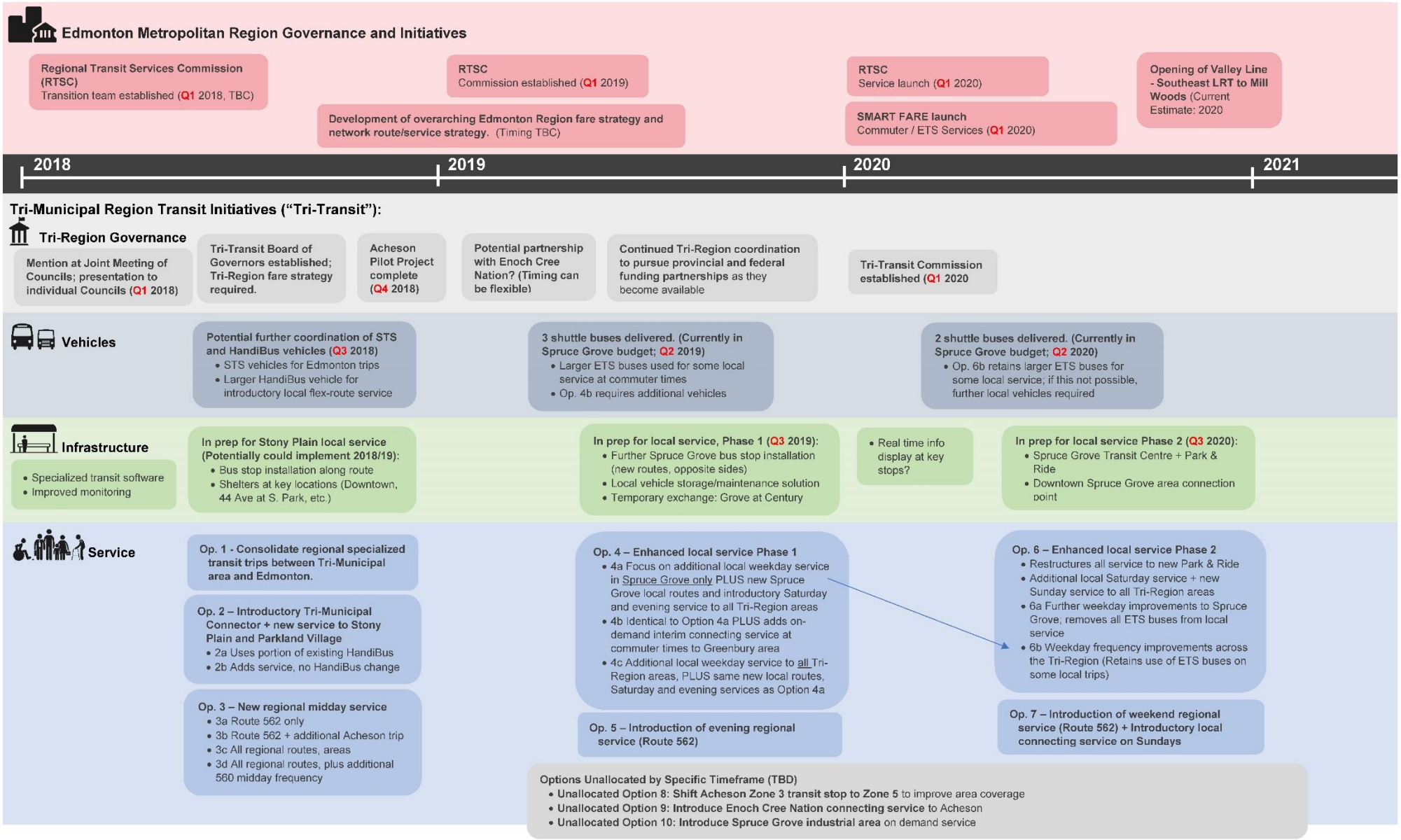
In some cases, service options follow a suggested sequential order that builds service in a logical progression based on likely market and demand, previously committed funding, or other infrastructure and community development triggers. In other cases, “unallocated options” show those service or infrastructure improvements that may be undertaken at any point.

Details for all service options are provided in **Section 7.0** while **Section 8.0** describes further detail for infrastructure, policy and technology improvements.

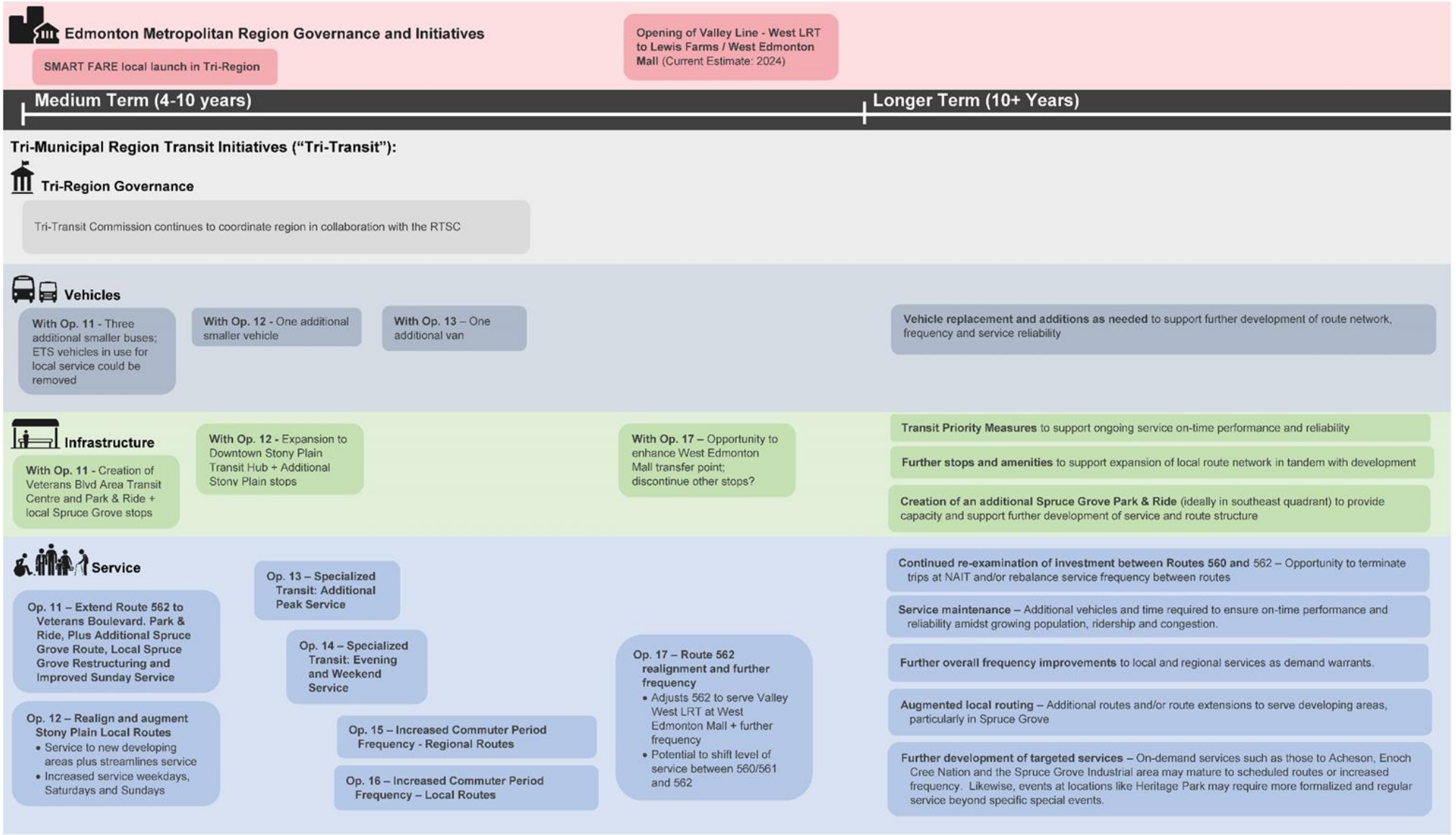
KEY TO THE INITIAVES SUMMARIES

	**Edmonton Metropolitan Regional Governance**	Initiatives relating to the larger region and connecting ETS services: • Edmonton Metropolitan Region Board. • Regional Transit Services Commission.
	**Tri-Region Governance**	Initiatives relating to the City of Spruce Grove, the Town of Stony Plain, Parkland County and their partners and potential partners.
	**Vehicles**	Additional vehicles planned or required for the service option(s), either via contract or purchase.
	**Infrastructure**	Capital elements required for the service: stops, sidewalks/landing pads, other passenger amenities, transit centres, vehicle storage/maintenance, technology.
	**Service**	Options to change service—either through expansion or reallocation—to attract further ridership and/or use resources more effectively.

HOW INITIATIVES RELATE:
TRI-MUNICIPAL REGIONAL TRANSIT SERVICE OPTIONS AND SUPPORTING MEASURES – SHORT TERM (NEXT 1-3 YEARS)



HOW INITIATIVES RELATE:
TRI-MUNICIPAL REGIONAL TRANSIT SERVICE OPTIONS AND SUPPORTING MEASURES – MEDIUM AND LONGER TERM (4+ YEARS)



6.4 Supporting Transportation Options

In some cases, population density will be too low in areas to make any form of transit viable. Other transportation methods will be used in these areas to bring people to transit connection points or provide some level of transportation option. Likewise, these other transportation methods may be also used within transit service areas to augment service.

The following provides a high-level overview of supporting transportation options and their potential application within the Tri-Municipal Region, as well as recommended supporting policy direction. In some cases these are complemented by the infrastructure guidelines and passenger amenity standards presented in Section 9.2.3.

6.4.1 Active Transportation

Overview – Every transit trip includes walking at some point as part of the journey and likewise an increasing number of passengers are using cycling to access transit, as well as other wheeled active modes. Distance, degree of quality pedestrian and cycling infrastructure, connection point facilities and integration of public information are all among a list of factors that impact the ease of supplementing transit with active modes of transportation.

Existing Use and Outlook

- As noted in Section 2.2 Community Planning Framework, the three municipalities all have language supporting future planned pedestrian and cycling improvements. These improvements should continue with an emphasis on those projects that align with the proposed transit network.
- Likewise, the existing Municipal Development Plans for Spruce Grove and Stony Plain (and the draft for Parkland County) all include policy direction speaking to focused development and improved walkability.

Policy Recommendations

- Wherever possible, pedestrian facility improvements should be prioritized on those corridors designated as **Local Connector** or **Local Core** in the Long Term Network Strategy, as well as any areas adjacent to Regional connection points. It may be useful to also seek municipal approval to enshrine these criteria as part of each community's infrastructure decision-making process.
- As part of the ongoing discussion around integrated governance of transit in the Tri-Municipal Region (discussed further in **Section 10**), it would also be useful to designate a staff person available to provide consistent perspective on proposed large developments from a transit point of view. The aspects that are particularly vital to integrate as part of a development review process are:
  - Pedestrian and cycling connections as they relate to the transit network, in particular sidewalks on arterials or collector roads that may be served by transit, as well as cut throughs and access points that make it easy for

those in the interior of the development to reach arterial road corners where transit stops are usually located (not the centre of arterial blocks, as shown in the diagram below.)

- Density and population massing of the neighbourhood that faces out towards arterials and their intersections.
- Collector roads that make it easy for potential neighbourhood-level transit to access the area, in particular roads that are relatively straight/direct and which offer at least two points of ingress/egress.
- Opportunity to include passenger bus stop amenities as part of developments, including bench, shelter, garbage can, accessible waiting pad and bicycle racks in places that intersect with the cycling network.

In Focus: Road Network Design and Pedestrian Pathways That Best Support Transit

The above illustration from Spruce Grove provides examples of two types of road and pedestrian network layouts, showing the neighbourhoods northwest (left) and northeast of the intersection of Grove Drive at Century Road.

In general, the more grid-like neighbourhood on the right is easier to navigate for pedestrians and therefore potential transit riders. However, the advantage of the network on the left is that it's pedestrian pathway or "cut through" is more closely oriented to the corner of a block (where transit stops and crosswalks are usually located) rather than to the centre, as shown on the right.

6.4.2 Connection Via Private Automobile: Park & Ride, Kiss & Ride

Overview – These options refer to cases where passengers use private vehicles to access transit, either as a car driver ("Park & Ride") or car passenger (drop off and ride, often known as "Kiss & Ride"). Particularly for the lower density residential areas of Parkland County that surround Spruce Grove and Stony Plain, providing Park & Ride space in proximity to transit terminals provides the most effective way to provide transit connection. Likewise, until local service evolves, many Stony Plain and Spruce Grove residents may also elect to access regional transit by driving (or biking) to terminals.

Existing Use and Outlook

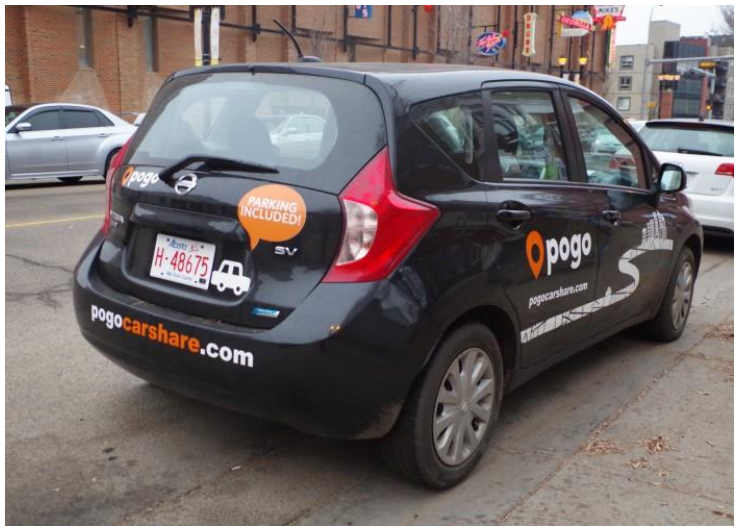
- Spruce Grove already has formal Park & Ride spaces at the Agrena, with informal Park & Ride use of parking lots near the TransAlta Tri Leisure Centre and "Hide & Ride" where transit passengers are parking on neighbourhood streets in proximity to the intersection of Grove and Century Roads.
- Plans for a Park & Ride and transit terminal are being proposed as part of the Spruce Grove Multi-Use Sport and Event Centre in the Westwind area and Park & Rides have also been previously been identified in municipal and Edmonton Metropolitan Region plans at Hwy 16A and Veterans Blvd. as well as speculatively in the southeast corner of Spruce Grove adjacent to Hwy 16A.

Policy Recommendations

- The three new Park & Ride locations noted above are suitable and have been integrated into the network strategy. Detailed planning for new Park & Rides should take place as development proceeds.
- If passengers are already parking around the Tri Leisure Centre, it may be appropriate to officially designate and mark more spaces to help promote the system and manage parking. Signage would indicate that transit passengers have priority during commuter hours.
- Any new Park & Ride locations should include the infrastructure and amenities described in detail for transit centres and Park & Rides in **Section 9.2.3**. These include providing high quality passenger waiting facilities, ensuring pedestrian and cycling connection, and designating priority spaces for passenger drop offs, carpoolers, those sharing rides or cars, and electric vehicle charging.
- Wherever possible, Park & Ride investment should be balanced with local transit service investment so that residents within a service area find it easy and convenient to take transit for the entirety of their journey.

6.4.3 Third Party Providers, Ride Share, Car Share and Ride Hailing[2]

Overview – Another way that communities can efficiently expand the reach of their transit system is through coordination with third party transportation providers. These include taxi companies, seniors and medical transportation organizations, and ride sharing and ride hailing apps where they exist in jurisdictions. These third-party options are separate from private companies who may be hired to operate all or a portion of the base transit system, discussed further in **Section 10.0**.



Edmonton-based Pogo Car Share in downtown Edmonton. Parking space for car share vehicles should be integrated into transit facility planning. (Photo: Pogo)

Existing Use and Outlook

- As noted in Section 3.6 Other Transportation Providers, there are already a number of organizations providing taxi and regional transportation options in the Tri-Municipal Region. Organizations such as these can be used to augment service. For instance, a common practice in many specialized transit systems is to dispatch overflow trips that occur outside of the regular service times or when transit vehicles are full to taxi companies or other third-party transportation organizations.
- Ride Hailing and Car Share are now available in Edmonton, while Ride Share is already available in the Spruce Grove area via TappCar. The spread of these options will only increase with population growth and as technology is adopted by a greater proportion of the population. Not only does this potentially change how passengers connect to transit within the Tri-Municipal Region, but also how they connect from transit to end points in Edmonton.

[2] There is often confusion about the differences between ride share, car share, and ride hailing. In short, ride sharing and ride hailing are typically used interchangeably and refer to a service where a customer pays an operating company to be driven to a destination (similar to a taxi). Car share, by contrast, is when a customer books out a vehicle for a defined period of time to drive for both recreational and commuting purposes.

Policy Recommendations

- Wherever possible, municipal license for one of these operators to provide service within an area should be contingent upon the operating organization clearly describing how it will complement and align with transit use, equitably meet the transportation needs of people with a disability, and provide travel pattern data to the sponsoring municipality on a regular basis. In return, consideration should be given in terms of how these services may be integrated with transit system promotion and customer information materials.
- As described for the Park & Ride section, supporting space and signage should be considered at any major transit hubs.
- Ride Hailing / Ride Sharing Services such as Uber or TappCar should be required to share trip data as these data can assist in understanding how new transit services could impact travel time across the region.[3]
- To support Car Sharing services, consideration should be given to designating parking spaces for Car Share vehicles at major transit hubs. This would better incentivize transit use by allowing transit passengers to access a supporting transportation option upon arrival.

In Focus: Why Not Have Ride Hailing Services Operate All Local Transit?

With Uber's current trial provision of transit services in the Town of Innisfil, Ontario there have been more questions raised recently over whether ride-hailing services could replace the need to have local transit in smaller communities.

Provision of local transportation by ride hailing and other third-party providers was considered for this transit plan. Indeed, some of the service options presented suggest the implementation of on-demand services in areas with lower density, as is the current case in Acheson. Also, as described in this section, there are many opportunities for the technology and operating model of ride hailing services to support transit.

However, transit is proposed for the majority of local services in the Tri-Municipal Region for the following reasons:

- The area already has existing local transit and established ridership patterns; proposals in this plan build on these rather than disrupting existing customers.
- The Tri-Municipal Region's existing land use and development patterns on key corridors makes scheduled, fixed-route transit in the Tri-Municipal Region a viable, lower cost option than ride hailing.
- At this time, transit also provides a solution that can serve the broadest cross-section of the community, serving the travel needs of not just adult commuters but also seniors, people with a disability, youth and families.

[3] Poon, L. (2017). Finally, Uber Releases Data to Help Cities With Transit Planning. *CityLab*, available online at: https://www.citylab.com/transportation/2017/01/finally-uber-releases-data-to-help-cities-with-transit-planning/512720/

7.0 TRANSIT SERVICE OPTIONS

The following presents preliminary transit service options that address immediate issues and opportunities and which further evolve the system towards the Long Term Transit Network Strategy proposed in **Section 6.2** and evolution shown in **Section 6.3**. The options build on community plans and transit plans to-date and any substantial shifts in recommendations from past plans are noted. Options are divided into three sections:

7.1 Suggested Short Term Options presents service improvements that could be considered within the next 1-3 years. These changes represent priorities for the system to improve overall ease of use and effectiveness.

7.2 Suggested Medium Term Options presents service improvements that could be considered within the next 4-10 years as development progresses and service grows. Many of the medium term options build on those presented in **Section 7.1**.

7.3 Suggested Longer Term Options presents a high-level outline of service improvement that could be considered beyond the ten-year horizon to build towards the long term route network and community development plans.

Costs for options are based on 2016 actuals for services that exist or peer averages for new services and would be in addition to existing municipal transit budgets. Actual costs may vary depending on confirmed budget figures and finalization of operating details and models at the time of implementation. A table summarizing total hours impact and vehicle requirements is also presented in **Section 7.4**.

In Focus: Transit Service Design Principles

Service options are based on the following principles, which are outlined further in **Section 9.0 Service Design Standards and Performance Guidelines**.

- Where feasible, **use routes that are direct and offer two-way service** as these are usually easier to understand and attract higher ridership.
- Rather than treating all areas equally, **focus highest levels of service on corridors that have higher density** and major destinations.
- If specific passengers or destinations require closer access to transit, **consider doing so on a different layer of service** (e.g. on demand transit) or by time of day (e.g. during the non-commuting period).
- Where possible, **avoid abrupt changes to the existing transit network** that don't result in service quality gain. For instance, this may mean feathering in substantial changes over a series of improvements.

The options also take into account reallocation of existing system resources and vehicles where feasible, as well as the City of Spruce Grove's committed purchase and arrival of three 24-30 passenger buses in 2019, with another two to arrive in 2020. At the time of this writing, there are no vehicle annual hour or kilometer threshold policies in place within the Edmonton Transit System or Tri-Municipal Region that would impact the number of spare vehicles required and so vehicle estimates are based on operational constraints and general transit industry best practices. For vehicle description definitions, see **Section 9.2.2**.

7.1 Suggested Short Term Options (1-3 years)

Service Option 1

Consolidate Regional Specialized Transit Trips Between Tri-Municipal Area and Edmonton

Description: This option would consolidate the specialized trips already being provided every weekday between the Tri-Region and Edmonton and publish them as "trip windows," the stated intervals of time when service takes place. These trips are already being provided every weekday by the Spruce Grove Specialized Transit Service (STS) and about twice per week by Stony Plain HandiBus.

Key Benefits:

- Publishing trip windows for service is an easy way to improve transit effectiveness and customer ease of use.
  - By stating the times when the bus will be travelling to Edmonton, it encourages customers to schedule their appointments or travel around those times, making existing service better utilized and reducing the need to for the service to schedule additional trips (although additional trips may still be possible).
  - At the same time, publishing the times makes it easier for customers to plan their travel around transit instead of trying to coordinate their transportation after the fact and may encourage further ridership.
- Consolidating regional service and publishing trip windows also provides the ability to reduce duplication. Rather than also travelling to Edmonton, HandiBus could have the ability to coordinate regional trips to Edmonton with the STS. For instance, if service and resources were shared differently, STS vehicles could also pick up Stony Plain users on the way to Edmonton while the Stony Plain vehicle focussed on connection within the Tri-Region.

Considerations:

- Once implemented, trip windows can be harder to adjust or take away. Care needs to be taken that any trip windows chosen will likely reliably continue on into the future and/or are at times that serve many different passenger needs.
- Enhancing communication and coordination between STS and HandiBus would be helpful as part of this process but the two entities can still operate separately for this model to work. However, the following Option 2 becomes more viable operationally and financially if this option is implemented.
- **A working group of STS, HandiBus, municipal staff and ideally Alberta Health Services staff should be formed to guide any further integration. See also the discussion box on this in Section 4.2**

Initial High Level Estimate – Additional Impacts

Option 1: Consolidate Regional Specialized Trips Between Tri-Municipal Area and Edmonton

0	Vehicles	$0	One-Time Vehicle Capital Cost
0	Annual Service Hours	$0	Annual Operating Cost
400	Annual Passengers	$6,000	Annual Revenue
		-$6,000	Net Total Annual Operating Cost

Service Option 2

Introductory 1 Tri-Municipal Connector

Description: This option would implement introductory-level scheduled service within Stony Plain that would also connect key destinations in Spruce Grove and Parkland Village. It creates a new route that would eventually evolve to be the core spine connecting major destinations and residential areas within the Tri-Municipal Region. There are two options in terms of how service is operated:

Option 2a – Introductory 1 Tri-Municipal Connector Using a Portion of Existing HandiBus Service builds on the integration proposed in Option 1 and uses the exiting Stony Plain shuttle bus and a portion of time reallocated from the service. Given existing ridership patterns and performance, this option appears that it would serve overall transportation needs better but there may be minor disruption for existing users.

Option 2b – Introductory 1 Tri-Municipal Connector With No Change to Existing HandiBus Service adds an additional vehicle to the system—either via purchase or contract—and associated resources to operate the introductory service. This means that no existing users would be impacted, although likely there would be appetite to integrate and refine services once they had been operating for a time.

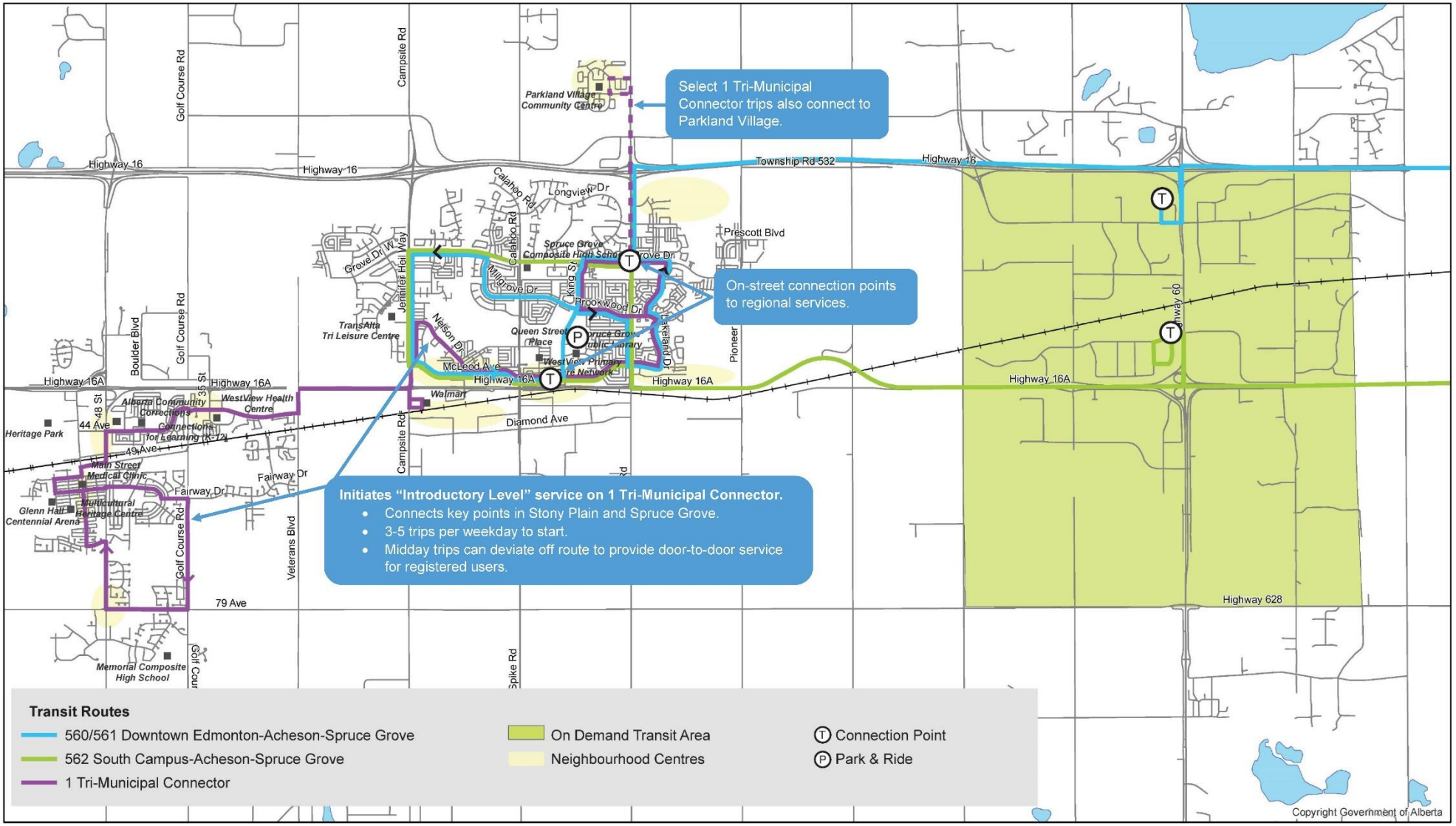
Routing:

- In either option, as shown in the following maps, service would take the form of a loop through the residential areas of Stony Plain that would then provide two-way service to key regional points, including Stony Plain's downtown, shopping in the vicinity of 48 Street and 44 Avenue, the Provincial Courts and WestView Health Centre.
- The two-way service would also connect Spruce Grove's downtown and denser residential areas, the area nearby Queen Street Place, the Tri Leisure Centre, Wal-Mart and retail along McLeod Avenue. Select trips would also connect to Parkland Village.
- Connection on-street at Grove Drive at Century Road would enable some trips to connect to routes serving Acheson and Edmonton. This connection would be expanded over time as service frequency improved.

Schedule and Service Operation:

- Initial frequency would be three to five trips per day, weekdays only. A sample draft schedule is shown on the following pages.
- While service would be shown to follow a fixed route and schedule, between 9:00 a.m. and 3:00 p.m. additional time would be available to enable the service to deviate off-route to provide pick ups and drop offs closer to destinations for people with mobility or cognitive impairments) registered with the system.
- **A portion of on-demand time would still be retained each day to enable HandiBus to provide fully demand responsive door-to-door trips within Stony Plain.**

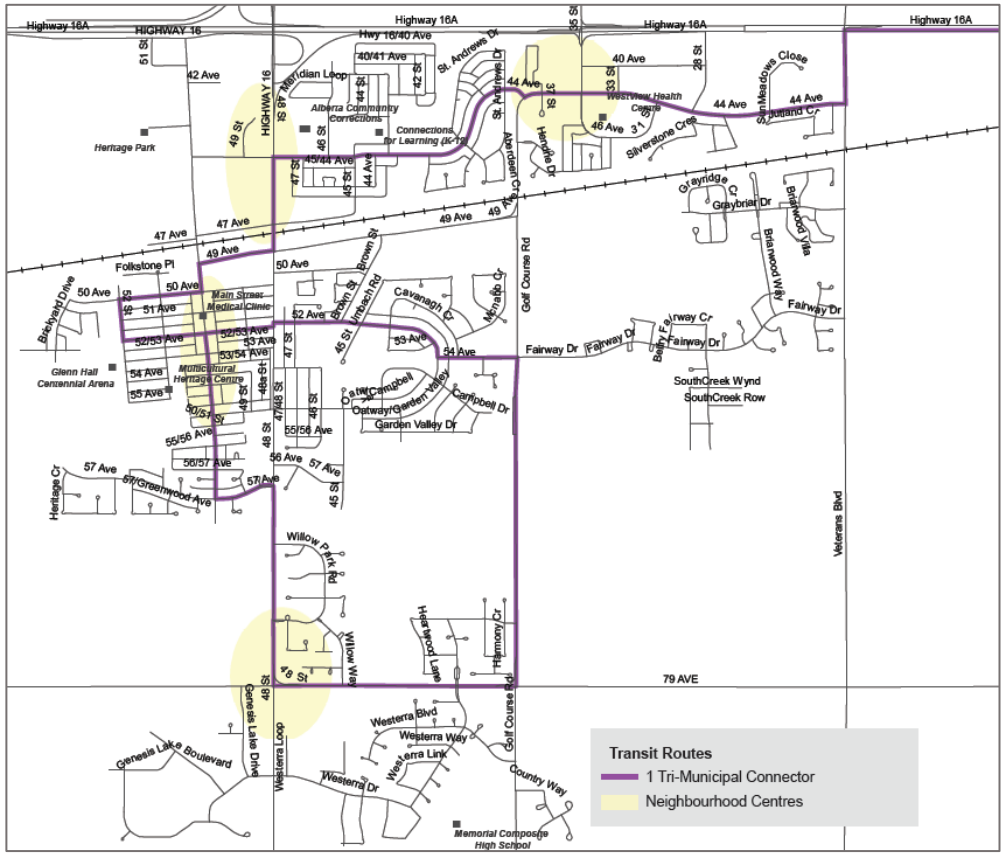
TRI-MUNICIPAL REGIONAL TRANSIT PLAN – SERVICE OPTION 2: INTRODUCTORY 1 TRI-MUNICIPAL CONNECTOR



Sample Draft Schedules - For Discussion Purposes and Further Refinement

Parkland Village			Tri-Municipal Connector																
Parkland Village Loop			Spruce Grove To Stony Plain				Stony Plain Loop								Stony Plain to Spruce Grove				
Grove at Century	Parkland Village Community Centre	Grove at Century	Grove at Century	Downtown Spruce Grove: McLeod at King	Jennifer Heil Way at Nelson (near TransAlta Tri Leisure Centre)	Campsite Rd. at Hwy 16A (Wal-Mart)	Boundary at 44 Ave	44 Ave at S Park Dr. (near WestView Health Centre)	44 Ave and 48 St	Downtown Stony Plain: 52 Ave at Main St	Golf Course at 79 Ave	Downtown Stony Plain: 52 Ave at Main St	44 Ave and 48 St	44 Ave at S Park Dr. (near WestView Health Centre)	Boundary at Hwy 16A	Campsite Rd. at Hwy 16A (Wal-Mart)	Jennifer Heil Way at Nelson (near TransAlta Tri Leisure Centre)	Downtown Spruce Grove: McLeod at King	Grove at Century	**Connection Notes**
-	-	-	-	-	-	-	-	-	-	6:30	6:37	6:44	6:50	6:54	6:57	7:00	7:04	7:09	7:21	Connects on Grove to ETS 560 Lv 7:27 a.m.; Ar. Downtown Edmonton 8:45 a.m.
			7:25	7:35	7:40	7:44	7:47	7:50	7:54	8:00	8:07	8:14	8:20	8:24	8:27	8:30	8:34	8:39	8:51	Connects on McLeod to ETS 562 at 8:42 a.m.; Ar. South Campus 9:17 a.m.
8:55	9:00	9:07	9:10	9:20	9:25	9:29	9:32	9:35	9:39	9:45	--> Drop off by request			-	-	-	-	-	-	
-	-	-	-	-	-	-	Stony Plain On Demand Service 9:45 a.m. - 11:30 a.m.; 12:30 p.m. to 1:10 p.m.									-	-	-	-	
-	-	-	-	-	-	-	**1:10**	**1:13**	**1:17**	**1:23**	**1:30**	**1:37**	**1:43**	**1:47**	**1:50**	**1:53**	**1:57**	**2:02**	**2:14**	
-	-	-	**2:20**	**2:30**	**2:35**	**2:39**	**2:42**	**2:45**	**2:49**	**2:55**	**3:02**	**3:09**	**3:15**	**3:19**	**3:22**	**3:25**	**3:29**	**3:34**	**3:46**	Connects on Grove to ETS 560 Ar. at 2:17 p.m.
3:50	**3:55**	**4:02**	**4:05**	**4:15**	**4:20**	**4:24**	**4:27**	**4:30**	**4:34**	**4:40**	**4:47**	**4:54**	**5:00**	**5:04**	**5:07**	-	-	-	-	Connects on Grove to ETS 562 Ar. at 3:40 p.m. and ETS 560 Ar. at 4:02 p.m.

Bold text for times within schedule represents p.m.



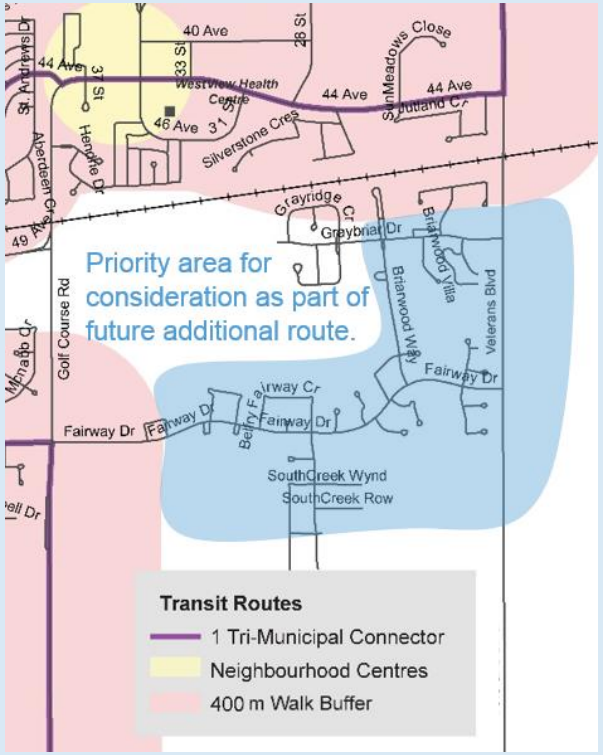
Key Benefits:

- Creates the structure of what will become the main **Local Connector** route serving key destinations and residential
- serve the needs of most existing HandiBus passengers while creating a structure to attract new users and areas within the Tri-Municipal Region.
- For Stony Plain residents, these options still make existing services better utilized. It also initiates a limited scheduled connection to Edmonton for the Town.
- For Spruce Grove residents, it offers improved local access within Spruce Grove as well as connection to key regional destinations in Stony Plain.
- For Parkland County, it initiates service to one of the most densely populated areas in the County (Parkland Village) and also creates the structure to improve local connections to routes serving Acheson.

Considerations:

- This option makes use of on-street space on Grove Drive to facilitate connections with ETS services and vehicle layover until a more permanent transit centre and Park & Ride is built in the vicinity. There is substantial curb space without driveways on Grove Drive and ETS vehicles already layover here for 10+ minutes per trip. However, use of this space for a second connecting bus would require confirmation from the City of Spruce Grove.
- Front line HandiBus and STS staff have taken a significant role in shaping those services to date. Successfully retaining as many existing customers as possible through the service change described here depends on ensuring that those staff fully understand it and have a role in shaping it, as well as the formation of an implementation

In Focus: Why Doesn't Initial Stony Plain Service Cover All of the Town?



Building successful transit is always a balance between supply and demand. Trying to cover too much area with initial resources dilutes service and makes it less marketable and attractive to passengers.

The proposed initial 1 Tri-Municipal Connector Stony Plain loop focusses transit on existing highest areas of density and ridership. It creates a starting point for the system to grow, with additional service to other developing areas such as the area highlighted in blue added in subsequent years, as proposed in **Service Option 12.**

working group as described in Service Option 1 and the discussion box in **Section 4.2**.

- Wherever possible, the new service should take into account existing HandiBus and STS subscription trips, particularly travel to day programs at WestView Health Centre. This option also relies on coordinating travel to Edmonton between STS and HandiBus, ideally by consolidating all regional travel on STS.
- The route crosses rail on 48 Avenue within Stony Plain. In addition to time to facilitate off-route deviations on midday service, schedules need to allow for sufficient recovery time to address potential rail delays when planning for connections to the regional routes.
- Within downtown Stony Plain, the route takes a somewhat circuitous routing via 50 Avenue, 52 Street, and 52 Avenue. to provide slightly closer coverage to the Arena and The Brickyard areas but mainly so that the downtown bus stops do not need to be located on Main Street and impact its existing angle parking. **In the longer term, as the system and ridership matures, a more direct downtown routing and bus stop pair would be helpful and should be considered as the area continues to change.**

- **Vehicle and Infrastructure Capital Costs:** Regardless of whether Option 2a or 2b is chosen, vehicles used for this option need to consider future integration. Depending on the overall level and timing of future service integration, vehicle capital costs may also be required related to farebox, radios, branding, etc. These are separate to the vehicle purchase costs shown, as would be the bus stop installation costs. The box on the following page provides estimates for this based on local conditions.

Initial High Level Estimate – Additional Impacts

Option 2a: Introductory 1 Tri-Municipal Connector Using a Portion of Existing HandiBus Service

0	Vehicles	$0	One-Time Vehicle Capital Cost
1,600	Annual Service Hours	$113,400	Annual Operating Cost
8,500	Annual Passengers	$25,500	Annual Revenue
		$87,900	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 2b: Introductory 1 Tri-Municipal Connector With No Change to Existing HandiBus Service

1	Shuttle Vehicle	$225,000	One-Time Vehicle Capital Cost
2,500	Annual Service Hours	$180,000	Annual Operating Cost
12,800	Annual Passengers	$38,400	Annual Revenue
		$141,600	Net Total Annual Operating Cost

In Focus: Additional Capital Cost and Policy Considerations for Service Options 1 and 2

Implementation of Service Options 1 and 2 have the following additional implications which should be considered:

- Implementation of these options may require changes to mandate language and/or changes to Alberta Transportation operating authority for either specialized transit organization.
- Further confirmation is required on any other regulatory requirements related to the use of the same vehicle in specialized transit and fixed route/deviated service operation, such as the application of seatbelt law and use of child car seats.
- Any existing specialized vehicle brought into fixed route service may require additional equipment. Estimated one-time capital purchase costs for required components would be: Radio $2,000; Smart Farebox $40,000; Branding/vehicle livery $12,000; Destination sign $6,500; Chime system $6,500.
- Estimated capital costs for additional bus stops required for this or other options are: Bus stop sign $50; Bus stop pole and installation $500; Concrete pad installation $7,000; Asphalt pad installation $5,600; Bus shelter $10,000-$15,000, depending on design.
    - As an example of how these figures might apply, a high level preliminary assessment of the 1 Tri-Municipal Connector route within the Town of Stony Plain showed the need for approximately 43 bus stops using typical 400 m spacing. Approximately 25 of these stops would required a concrete pad or temporary asphalt pad as there was either no pre-existing sidewalk or a pad would be required to fill the boulevard space between the street and the sidewalk. An initial investment of five shelters could provide cover at key stops at 52 Avenue at Main Street, 79 Avenue at Golf Course Road, 52 Avenue at 47 Street, and in both directions at 44 Avenue at South Park Drive. This equates to an overall initial infrastructure estimated cost of $260,000. (This example is for illustrative purposes only and would require confirmation as part of detailed implementation planning).
- **Relevant Examples** – Service provider staff were interested to know of other communities that have successfully implemented service changes similar to Service Options 1 and 2.
    - In terms of specialized transit organizations that have successfully integrated services similar to Service Option 1, relevant Alberta examples were not found, although several organizations in the vicinity of Grande Prairie are in the process of considering increased integration. Examples from B.C. with similar winter weather and regional travel patterns to the Tri-Municipal Region include organizations in the West Kootenay and Okanagan-Similkameen regions, and their contact details can be provided.
    - For the type of combined service described in Service Option 2, Leduc Transit operates a local system that combines specialized and fixed-route transit and so could be an excellent resource.

Service Option 3

New Regional Midday Service

Description: This option would improve regional midday service. There are several options for doing so:

Option 3a – Midday Improvements on Route 562 Only adds three additional midday trips on the Route 562, none of which provide service to Acheson. Service would be every 1.5 hours and would require four additional service hours per day. This option is included here as it aligns with current City of Spruce Grove budget planning.

Option 3b – Select Route 562 Midday Improvements + Additional Acheson Trip adds three additional midday trips on Route 562, with one of those also extended to Acheson to provide inbound service between Acheson and Edmonton around 3:00 p.m. This timing had been requested by Acheson employers since many shifts end at 2:30 p.m. or 3:00 p.m.

Option 3c – Midday Improvements for All Regional Routes and Areas balances midday investment across Routes 560, 561 and 562. It would add:

- One midday trip on Route 562 that would also provide service to Acheson.
- One late morning trip on Route 560 to offset high passengers loads on its current last morning inbound trips.
- Minor scheduling changes to the existing 1:23 p.m. Route 560 trip to enable the addition of a Route 561 trip on its inbound route to provide service to Acheson at approximately 3:00 p.m.

Option 3d – Midday Improvements on All Regional Routes, Plus Further Route 560 Frequency is identical to Option 3c but includes provision for an additional two Route 560 midday trips, enabling service to operate roughly every two hours throughout the peak.

Key Benefits:

- Improves options for non-commuting passengers travelling during the midday.
- Will likely also improve overall ridership on existing trips, since adding to midday service can help boost commuter confidence in taking transit as they know there are more options at non-commuter times (for instance if they are working or going to school half days, etc.)
- Depending on option, enables service via Acheson into Edmonton at the key 3:00 p.m. shift end time.

Considerations:

- A mix of ETS- and City of Spruce Grove-owned vehicles would be used for this service. It appears that Options 3a-3c could be done with existing vehicles, while option 3d may require an additional vehicle depending on trip timing.

Initial High Level Estimate – Additional Impacts

Option 3a: Midday Improvements on Route 562 only

0	Vehicles	$0	One-Time Vehicle Capital Cost
1,200	Annual Service Hours	$181,700	Annual Operating Cost
7,200	Annual Passengers	$38,800	Annual Revenue
		$142,900	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 3b: Select Route 562 Midday Improvements + Additional Acheson Trip

0	Vehicles	$0	One-Time Vehicle Capital Cost
1,200	Annual Service Hours	$181,700	Annual Operating Cost
7,800	Annual Passengers	$42,000	Annual Revenue
		$139,700	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 3c: Midday Improvements for All Regional Routes and Areas

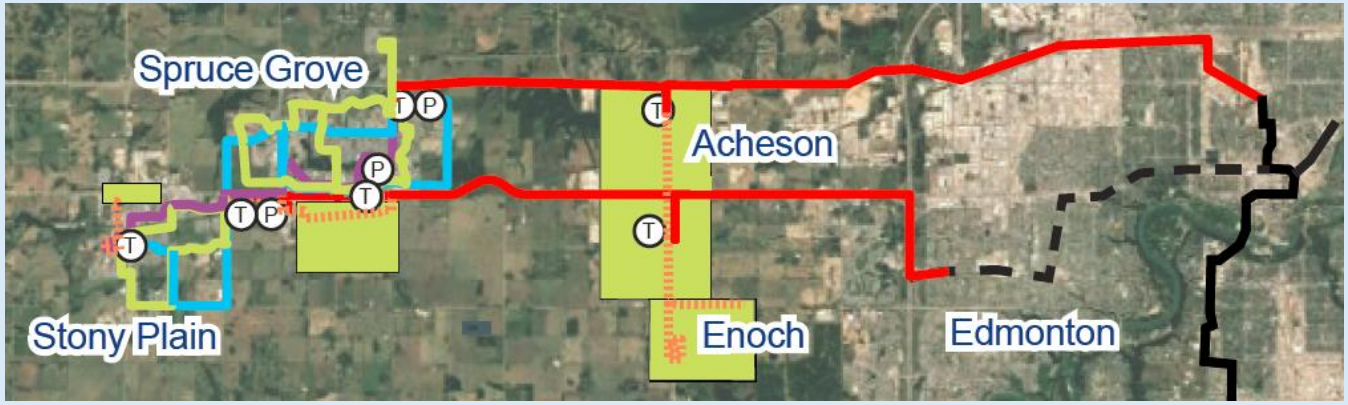
0	Vehicles	$0	One-Time Vehicle Capital Cost
1,300	Annual Service Hours	$196,800	Annual Operating Cost
9,100	Annual Passengers	$49,000	Annual Revenue
		$147,800	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 3d: Midday Improvements for All Regional Routes, Plus Further 560 Frequency

1	Standard Vehicle	$600,000	One-Time Vehicle Capital Cost
2,300	Annual Service Hours	$348,200	Annual Operating Cost
18,400	Annual Passengers	$99,200	Annual Revenue
		$249,000	Net Total Annual Operating Cost

In Focus: Major Regional Corridors



The long term network strategy in this Regional Transit Plan currently identifies two primary Regional Connector corridors: Hwy 16 (currently served by Routes 560 and 561) and Hwy 16A (currently served by Route 562).

Over the longer term, it is likely that the Hwy 16A transit corridor will take precedence given its future connection to the planned Valley Line – West LRT, and investment priorities take this into account. However, in the near term, regional service improvement options balance investment between the two corridors since Route 560 is currently the best-performing route.

This long term regional corridor strategy may be impacted by connections to other communities in the larger Edmonton Metropolitan Region that may arise out of a future Edmonton regional planning. Over the longer term, high capacity vehicles may also be considered for the corridor, in keeping with the system vehicle standards outlined in **Section 9.2.2**.

Service Option 4

Enhanced Local Service, Phase 1

Description: This option revises all routes locally within Spruce Grove and sets the stage for future improvements to all fixed route services in Spruce Grove, Stony Plain and Parkland County as shown in the **Enhanced Local Service, Phase 1 map** on the following page. This option:

- Uses the proposed acquisition of three local buses in 2019.
- Makes use of two on-street terminus points: one using existing stops on Grove Drive at Century Road and the other in the vicinity of downtown Spruce Grove.
- Positions the local route structure for a further to shift to a potential transit terminal and Park & Ride in the Westwind area, as shown in **Service Option 6**.

Routing:

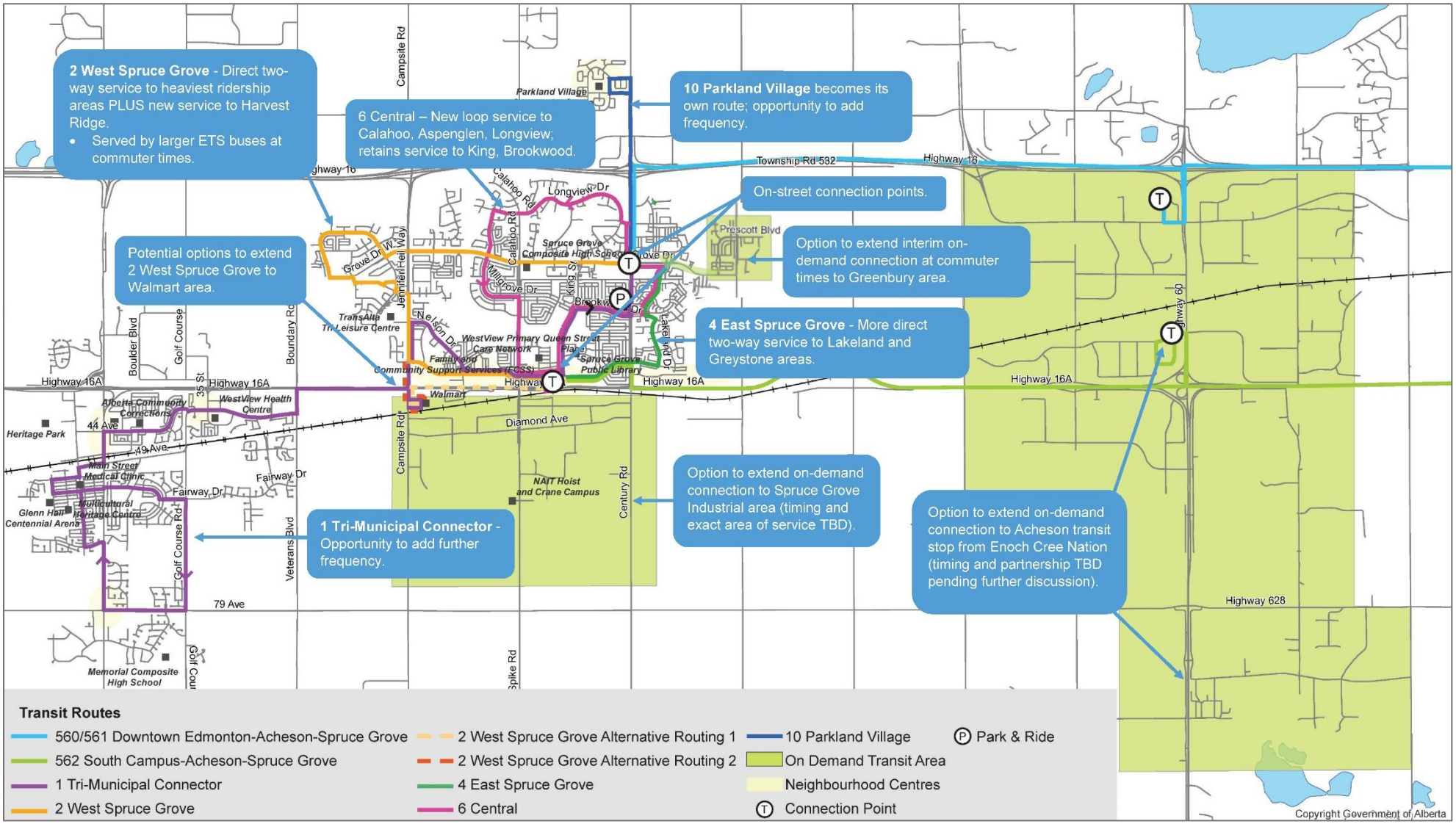
- Revises the **1 Tri-Municipal Connector** to serve King Street, Brookwood Drive and Century Road within Spruce Grove, and separates the segment from the Park & Ride to Parkland Village as its own route, the 10 Parkland Village.
- Revises the local portions of routes 560 and 562 to create three new local routes:
  - **2 West Spruce Grove** serving existing major corridors of the ETS service (Grove Drive, Jennifer Heil Way and McLeod Avenue), plus new service to the Harvest Ridge area.
  - **4 East Spruce Grove** serving the balance of the existing major corridors of the ETS service (McLeod Avenue, Lakeland Drive, Greystone Drive) plus new service via Spruce Village Way and Vanderbilt Common to reroute back to downtown after accessing the terminus point at Grove Drive at Century Road.
  - **6 Central** would initially operate as a loop to ensure sufficient levels of service on the existing corridors of King Street, Brookwood Drive, Century Road and Millgrove Drive now served by the 560 plus new service to Calahoo Road, Aspenglen Drive, Avonlea Way, Longview and Kings Link.
- **Routes 560 and 562** would be shown to “terminate” at the Grove Drive at Century Road terminal and downtown Spruce Grove, respectively. However, at commuter times, these buses would also serve the 2 West Spruce Grove route, with the balance of trips operated by the initial delivery of three smaller Spruce Grove buses (two in service, one spare) and the Stony Plain vehicle operating the 1 Tri-Municipal Connector and 10 Parkland Village.

In Focus: Options for Local Service to Walmart Area

Ideally service to Spruce Grove highway commercial in the vicinity of Walmart would only be served by the Tri-Municipal Connector route, to avoid needless duplication. However, depending on short term service levels (i.e. selecting Option 4a or 4b rather than 4c), an interim extension to the Route 2 West Spruce Grove **during non-commuter times** may wish to be considered.

As shown in the alternate routing options in the map, this extension could consist of operating Route 2 in one direction via the highway commercial or by adding a loop at the end. An access agreement would be required to provide service on the Walmart site.

TRI-MUNICIPAL REGIONAL TRANSIT PLAN – SERVICE OPTION 4: ENHANCED LOCAL SERVICE, PHASE 1



Scheduling:

Three sub-options are available, with the differences for each based mainly on trip frequencies and how quickly partners wish to grow service, particularly to Stony Plain and Parkland Village.

Option 4a – Enhanced Local Service, Phase 1: Spruce Grove Focus + Introductory Evenings and Saturdays implements the routing changes described above, with service on all Spruce Grove routes operating every 30 minutes at peak and every 60 minutes at other times. It also introduces limited "introductory level" evening service on Routes 1, 2, 4,and 6 corresponding with the implementation of evening service on Route 562 shown in **Option 5**, as well as an initial level of Saturday service to Spruce Grove, Stony Plain and Parkland Village. However, in this option, weekday service levels to Stony Plain or Parkland Village would stay status quo (i.e. identical to Option 2a or 2b, whichever had been previously implemented). The table at right illustrates these service levels.

Option 4b – Enhanced Local Service, Phase 1: Spruce Grove Focus + Greenbury On Demand is identical to Option 4a but also includes provision to enable on demand connection during the weekday commuter periods only between the Greenbury neighbourhood and the rest of the local and regional network at Grove Drive at Century Road.

Option 4c – Enhanced Local Service, Phase 1: Improvements Across Region Using Additional Vehicles is identical to Option 4b buts adds on additional investment and frequency on weekdays to implement service levels in Stony Plain and Parkland immediately closer to those provided in Spruce Grove. Additional vehicles would be required for this option, via contract or purchase. **Note that if this option is not pursued, Option 6b implements similar frequency improvements to Stony Plain and Parkland County, just at a later date and making use of the vehicles already approved for purchase through Spruce Grove GreenTRIP funding.**

SAMPLE SERVICE LEVELS: OPTION 4a – ENHANCED LOCAL SERVICE, PHASE 1
(Assumes Implementation of Options 2a, 4a and 5)

Route	Frequency in Minutes				
	AM Peak 5:30 a.m. – 8:30 a.m.	**Midday** 8:30 a.m. – 3:00 p.m.	**PM Peak** 3:00 p.m. – 7:00 p.m.	**Evening*** 7:00 p.m. – 10:30 p.m.	**Saturday** 8:30 a.m. – 8:30 p.m.
1 Tri-Municipal Connector	1 trip	3 trips	1 trip	1 trip	2 trips
2 West Spruce Grove	30	60	30	90-120	90-120
4 East Spruce Grove	30	60	30	90-120	90-120
6 Central	30	60	30	90-120	90-120
10 Parkland Village	1 trip	-	1 trip	-	2 trips
560 Regional NAIT, Downtown Edmonton	30	1-2 trips	30	-	-
561 Regional Via Acheson to NAIT	3 trips	1-2 trips	3 trips	-	-
562 Regional West Edmonton Mall, S. Campus	60-90	1-3 trips	60-90	90-120	-

* Includes provision for limited local connection from last return trip from Edmonton.

Key Benefits:

- Improves transit system coverage and frequency within Spruce Grove, extends evening service to Stony Plain and Spruce Grove, and introduces preliminary Saturday service to Stony Plain, Spruce Grove and Parkland Village.
- Reorients more service into direct routes operating in both directions, reducing travel time for passengers.
- By maintaining operation of the 2 West Spruce Grove by the regional buses at commuter times, it more seamlessly transitions and retains existing customers on the most heavily used sections of Routes 560 and 562 to the new structure as they would not have to physically change buses to "transfer" between local and regional service.

Considerations:

- The segments of King Street between Grove Drive and Brookwood/Woodgrove Drives and Woodgrove Drive between King Street and Calahoo Road would no longer have service. However, residents would still be within a 400 metre walk of transit on adjacent corners. Implementation should include a public engagement process that assists existing users in understanding the trade offs in the new route structure and how their existing travel patterns shift but are still served.
- Likewise, it is recommended that service to any new route sections include a door-to-door survey of residents directly on the corridor to confirm their support prior to any larger engagement process (more traditional open house/online survey, etc.).
- Option 4a and 4b have been tailored to make use of available vehicles and delivery schedules. All options assume that Option 2a or 2b would have been implemented prior to or in tandem with the improvements shown here, as well as an increased degree of coordination in the system as discussed in **Section 4.2**.
- Costs estimates also include provision for rescheduling of all regional trips to now align with the regular 30 minute "pulse" that would occur on local routes within Spruce Grove. This rescheduling requires additional hours and is offset by the more introductory nature of proposed Saturday services.

Initial High Level Estimate – Additional Impacts

Option 4a: Enhanced Local Service, Phase 1: Spruce Grove Focus + Introductory Evenings & Saturdays

3	Shuttle Vehicles	$675,000	One-Time Vehicle Capital Cost
9,400	Annual Service Hours	$996,700	Annual Operating Cost
67,700	Annual Passengers	$142,200	Annual Revenue
		$854,500	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 4b: Enhanced Local Service, Phase 1: Spruce Grove Focus + Greenbury On Demand

3	Shuttle Vehicles	$675,000	One-Time Vehicle Capital Cost
10,600	Annual Service Hours	$1,122,800	Annual Operating Cost
77,400	Annual Passengers	$162,500	Annual Revenue
		$960,300	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 4c: Enhanced Local Service, Phase 1: Improvements Across Region Using Contracted Vehicles

5	Shuttle Vehicles	$675,000	One-Time Vehicle Capital Cost
15,300	Annual Service Hours	$1,703,100	Annual Operating Cost
114,800	Annual Passengers	$241,100	Annual Revenue
		$1,462,000	Net Total Annual Operating Cost

Service Option 5

Introduction of Evening Regional Service

Description: Proposed for implementation in conjunction with the revised and enhanced local route service in 2019, this option adds two to three evening trips on Route 562.

- Spaced roughly 1.5 – 2 hours apart, the trips would focus on schedules enabling return to Spruce Grove from evening classes, as well as employment, shopping and other activities in Edmonton.

Key Benefits:

- Makes the overall regional service more attractive for all users and creates significant community benefit in terms of access to employment, education and services.

Considerations:

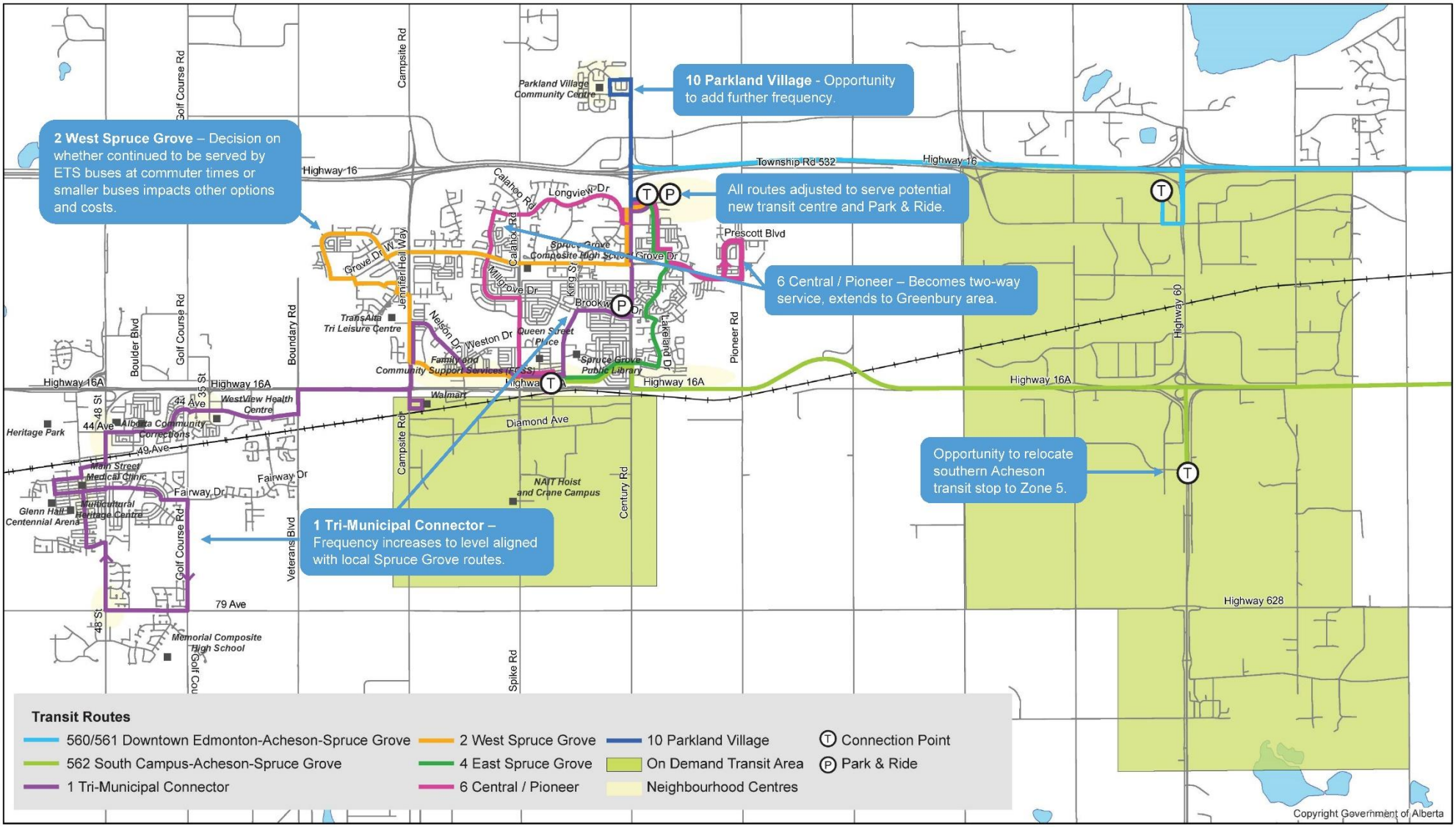
- Similar to the discussion around operation of some local service using larger regional vehicles presented in **Service Option 4**, there are trade offs in terms of possible ways of deploying vehicles for the evening service.
  - The most cost-efficient manner would be to use the Route 562 buses to also operate the Route 2 West Spruce Grove as that would include a level of connecting local evening service, particularly for a late evening bus that may be operating after the local system is not operating. However, this would mean the appearance of the slightly larger regional bus at night on some neighbourhood streets (particularly in the Harvest Ridge area).
- Another option to augment local service later in the evening would be to either operate one later evening Tri-Municipal Connector trip and/or provide on-demand connecting service from a Spruce Grove terminus point.
- One potential way of mitigating bus size concerns would be to see if it may be possible to amend the existing contracts with the ETS to make use of one of their system shuttle-sized buses during evenings for Route 562.

Initial High Level Estimate – Additional Impacts

Option 5: Evening Service on Route 562

0	Vehicles	$0	One-Time Vehicle Capital Cost
900	Annual Service Hours	$136,200	Annual Operating Cost
5,400	Annual Passengers	$29,100	Annual Revenue
		$107,100	Net Total Annual Operating Cost

TRI-MUNICIPAL REGIONAL TRANSIT PLAN – SERVICE OPTION 6: ENHANCED LOCAL SERVICE, PHASE 2



Service Option 6

Enhanced Local Service, Phase 2

Description: With the arrival of the remaining two local service buses in 2020 and the addition of weekend regional trips, this option provides the resources to further increase service levels and restructure service. This includes the provision to extend routes to a potential new terminus point and Park & Ride facility in the Westwind area. (See **Enhanced Local Service, Phase 2** map on the previous page, or **Spruce Grove Routing Detail** map on the next).

This option also presents some choices depending on local direction and which variation of Service Option 4 had been implemented:

Option 6a – Spruce Grove Focussed Phase 2 Local Improvements retains the interim route structure as presented in **Service Option 4 Phase 1 Local Improvements** and simply replaces the in-town service on the Route 2 West Spruce Grove route delivered by the regional vehicles during commuter periods with smaller vehicles at all times.

- All local passengers would need to physically change buses to connect to regional services. However, in return, operational savings would accrue.
- The frequency of service in this option would be identical to that previously presented for Option 4a, except that Saturday service would be consistently 60 minutes or better all day.

Option 6b – Region-Wide Local Improvements retains operation of the Route 2 West Spruce Grove by larger regional vehicles and uses the additional vehicles and hours to increase frequency to Stony Plain and Parkland

SAMPLE SERVICE LEVELS: OPTION 6b – ENHANCED LOCAL SERVICE, PHASE 2
(Assumes Implementation of Option 2, 4a, 5 and 7; weekday service levels shown here also illustrate those for Option 4c)

Route	Frequency in Minutes					
	AM Peak 5:30 a.m. – 8:30 a.m.	**Midday** 8:30 a.m. – 3:00 p.m.	**PM Peak** 3:00 p.m. – 7:00 p.m.	**Evening*** 7:00 p.m. – 10:30 p.m.	**Saturday** 8:30 a.m. – 10:30 p.m.	**Sunday** 8:30 a.m. – 10:30 p.m.
1 Tri-Municipal Connector	30-60	60-90	30-60	2 trips	60-90	120-180
2 West Spruce Grove	30	60	30	90-120	60-90	120-180
4 East Spruce Grove	30	60	30	90-120	60-90	-
6 Central	30	60	30	90-120	60-90	-
10 Parkland Village	1 trip	2 trips-	2 trips	-	4 trips	-
560 Regional NAIT, Downtown Edmonton	30	1-2 trips	30	-	-	-
561 Regional Via Acheson to NAIT	3 trips	1-2 trips	3 trips	-	-	-
562 Regional West Edmonton Mall, S. Campus	60-90	1-3 trips	60-90	90-120	90-120	120-180
* Includes provision for limited local connection from last return trip from Edmonton.						

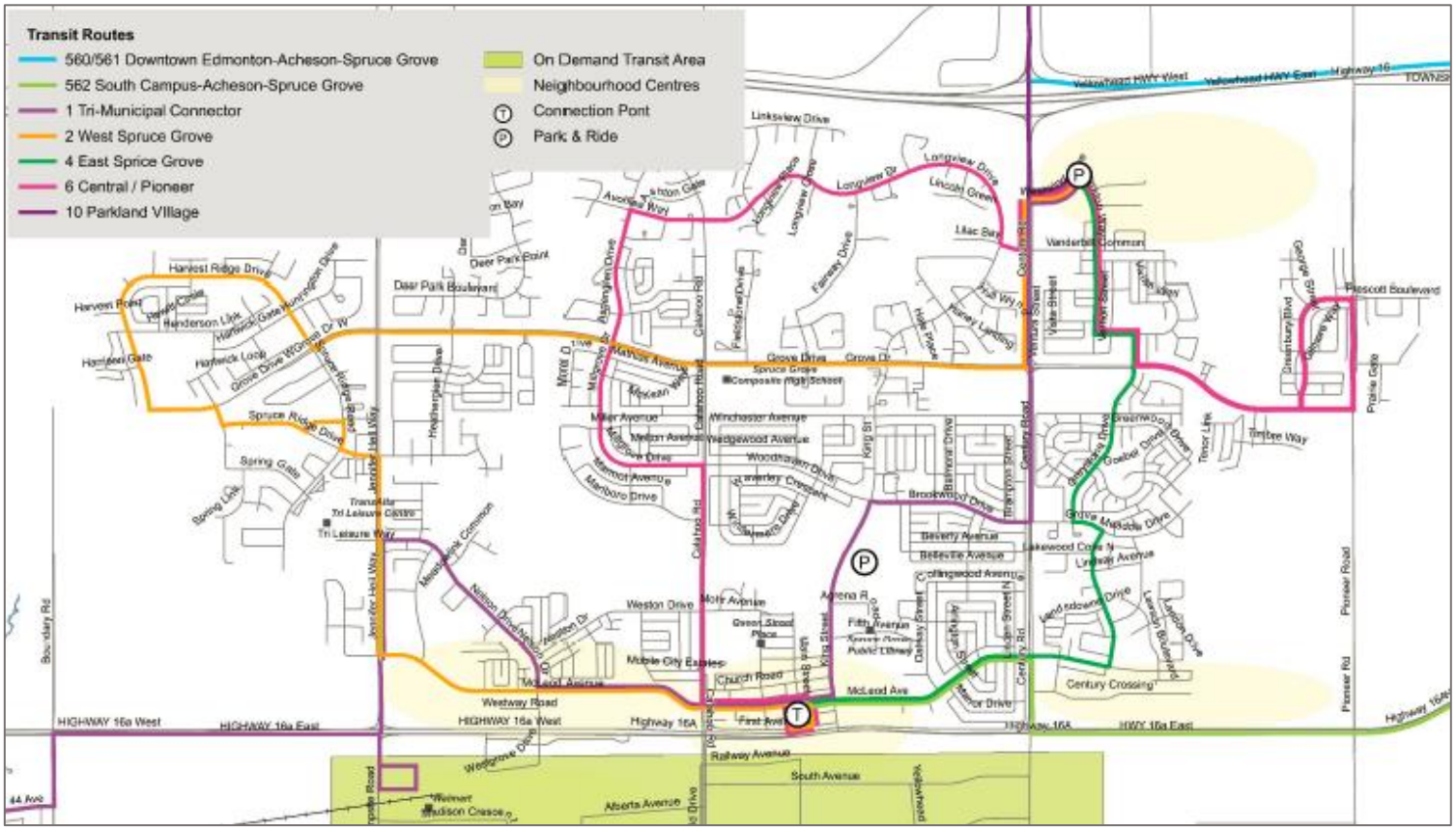
Village, plus implement the full short term route structure within Spruce Grove, as shown in the **Local Service Enhancement, Phase 2** map. It also increases Saturday service frequency. Revised frequencies are shown in the table below, with routing changes as follows:

- Restructures the Route 6 Central to operate in two directions via Calahoo Road and Longview Drive rather than as a loop, since the 1 Tri-Municipal Connector would now provide sufficient frequency on King Street, Brookwood Drive and Century Road.
- Extends the Route 6 Central to the Greenbury area.

Key Benefits:

- Fully implements the local route structure with consistent commuter service levels across the region.
- Better enables connection and access for travel within the Tri-Municipal Region as well as to Edmonton.

TRI-MUNICIPAL REGIONAL TRANSIT PLAN – SERVICE OPTION 6: SPRUCE GROVE ROUTING DETAIL



Considerations:

- The key trade-off between Option 6a and 6b is the use and perception of larger vehicles versus opportunity to improve connection across the Tri-Municipal Region. The "negative" costs shown in Option 6a reflect the lower operating costs for using smaller vehicles in all local service and therefore the financial impacts appear as a credit.

  However, by retaining the use of larger regional vehicles to operate some local service—as shown in Option 6b—the entire Tri-Municipal system has the opportunity to leverage the two additional smaller vehicles into more service. Existing Spruce Grove regional passengers on the 560 and 562 routes would also likely be more supportive of the "no transfer required" option at commuter times presented in Option 6b and ridership estimates for each option take likely impact into account.

- If the regional buses are not removed from local service at this point, the next logical point would be in concert with the extension of Route 562 to an additional Park & Ride in the vicinity of Veterans Boulevard at Hwy 16A, as described in **Service Option 11**.

Initial High Level Estimate – Additional Impacts

Option 6a: Spruce Grove Focussed Phase 2 Local Improvements

2	Shuttle Vehicles	$450,000	One-Time Vehicle Capital Cost
1,000	Annual Service Hours	-$59,500	Annual Operating Cost
-7,200	Annual Passengers	-$15,100	Annual Revenue
		-$44,400	Net Total Annual Operating Cost

Initial High Level Estimate – Additional Impacts

Option 6b: Region-Wide Local Improvements
(Costs additional to Option 6a)

2	Shuttle Vehicles	$450,000	One-Time Vehicle Capital Cost
5,400	Annual Service Hours	$573,400	Annual Operating Cost
40,500	Annual Passengers	$85,100	Annual Revenue
		$488,300	Net Total Annual Operating Cost

Service Option 7

Introduction of weekend regional service (Route 562) + Introductory local connecting service on Sundays

Description: Proposed for implementation in conjunction with the second phase of enhanced local route service in 2020, this option adds service on weekends on Route 562, as well as introductory local connecting service on key routes on Sundays.

- Regional service on Route 562 would operate approximately every two hours on Saturday and every two-three hours on Sunday from 9:00 a.m. to 9:00 p.m.
- Ideally, the evening trips presented on Saturday and Sunday will align with those implemented on Weekday evenings.
- An introductory level of local Sunday service would also be provided through this option, with service on the Routes 2 West Spruce Grove and 1 Tri-Municipal Connector also operating every two-three hours. Further Sunday frequency across all local routes would then be added in Service Option 11.

Key Benefits:

- Makes the overall regional service more attractive for all users and creates significant community benefit in terms of access to employment, education and services.

Considerations:

- Just as with the discussion around operation of service and vehicles presented in **Option 4**, there are trade offs in terms of possible ways of deploying vehicles for the weekend service. This option assumes that the Route 562 vehicle would also operate select connecting trips on the Route 2 West Spruce Grove on Saturdays and Sundays as it represents the most efficient solution.
  - One potential way of mitigating bus size concerns would be to see if it may be possible to amend the existing contracts with the ETS to make use of one of their system shuttle-sized buses during lower demand weekend times for Route 562.

Initial High Level Estimate – Additional Impacts

Option 7: Weekend Service on Route 562

0	Vehicles	$0	One-Time Vehicle Capital Cost
1,500	Annual Service Hours	$283,800	Annual Operating Cost
9,000	Annual Passengers	$48,500	Annual Revenue
		$235,300	Net Total Annual Operating Cost

Unallocated Service Option 8

Shift Acheson Zone 3 Transit Stop to Zone 5

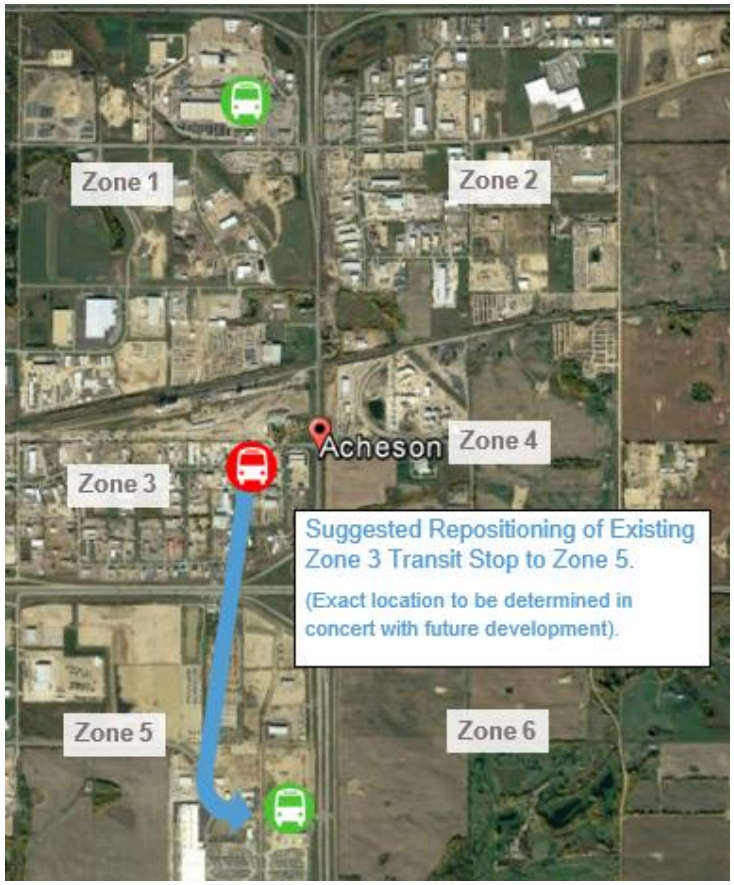
Description: The nature of employers and workforce is changing in Acheson, with new development in Zone 5 that will likely attract employees that may be more open to taking transit. To meet these changes, it is proposed that the existing Acheson Zone 3 bus stop location be moved to a new one in Zone 5. This change would require capital investment (for new passenger amenities) and would also require rerouting for Route 562.

Key Benefits:

- Provides increased separation between the stops served by transit in Acheson (the other is in Zone 1), therefore reducing duplication and improving coverage. Allows expansion of service into Zone 7 as development occurs.
- Better aligns service with potential sources of ridership, bringing transit not only closer to targeted employers in Zone 5 but also better serving the potential highway commercial adjacent to Hwy 16A.

Considerations:

- The growth in Zone 7 will increase potential demand and necessitate an expansion of the shuttle service area. This growth may require a second shuttle vehicle to maintain the reliability of the service.
- Adding a second stop in Zone 5 is not recommended if the stop in Zone 3 is not removed. Regional Connector service should be as streamlined as possible, leaving the route diversions to the shuttle service.



Initial High Level Estimate – Additional Annual Impacts

Unallocated Option 8*: Adjust Acheson Transit Stop from Zone 3 to Zone 5

Cost Estminates TBD Pending Further Discussion with Parkland County Staff.

* Option is currently not allocated to a specfic year within the short term and could be introduced at any point.

Unallocated Service Option 9

Introduce Enoch Cree Nation Connecting Service to Acheson

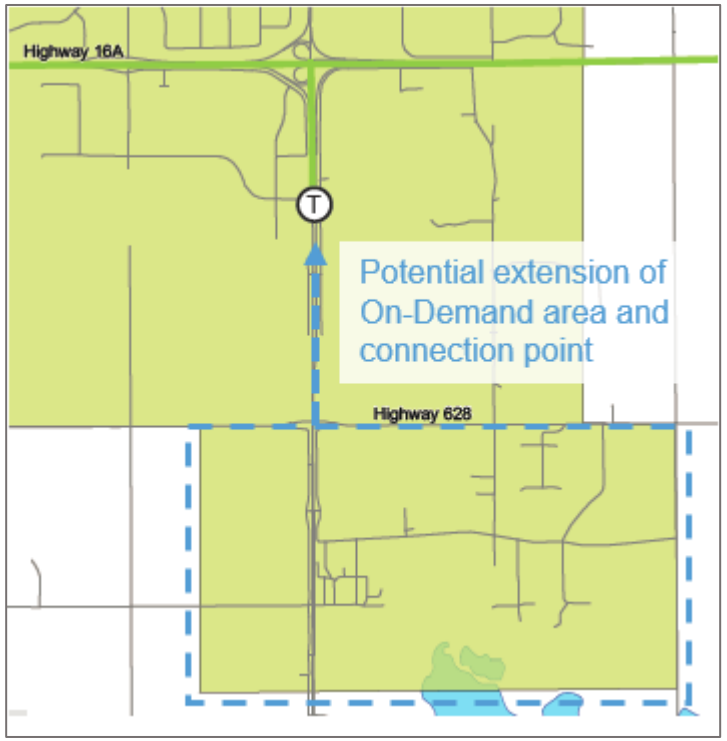
Description: This option enables the creation of on-demand connection between Enoch Cree Nation and select trips on Route 562. Using the same contract as that providing service to Acheson, this would create a selection of trip window times during which the Acheson Shuttle would also be able to provide connection from the main Enoch village area to the Acheson Zone 3 connection point (or a new connection point in Zone 5, as described in **Unallocated Service Option 8**). Provision for three to five trips per weekday would meet a number of Enoch community needs while also balancing for population size.

Key Benefits:

- Provides introductory-level transit service to Enoch Cree Nation that facilitates travel either into Spruce Grove (where many services accessed by Nation members are located) or into Edmonton.
- Trip times would be dispersed across the day to enable the service to be used for many types of travel.

Considerations:

- Would require further discussion and development of potential service levels, and then subsequent creation of agreements with Enoch Cree Nation.
- Would also require further discussion with Southland Transportation to confirm cost estimates based on final service plan.



Initial High Level Estimate – Additional Annual Impacts

Unallocated Option 9*: Extend Connecting Service to Enoch Cree Nation

Cost Estminates TBD Pending Further Discussion with Municipal and Enoch Nation Staff.

* Option is currently not allocated to a specfic year within the short term and could be introduced at any point.

Unallocated Service Option 10

Introduce Spruce Grove Industrial Area On-Demand Service

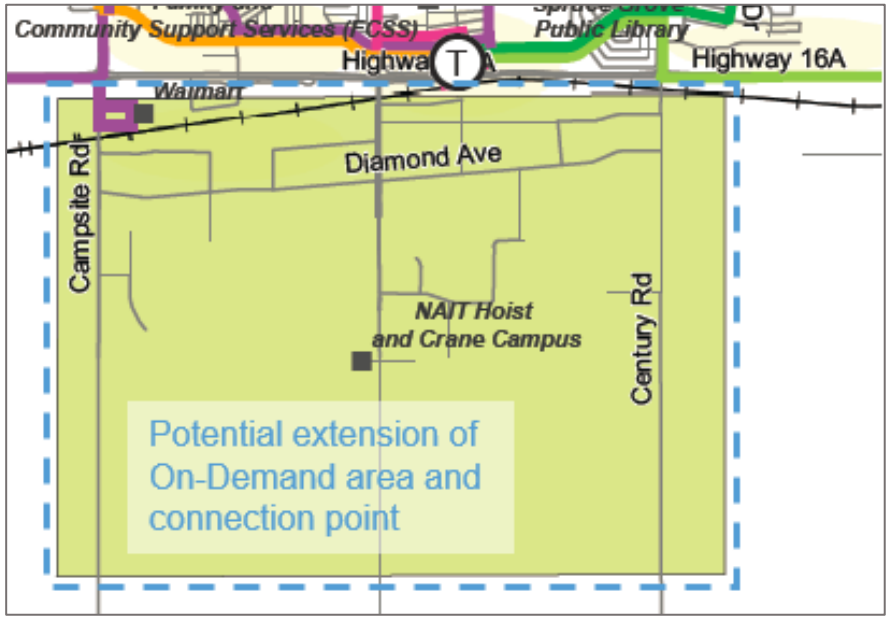
Description: This option creates the provision of hours and vehicle to introduce connecting on-demand service to Spruce Grove's south industrial area using trip windows. Service would connect at 30 minute intervals during the commuter period on weekdays to the downtown terminus.

Key Benefits:

- Introduces connecting service to Spruce Grove's industrial area that is of appropriate design and scale to its land use pattern.
- As ridership matures and the area develops, provides the opportunity to transition to a targeted commuter period route if warranted by demand.

Considerations:

- The industrial area on-demand service could potentially be implemented separately without the need to purchase a vehicle depending on the availability of a van from one of the specialized transit operators.
- It may also be more efficient to contract this service to a third-party transportation provider (taxi company, ride hailing service, etc.), similar to the Acheson Shuttle.



Initial High Level Estimate – Additional Impacts

Unallocated Option 10*: Introduce Spruce Grove Industrial Area On-Demand Service

1	Van Vehicle	$90,000	One-Time Vehicle Capital Cost
1,200	Annual Service Hours	$87,900	Annual Operating Cost
4,800	Annual Passengers	$10,100	Annual Revenue
		$77,800	Net Total Annual Operating Cost

* Option is currently not allocated to a specfic year within the short term and could be introduced at any point.

7.2 Suggested Medium Term Options (4-10 Years)

Service Option 11

Extend Route 562 to Veterans Boulevard Park & Ride, Plus Additional Spruce Grove Route, Local Spruce Grove Restructuring and Improved Sunday Service

Description: Timed to occur in conjunction with future development, this option would extend Route 562 to serve a new Park & Ride and Transit Centre in the vicinity of Veterans Boulevard at Hwy 16A. It also creates the provision for the following:

- Additional targeted local and regional frequency at commuter times to address any crowding or service reliability issues.
- Creation of a new local route and associated restructuring within Spruce Grove. (Exact routing to be determined at a future point depending on location and pace of residential development and road network changes).
- Increased Sunday frequency to offer 60 minute service on the Route 1 Tri-Municipal Connector and Route 2 West Spruce Grove, 60 - 90 minute service on other local Spruce Grove local routes and 3 - 4 trips on the Route 10 Parkland Village.
- Also includes provision to potentially transition the majority of Route 2 West Spruce Grove trips away from operation by the larger regional vehicles if Option 6b had been previously implemented.

Key Benefits:

- Provides an additional Park & Ride option and capacity in the region, particularly for Stony Plain residents and Parkland County area residents in that vicinity.
- Creates opportunity to increase frequency at commuter times, including further service to Acheson.
- Improves ease of use of Sunday service across the Tri-Region.
- Ensures that service area keeps pace with development.

Considerations:

- Depending on the pace of Stony Plain development and timing of Edmonton Valley Line - West LRT implementation, it may be helpful to align this option with that of **Service Option 12 - Realign and Augment Stony Plain Local Routes** and/or **Service Option 17 – Route 562 Realignment and Further Frequency**.

Initial High Level Estimate – Additional Impacts

Option 11: Extend Route 562 to Veterans Boulevard Park & Ride, Plus Additional Spruce Grove Route & Restructuring

3	Shuttle Vehicles	$675,000	One-Time Vehicle Capital Cost
8,300	Annual Service Hours	$881,100	Annual Operating Cost
66,400	Annual Passengers	$139,400	Annual Revenue
		$741,700	Net Total Annual Operating Cost

Service Option 12

Realign and Augment Stony Plain Local Routes

Description: This option creates provision for a second route in Stony Plain, ideally to complement the implementation of a Veterans Boulevard Transit Centre and Park & Ride, as described in **Service Option 11**.

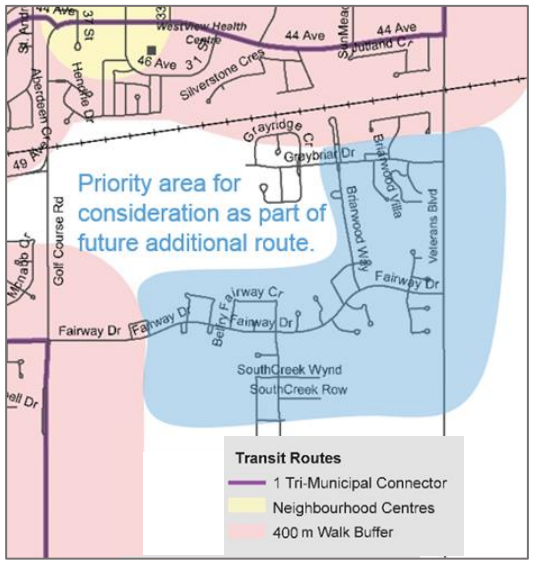
- Exact routing would be confirmed based on actual development patterns, but new areas of coverage would likely focus on Veterans Boulevard, Golf Course Road and the core section of Stony Plain described in its MDP as the Area of Transition.
- The goal would be to realign the existing Route 1 Tri-Municipal Connector in tandem with the new route to reduce its large loop through Stony Plain and further focus additional two-way service between downtown and the Veterans Boulevard Transit Centre.

Key Benefits:

- Revised route structure would serve new and emerging neighbourhoods in Stony Plain, plus ensure the Route 1 Tri-Municipal Connector maintains its schedule reliability.
- By increasing two-way service and connection at downtown and regionally at Veterans Boulevard, there would be increased ease of connection and directness of travel for key residential neighbourhoods.
- The route restructuring provides the opportunity to align with and promote the creation of transit-supportive neighbourhoods, like those planned in Stony Plain's core.

Considerations:

- Requires at least one additional local vehicle (and potentially an additional spare for the entire local network depending on overall level of service integration and the order of implementations).
- Depending on scheduling and final route design, may require stop and layover space for at least one additional bus in downtown Stony Plain.



Initial High Level Estimate – Additional Impacts

Option 12: Realign and Augment Stony Plain Local Routes

1	Shuttle Vehicle	$225,000	One-Time Vehicle Capital Cost
5,400	Annual Service Hours	$482,400	Annual Operating Cost
42,100	Annual Passengers	$88,400	Annual Revenue
		$394,000	Net Total Annual Operating Cost

Service Option 13

Specialized Transit: Additional Peak Service

Description: Creates provision to add additional hours and either a larger replacement vehicle or an additional vehicle to specialized transit services to provide increased capacity at peak hours for people with a disability.

Key Benefits:

- Ensures that specialized transit services in the Tri-Municipal Region retain sufficient capacity to meet resident needs, particularly as population and the number of seniors continues to grow.

Considerations:

- The exact nature of how the specialized transit hours would be deployed, vehicle requirements and the timing of implementation depends on decisions related to integration of specialized transit services in Stony Plain and Spruce Grove. It also depends on the potential degree of integration with the local fixed route network and implementation of revised specialized transit eligibility processes and policies, as described further in **Section 8.5**.
- The degree of integration and eligibility policy alignment could delay the need to implement this option.
- If the specialized transit services are still operating separately, likely the number of hours required to meet demand would be higher than that shown here.

Initial High Level Estimate – Additional Impacts

Option 13: Specialized Transit Additional Peak Service

1	Van Vehicle	$90,000	One-Time Vehicle Capital Cost
1,900	Annual Service Hours	$137,500	Annual Operating Cost
3,200	Annual Passengers	$12,800	Annual Revenue
		$124,700	Net Total Annual Operating Cost

Service Option 14

Specialized Transit: Evening and Weekend Service Additional Peak Service

Description: with provision of local and regional service on weekends and evenings, extends the regular hours and days of operation of specialized transit in the Tri-Municipal Region to also offer a degree of service during those similar time periods.

Key Benefits:

- Ensures that all community members have similar access to transit regardless of ability or style of service.

Considerations:

- Ideally, expansion of the span of service for specialized transit would occur in tandem with that for fixed route service. However, it is suggested that their implementation be offset for the following reasons:
    - It enables time for the various operating organizations within the region to come to a consensus around how local services (including fixed route and specialized) will be operated. If further integration is desired, it provides the time to transition the components of service iteratively rather than all at once.
    - It smooths the pace of investment for local municipalities. Significant transit investment and change is already projected for the fixed route portion of service over the first three years. Having any specialized transit increases happen after that point is likely more viable for municipal budgets.
    - It provides an incentive for those existing specialized transit users who might be able to use the fully accessible fixed route system to try it before additional resources are added to the specialized network.
- Other operating models may be available to reduce costs associated with this option. For instance, some communities contract out service during these lower demand times to third party service providers who also provide a wheelchair accessible vehicle. In that case, trip booking is still overseen by the specialized transit operator but is delivered by the other provider.

Initial High Level Estimate – Additional Impacts

Option 14: Specialized Transit Weekend and Evening Service

0	Vehicles	$0	One-Time Vehicle Capital Cost
1,900	Annual Service Hours	$134,700	Annual Operating Cost
2,100	Annual Passengers	$8,400	Annual Revenue
		$126,300	Net Total Annual Operating Cost

Service Option 15

Increased Commuter Period Frequency - Regional Routes

Description: Creates provision to increase service on all regional routes to every 15 minutes during commuter times, including every 30 minutes or better to Acheson.

Key Benefits:

- Service frequency of 15 minutes or better tends to be the "tipping point" where substantial ridership increases occur since it is frequent enough that passengers feel like they have multiple options and don't need to consult a schedule.

Considerations:

- To work optimally, expansion of regional and local services need to occur together. Therefore, if funding is not sufficient to do both **Service Option 15** and **Service Option 16** at the same time, it would also work to initially implement 15 minute service for a shorter period in the commuter peaks and then expand to the remainder of the commuter period at a later date.
- Ideally, service to Acheson will also operate at a consistent, higher frequency. The trade-off is managing service levels and the level of deviation off Hwy 16/16A to be as attractive as possible to commuters in both directions. For instance, in the mornings a suggested balance might be to schedule all trips from Edmonton to the Tri-Municipal Region via Acheson (therefore, 15 minute service to Acheson) but only every second trip from the Tri-Municipal Region to Edmonton via Acheson (30 minute service to Acheson).
- Capacity planning for all terminus points should take this level of local and regional frequency into account.

Initial High Level Estimate – Additional Impacts

Option 15: Additional Commuter Period Frequency: Regional Routes

4	Standard Vehicles	$2,400,000	One-Time Vehicle Capital Cost
5,300	Annual Service Hours	$802,300	Annual Operating Cost
58,300	Annual Passengers	$314,200	Annual Revenue
		$488,100	Net Total Annual Operating Cost

Service Option 16

Increased Commuter Period Frequency – Local Routes

Description: Similar to the key benefits and considerations for regional routes in **Service Option 15**, this option increases service on the majority of local Tri-Municipal Region routes to 15 minutes. All Local Connector and Local Core routes would have this level service, plus those Neighbourhood level routes with sufficient demand.

Initial High Level Estimate – Additional Impacts

Option 16: Additional Commuter Period Frequency: Local Routes

5	Shuttle Vehicles	$1,125,000	One-Time Vehicle Capital Cost
8,100	Annual Service Hours	$865,800	Annual Operating Cost
72,900	Annual Passengers	$153,100	Annual Revenue
		$712,700	Net Total Annual Operating Cost

Service Option 17

Route 562 Realignment and Further Frequency

Description: This option creates the provision to realign some or all of the regional Route 562 trips when the Valley Line - West LRT serving West Edmonton Mall and Downtown Edmonton is completed.

- This change creates the potential opportunity to discontinue some or all of the existing Route 562 service between West Edmonton Mall and the South Campus/Fort Edmonton Transit Centre. Time saved could be reinvested into further frequency improvements for select regional and local services at commuter times, including potentially more trips via Acheson Zone 5.
- As this change is purely accomplished through reallocation of existing resources, costs shown for this option are zero but would likely garner more passengers through improved frequency.

Key Benefits:

- More quickly connects Tri-Municipal passengers with the Edmonton Metropolitan Region LRT network.
- Similarly, provides improved mobility for EMR residents to access transit to employment in Acheson and other Tri-Municipal areas.

Considerations:

- The ability to smoothly transition to having more or all buses terminate at West Edmonton Mall will depend on the proportion of passengers travelling to/from South Campus/Fort Edmonton versus other locations in Edmonton and continued investment in the underlying ETS network that facilitates easy, direct access between the Mall and the South Campus.
- The implementation of the Valley Line - West LRT along with this proposed change could may also facilitate the gradual transfer of resources and trips from route 560 to 562 or terminating more 560 trips at the NAIT LRT station, as described in the long term options.

Initial High Level Estimate – Additional Impacts

Option 17: Route 562 Edmonton Realignment + Further Frequency

0	Vehicles	$0	One-Time Vehicle Capital Cost
0	Annual Service Hours	$0	Annual Operating Cost
5,300	Annual Passengers	$28,600	Annual Revenue
		-$28,600	Net Total Annual Operating Cost

7.3 Suggested Long Term Options (10+ Years)

As service and the community matures, further service improvement priorities will emerge. These would typically be captured and further developed in future regional transit plan updates. However, the following provides an outline of improvements that will likely need to be considered by the Tri-Municipal Regional System over the long term:

- **Continued Re-examination of Investment Between Routes 560 and 562** – As the Valley Line - West LRT matures and the overall Edmonton LRT network develops, the regional commuting pattern of Tri-Municipal passengers will likely adapt. As this happens, there may be opportunity to truncate Route 560 at NAIT and/or begin transitioning the proportion of trips from Route 560 to the Route 562 to focus service and frequency on one line.
- **Service Maintenance** – As population, development and ridership grows, so too do congestion and transit running times. As the service matures, likely an additional vehicle and associated hours will need to be added to both the local network and the regional service to maintain schedule reliability. Transit priority improvements and route changes may delay the need for this on the regional side. Similarly, consideration of transit priority measures appropriate for the scale of Stony Plain and Spruce Grove (such as the queue jump lanes or transit signal priority at key intersections described further in **Section 9.2.6**), as well as route adjustments may address this for local service.
- **Further Frequency Improvements** – By the long term mark, the targeted frequency improvements outlined in the Short Term and Medium Term sections likely mean that many routes are offering 15 minute service at commuter times. Over the long term, ideally the system increases service to offer 15 minute service over a longer course of the day as warranted by ridership and 30 minute service at other times.
- **Augmented Local Routing** – Particularly in Spruce Grove (which has been experiencing the highest pace of population growth) but also in other areas of the Region, continued development will put pressure on the system to expand its local route network. Planning will need to take place to add further routes and associated vehicles and service hours. However, at some point a more substantial local network restructuring will also need to take place to realign all routes and schedules so that they continue to be as effective and efficient as possible in the face of continued outward expansion.
- **Further Development of Targeted Services** – As the on-demand services mature in the Acheson/Enoch Cree Nation and the Spruce Grove industrial areas, likely it will become more effective to transition these services to slightly more formalized routes. Likewise, similar service to the Stony Plain industrial area could be considered, while Heritage Park events may grow to a point that the special events service outlined in **Section 8.5** needs to transition to a more regular service. There may also be opportunity to coordinate services with the School District. These developments would each necessitate further restructuring of service and either reallocation or expansion of resources.

7.4 Service Option Summary

The following presents the financial and performance estimates for short term and medium term options presented in **Sections 7.1-7.2**. Costs are based on 2016 actuals for services that exist, or peer averages for new services and would be in addition to existing municipal transit budgets. All operational figures are annual, while capital costs are one-time. In keeping with the regional nature of this plan, all service options provide ancillary benefit for all three municipal partners, but physical location of services is indicated.

Tri-Municipal Regional Transit Plan
Service Option Summary: Preliminary Estimated Additional Impacts**

Service Option	Vehicles ***	Annual Total Kms	Annual Service Hours	Annual Rides	Total One Time Vehicle Capital Costs	Annual Operating Costs	Annual Total Revenue	Annual Net Operating Costs	Operating Roadways^ City of Spruce Grove	Town of Stony Plain	Parkland County
Options for Short Term Consideration (1-3 years)											
Option 1: Consolidate Regional Specialized Trips Between Tri-Municipal Area and Edmonton	0	0	0	400	$0	$0	$6,000	-$6,000	X	X	X
Option 2: Introductory Tri-Municipal Connector Options (Choice of One):											
Option 2a: Introductory 1 Tri-Municipal Connector Using a Portion of Existing HandiBus Service	0	48,000	1,600	8,500	$0	$113,400	$25,500	$87,900	X	X	X
Option 2b: Introductory 1 Tri-Municipal Connector With No Change to Existing HandiBus Service	1	75,000	2,500	12,800	$225,000	$180,000	$38,400	$141,600	X	X	X
Option 3: Regional Midday Improvements (Choice of One):											
Option 3a: Midday Improvements on Route 562 only	0	36,000	1,200	7,200	$0	$181,700	$38,800	$142,900	X		
Option 3b: Select Route 562 Midday Improvements + Additional Acheson Trip	0	36,000	1,200	7,800	$0	$181,700	$42,000	$139,700	X		X
Option 3c: Midday Improvements for All Regional Routes and Areas	0	39,000	1,300	9,100	$0	$196,800	$49,000	$147,800	X		X
Option 3d: Midday Improvements for All Regional Routes, Plus Further 560 Frequency	1	69,000	2,300	18,400	$600,000	$348,200	$99,200	$249,000	X		X
Option 4: Revised and Enhanced Local Service, Part 1 (Choice of One):											
Option 4a: Enhanced Local Service, Phase 1: Spruce Grove Focus + Introductory Evenings & Saturdays	3	282,000	9,400	67,700	$675,000	$996,700	$142,200	$854,500	X	X	X
Option 4b: Enhanced Local Service, Phase 1: Spruce Grove Focus + Greenbury On Demand	3	318,000	10,600	77,400	$675,000	$1,122,800	$162,500	$960,300	X	X	X
Option 4c: Enhanced Local Service, Phase 1: Improvements Across Region Using Contracted Vehicles	5	459,000	15,300	114,800	$675,000	$1,703,100	$241,100	$1,462,000	X	X	X
Option 5: Evening Service on Route 562	0	27,000	900	5,400	$0	$136,200	$29,100	$107,100	X	X	X
Option 6: Revised and Enhanced Local Service, Part 2 (Choice of One):											
Option 6a: Spruce Grove Focussed Phase 2 Local Improvements	2	30,000	1,000	-7,200	$450,000	-$59,500	-$15,100	-$44,400	X		
Option 6b: Region-Wide Local Improvements (Costs additional to Option 6a)	2	162,000	5,400	40,500	$450,000	$573,400	$85,100	$488,300	X	X	X
Option 7: Weekend Service on Route 562	0	45,000	1,500	9,000	$0	$283,800	$48,500	$235,300	X	X	X
Unallocated Option 8*: Adjust Acheson Transit Stop from Zone 3 to Zone 5	Cost Estminates TBD Pending Further Discussion with Parkland County Staff.										X
Unallocated Option 9*: Extend Connecting Service to Enoch Cree Nation	Cost Estminates TBD Pending Further Discussion with Municipal and Enoch Nation Staff.										X
Unallocated Option 10*: Introduce Spruce Grove Industrial Area On-Demand Service	1	36,000	1,200	4,800	$90,000	$87,900	$10,100	$77,800	X		
Options for Medium Term Consideration (4-10 years)											
Option 11: Extend Route 562 to Veterans Boulevard Park & Ride, Plus Additional Spruce Grove Route & Restructuring	3	249,000	8,300	66,400	$675,000	$881,100	$139,400	$741,700	X	X	
Option 12: Realign and Augment Stony Plain Local Routes	1	162,000	5,400	42,100	$225,000	$482,400	$88,400	$394,000		X	
Option 13: Specialized Transit Additional Peak Service	1	57,000	1,900	3,200	$90,000	$137,500	$12,800	$124,700	X	X	X
Option 14: Specialized Transit Weekend and Evening Service	0	48,000	1,900	2,100	$0	$134,700	$8,400	$126,300	X	X	X
Option 15: Additional Commuter Period Frequency: Regional Routes	4	48,000	5,300	58,300	$2,400,000	$802,300	$314,200	$488,100	X	X	X
Option 16: Additional Commuter Period Frequency: Local Routes	5	48,000	8,100	72,900	$1,125,000	$865,800	$153,100	$712,700	X	X	X
Option 17: Route 562 Edmonton Realignment + Further Frequency	0	0	0	5,300	$0	$0	$28,600	-$28,600	X	X	X
Total of All Options (Including 2a, 3d, 4b and 6b)	**23**		**59,100**	**452,100**	**$6,330,000**	**$6,549,800**	**$1,289,500**	**$5,260,300**			

Notes:

* Option is currently not allocated to a specfic year within the short term and could be introduced at any point.

** Based on 2016 system actuals and peer averages. Final costs may vary based on detailed budgets, year of implementation and final operational details.

*** Vehicle requirements shown include spares and may vary at time of implementation based on system fleet standards. ^ "Operating Roadways" refers to where service physically operates; as a regional system, all service benefits all partners.

7.5 Future Forecast and Benchmarking

The following two tables compare the resulting projected ridership of the recommended service improvements over the next ten years as summarized in Section 7.4 against the forecasted population increase to the Tri-Municipal Region.

The top table at right summarizes the total performance for all services within the Tri-Municipal Region, including conventional services operated by the ETS, the connecting Acheson Shuttle and specialized services provided by Spruce Grove STS and Stony Plain HandiBus.

The bottom table uses the 2017 figures as a base and adds on the vehicle, service hour and ridership impacts over the next ten years from the recommended short and medium term service options as presented in Section 7.4. It also shows the forecasted population aligning with ten years from now (2028).

Two metrics are also included in both tables:

- **Service Hours per Capita** shows the general level of investment in service for a community.
- **Ridership per Capita** shows the relative level of transit uptake across a community.

2017 TRI-MUNICIPAL REGION ANNUAL TRANSIT PERFORMANCE: TOTAL OF ALL SERVICES*

Municipal Population	Total Vehicles ^	Annual Service Hours	Annual Ridership (Boardings)	Service Hours Per Capita	Ridership Per Capita
83,352	17	21,977	118,643	0.26	1.42

* Based on 2017 actuals where provided, with forecast for months not available.

^ Vehicles include the 6 conventional vehicles owned by the City of Spruce Grove, 4 conventional vehicles contracted from the ETS, 1 vehicle contracted from Southland Transportation Ltd., and the 6 vans and shuttle buses used by area specialized services.

2028 TRI-MUNICIPAL REGION PROJECTED ANNUAL TRANSIT PERFORMANCE: TOTAL OF ALL SERVICES**

Municipal Population***	Total Vehicles	Annual Service Hours	Annual Ridership (Boardings)	Service Hours Per Capita	Ridership Per Capita
104,026	40	81,077	570,743	0.78	5.49

** Using the above 2017 figures as a base, adds the additional vehicles, service hours and ridership projected for the short term and medium term options presented in the summary table in **Section 7.4**.

*** Population projections for the Tri-Municipal Region (City of Spruce Grove, Town of Stony Plain and Parkland County) were estimated using the Alberta Regional Dashboard. Projections were based on historic growth (2012-2016) for each municipality.

In general, these tables show:

- The proposed level of transit investment in the Tri-Municipal Region more than keeps pace with projected population increase, with Service Hours per Capita growing from 0.26 to 0.78.
- While the level of investment in transit increases substantially (with annual hours of service growing by 370%), the resulting ridership grows at any even higher rate (483%). The actual rate of return would likely be even greater as service matures and since all peer-reviewed ridership and revenue projections in this document have been developed to be conservative.

However, while the increased transit investment shown for the Tri-Municipal Region appears to be large, the resulting annual totals are modest when compared to peer Alberta Transit Systems, as shown in the benchmark comparison table below. The relatively modest level is especially notable when comparing the Tri-Municipal Region per capita totals for service hours and ridership against those for systems serving communities in the 60,000 to 100,000 population range (St. Albert and Strathcona County in the Edmonton Metropolitan Region and Grande Prairie, Lethbridge and Red Deer elsewhere in Alberta[4]).

Transit increases always seek an optimal balance between appropriate level of service and local capacity to fund it. The comparison of all three tables in this section indicates that this Plan's recommended service options strike that balance. They offer a substantial "kick start" to growing service levels closer to those of peer systems and they exceed the pace of projected population growth, while at the same time they stay within a range of increase that is likely more feasible for local municipalities to fund.

BENCHMARK COMPARISON TO PEER ALBERTA TRANSIT SYSTEMS*

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Community	Municipal Population	Total Vehicles	Annual Service Hours	Annual Ridership (Boardings)	Service Hours Per Capita	Ridership Per Capita
Tri-Municipal Region Total - 2017	83,352	17	21,977	118,643	0.26	1.42
Tri-Municipal Region Projected Total - 2028	104,026	40	81,077	570,743	0.78	5.49
Edmonton Metropolitan Regional Transit Systems:						
Fort Saskatchewan	24,569	2	6,657	66,725	0.27	2.72
Leduc	30,498	14	21,881	107,871	0.72	3.54
St Albert	64,645	63	101,838	1,504,417	1.58	23.27
Strathcona County	98,044	86	125,219	1,641,125	1.28	16.74
Other CUTA Alberta Peer Systems:						
Grande Prairie	65,088	32	66,427	776,214	1.02	11.93
Lethbridge	96,828	69	148,381	1,926,063	1.53	19.89
Red Deer	99,718	87	190,127	2,871,169	1.91	28.79
Peer Average:		**50**	**94,361**	**1,270,512**	**1.19**	**15.27**
Edmonton:	895,000	1180	2,286,597	142,900,052	2.55	159.66

* Figures shown for other systems use the total of all conventional and specialized services, as reported for 2016 to the Canadian Urban Transit Association.

[4] Medicine Hat would also typically be included in this peer community list but that system does not report statistics to CUTA.

8.0 SUPPORTING MEASURES

The following presents complementing infrastructure, technology, fare, marketing and policy priority measures that support the service options presented.

8.1 Infrastructure Priorities

Short Term Infrastructure Priorities (1-3 Years)

- **Stony Plain Downtown Terminal** – Creation of a pair of stops on 52 Avenue at Main Street, with seating and shelter. Subject to an access agreement, one stop could potentially make use of/integrate with an existing pedestrian plaza on private property on the northwest corner of 52 Avenue at Main Street, subject to an access agreement.
- **Grove Drive Terminal Improvements** – Signage updates and other minor improvements to facilitate use of the Grove Drive at Century Road stops for the new Route 1 Tri-Municipal Connector.
- **Stony Plain Bus Stop Installation** – Installation of stops and signage for introduction of Tri-Municipal Connector route.
- **Downtown Spruce Grove Terminal Location Confirmation** – In conjunction with Spruce Grove City Centre Area Redevelopment Plan, confirming approach to a transit terminal in the downtown area.
- **Spruce Grove Bus Stop and Targeted Sidewalk Installation** – Installation of bus stops, signage and passenger amenities to facilitate revisions to local network within Spruce Grove. As part of this, distribution of bus stops within Spruce Grove should also be checked to maintain even spacing of approximately 400 m as currently some are closer together and this makes transit travel slower.
- **Westwind Area Transit Terminal and Park & Ride** – Creation of a new transit centre and Park & Ride to align with restructuring and expansion of local services with Spruce Grove and Stony Plain.

Except for a shelter and a sign, this small plaza on private property in downtown Stony Plain on 52 Avenue at Main Street provides an example of many of the amenities also helpful in a transit stop: seating, spacious accessible waiting space, and landscaping.

- **Next Bus Information Displays at Major Terminals** – In conjunction with technology items outlined in **Section 8.2**, investment in physical monitors for major stops.
- **Operations and Maintenance Facility** – Confirmation of approach (provided by an operating company or integration with an existing municipal asset) and implementation of an operations and maintenance facility to support Tri-Municipal-area local buses. The confirmed approach could also consolidate operations and space for STS and HandiBus services, as well as other on-demand services in the Region.
- **Downtown Spruce Grove Transit Terminal** – Following from the downtown terminal location confirmation process, creation of space to facilitate passenger connections and vehicle layover at or near downtown Spruce Grove. Certainly over the short term and potentially longer term this terminal could make use of on-street space. If downtown is not feasible, another location is required in the southeast quadrant of the City, ideally on or near McLeod Ave.
- **Enoch Cree Nation Transit Stop** – Should service proceed to Enoch Cree Nation, a flagship stop within the Village would be helpful. While service could initially start as on-demand, a stop (ideally with a shelter or nearby indoor waiting area) acts to promote the service and focusses ridership where possible on a central location.
- **Creation of Acheson Zone 5 Transit Stop** – As described in Service Option 6, creates a new Transit stop location in concert with development in Acheson Zone 5 to replace the existing Zone 3 stop.

Medium Term Infrastructure Priorities (4-10 Years)

- **Veterans Boulevard Transit Centre and Park & Ride** – In concert with East Boundary Area development, creation of a transit centre and Park & Ride at Veterans Boulevard at Highway 16A to serve future extension of Regional service to this location, as well as evolution of the Stony Plain route network.
- **Expanded Downtown Stony Plain Terminal Capacity** – Creation of expanded bus stop and layover capacity within the vicinity of downtown Stony Plain to serve future growth of frequency and local network.
- **On Going Regional Bus Stop Improvement Program** – Annual infrastructure fund to support at bus stop pad, bench, customer information and shelter improvements on a region-wide priority basis.

Longer Term Infrastructure Priorities (10+ Years)

- **Expanded Park & Ride Capacity** – As service matures, additional Park & Ride capacity will likely need to be planned for and built, ideally in tandem with future development in the southeast quadrant of Spruce Grove.
- **Expanded Downtown Spruce Grove Terminal Capacity** – Depending on the short term and longer term strategy determined for a transit centre in the vicinity of downtown Spruce Grove, a second phase of expanded capacity may be required as the route structure and system frequency grows.

8.2 Technology Priorities

- **Integration with Existing ETS Real Time Information** – While the ETS Live To Go app is currently available and shows real time information for the Spruce Grove/Acheson routes within Edmonton, real time information is not available once vehicles cross outside of the City of Edmonton boundary. This priority would seek to address this situation for the current Spruce Grove/Acheson routes and create the structure and process to include further Tri-Municipal Region services as they grow. It would also determine the data and infrastructure requirements to feed future on-street customer information displays.
- **Consolidated Specialized Transit Scheduling and Dispatch** – Stony Plain HandiBus has acquired specialized transit dispatch and scheduling software, while the STS (and other specialized transit operators in the Edmonton Metropolitan Region) are also interested in acquiring similar software. At the very least, the STS and Handibus should look at sharing the same type of software between them to offer a cost-effective scheduling solution, enable dispatchers to be better able to coordinate regional trips, and potentially help facilitate further integration of the service and operations in future.
- **Customer Facing Applications** – Potentially in tandem with the previous two technology priorities, the system should continue to expand its real time information and ride booking technologies. This includes applications that better enable passengers to book on-demand services themselves, whether for specialized transit or the industrial connector services. Not only do these applications increase customer convenience for booking, but they also enable more efficient deployment of service since they can provide prior notification to passengers of expected bus arrival time. These systems can also provide valuable data for ridership and travel demand trends.

- **ETS Smart Fare / Smart Bus Project** – As described in **Section 3.5**, a regional electronic fare payment system (and supporting Smart Bus technology) is already in progress of implementation for Edmonton, St. Albert and Strathcona County transit systems. Tri-Municipal regional and local services should be included in this project as it expands to other transit services within the Edmonton Metropolitan Region and future vehicle purchases also need to take these requirements into account.
- **Security Systems** – Creating and maintaining a sense of security and safety for passengers and transit staff is integral to a successful system. At a minimum, security cameras on board vehicles and at Park & Rides and Terminals should be considered, along with the systems and process to monitor and maintain them.

8.3 Marketing and Customer Information Priorities

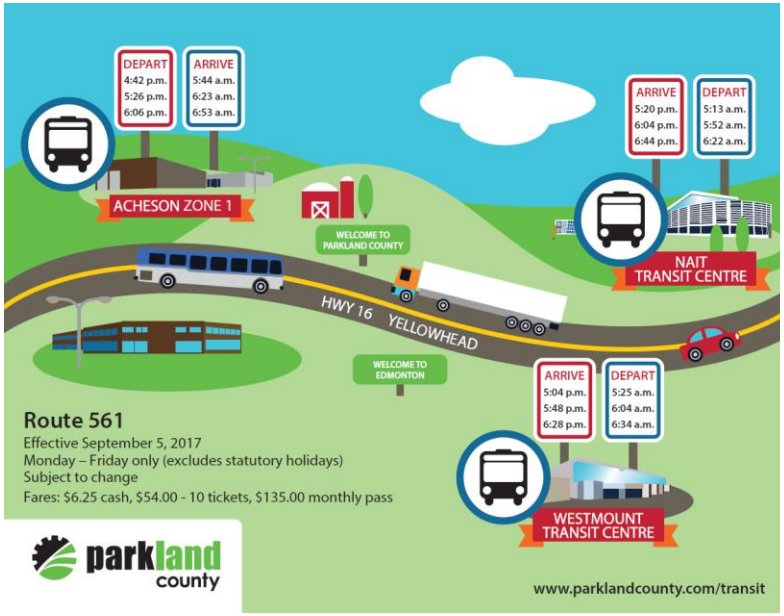
- **Consolidated and Branded Tri-Municipal Transit Information** – Existing transit information for the Tri-Municipal Region is currently provided primarily through the ETS, with Parkland County and the City of Spruce Grove providing a "window" into this information through their respective municipal websites. Parkland County has also been supporting this with separately designed and printed materials, as shown at right.

  While over the long term it is critical that the ETS continue to act as a source for transit information (so that fare and real time technologies and monitoring continue to work across the region), consolidating and branding Tri-Municipal Region Transit information into a single on-line portal and printed materials (ridebook, shelter maps/schedules) would be helpful. It would also be helpful to support general information with that consolidated and targeted for specific markets (Acheson commuters, post-secondary students, etc.). Information on specialized transit and on-demand services should also be included in any consolidated passenger information products.

- **Show the Acheson – Spruce Grove Connection on Route 561** – Currently, service between Spruce Grove, Acheson and Edmonton is integrated as part of Route 562 schedules operating via Hwy 16A but the Acheson service along Hwy 16 is shown separately from Route 560 as Route 561. Should the Acheson service be continued past its pilot period, it may be easier to include the Route 561 trips as part of Route 560 (so that there are two regional routes, not three).

  At the very least, it would be helpful to show the terminus point of Route 561 as Grove at Century rather than Acheson so that it would be clearer to passengers that they can also use Route 561 trips for service between Spruce Grove and Edmonton.

- **On Street Information** – Route and schedule information via apps and terminal displays should be a system goal. However, printed on-street information via shelter or stop posters and schedules should also still be considered for implementation. Not only do they ensure transit information is accessible to all potential customers (regardless of technology) but they also serve to promote the service to passersby and act to reassure new customers arriving at the stop.



Example of passenger information developed by Parkland County for Acheson Industrial Area employers providing a quick snack shop of available service on Route 561.

8.4 Fare Priorities

- **Consolidate Fares and Vendors Across the Region** – Preliminary analysis of fares from a regional perspective are provided in **Section 10.0**. As part of any implementation of further Tri-Municipal Regional Transit service, fares should be aligned between the existing transit services in each of the municipalities and also foreshadow further alignment with ETS fares and the planned undertaking of an Edmonton Metropolitan Region Fare Strategy. A fare vendor strategy consistent across the region—and potential impacts of changing technology to fare product purchase habits—should also be considered as part of this.
- **Pass Programs** – Consolidation of fare policy across the region should also consider provision for local implementation of pass programs and policies aligned with those in the ETS. In particular, the ETS@Work program which provides a discounted perpetual transit pass to employees via payroll deduction. For travel on the local Tri-Municipal routes, it may also be helpful to consider daypasses and a policy aligned with that of the ETS which enables adults using a monthly pass or daypass to bring up to four children age 12 and under onboard for free.
- **Youth Summer Pass Program** – A number of other smaller transit systems have also derived good benefit by offering a Summer Pass Program for youth, particularly in the case of newer services in the process of growing their ridership. Assuming the creation of a monthly pass for travel within the local Tri-Municipal area as part of the implementation of new local service, this program would offer youth and their parents the ability to purchase two monthly passes in the summer (i.e. July and August) for the price of one. This program helps promote ridership at a time when it may be slower and also acts to orient youth to the transit service in a cost-effective way.

8.5 Policy Priorities

Complementing the discussion on governance in **Section 10.0**, the following policy priorities are recommended:

- **Align Specialized Transit Policies and Procedures Between Operating Entities** – This project would align policies and procedures between Spruce Grove STS and Stony Plain HandiBus, in particular eligibility requirements that are based on cognitive or mobility disability not age, the creation of a similar application process, and aligned hours of operation and fares. This process of alignment should also consider how policies compare with those elsewhere in the Edmonton Metropolitan Region.
- **Consider Future Implementation of an In-Person Registration Process for Specialized Transit** – To help manage future demand and service effectiveness, coordinated improvements to specialized transit should also outline a future intake process that focusses on in-person assessment by a third party assessor (usually an occupational or physiotherapist) rather than paper-based forms. This revised process ensures that specialized transit is available and reserved for those who need it most. It can also include a travel training component for the accessible fixed-route system for those passengers who may be able to use it.
- **Formalize Special Events Service and Budget Provision Across the Region** – Currently both the STS and HandiBus offer service for special events and programs. The implementation of further programming at Heritage Park, as well as increased local transit service and regional connection to Edmonton on evening and weekends will only increase desire to align transit service with special events. Consolidating policy and defining annual budget for special events and programs across the Tri-Municipal Region should be considered.
- **Data Collection, Monitoring and Communications Processes** – Cost and ridership information for each of the existing transit services within the Tri-Municipal Region comes in different formats and captures different line items. This makes it very hard to compare and monitor the productivity of services across the region. The monitoring recommendations outlined in Section 9.3.2 should be considered for implementation.
- **Approval of Service Standards and Performance Guidelines** – As part of moving this plan to action, the Service Design Standards and Performance Guidelines developed and provided in **Section 9.0** should be formally approved at the local level.
- **Plan Endorsement, MDP Inclusions and Amendments** – Likewise, in addition to the recommendation to endorse the final version of the Regional Transit Plan document, it is recommended that local governments also approve the long term network strategy and request its inclusion as part of future Municipal Development Plan amendments. Those roadways designated as Regional, Local Connector and Local Core corridors in the Regional Transit Plan should also be earmarked for special consideration or review processes as part of future development and road network improvements.

9.0 SERVICE DESIGN STANDARDS AND PERFORMANCE GUIDELINES

Service design standards and performance guidelines facilitate planning and monitoring of transit services. In particular for a regional context, they ensure an overarching framework agreed to by all parties to consistently guide decision making on items such as making changes to existing service, implementing new service and responding to service requests by citizens and community leaders.

Service design standards and performance guidelines also serve as tools for monitoring service and tracking progress at the route and system level towards community objectives. The standards and guidelines build from the network strategy and service layers defined in **Section 6.0** and include:

- **9.1 Overarching System Design Principles** define high-level principles for system decision making, including items related to accessibility, land use and minimum conditions for introducing new service.
- **9.2 Design Standards by Service Type** describe the minimum service levels for each network service layer type and their attributes related to infrastructure, vehicles and transit priority measures.
- **9.3 Performance Guidelines** define the process for measuring system effectiveness, monitoring progress and determining when further action is required to correct lower performing services or provide further resources to those that are higher performing.

Collectively these three components should be referred to and formally approved as the system's Service Design Standards and Performance Guidelines. The service design standards and performance guidelines should also be reviewed and reaffirmed on a periodic basis (every 5-10 years depending on extent of community development and/or transit system change) to ensure that they continue to have relevance to the transit system and community.

9.1 Overarching System Design Principles

The long term effectiveness and efficiency of transit in the Tri-Municipal Region depends on an integrated approach that consistently makes service easy to understand, easy to use and aligns with good land use design. The following describes the overarching principles that will be used in the Tri-Municipal Region to guide the highest-level decisions around system design.

1. **Be Direct and Easy to Understand** - **Where feasible, routes are as direct as possible and offer two-way service since this design is usually easier to understand and attracts higher ridership.**

    - Transit services will be designed to connect residents to their closest town/city centre as well as to facilitate connection to regional transit serving the Acheson Industrial Area and the City of Edmonton.
        - Within the Tri-Municipal Region, service will aim to provide trips that require no more than one connection.
        - Within the City of Edmonton—as fare integration develops and where service is more frequent—and to other communities within the Edmonton Metropolitan Region, connecting trips may require further transfers.
    - Service design should be simple and service frequencies and schedules should be as consistent as possible for each service layer and during each time period.
        - Wherever possible, timed transfers should be provided for connections to regional transit and highest order local (core and connector) transit services.

2. **Align with Land Use** - **Rather than treating all areas equally, highest levels of transit service will focus on corridors that have higher density and which connect major destinations.**

    - Land use density within the Tri-Municipal Region is relative and determined within the region's own context. Service types and levels are designed based on a hierarchy that serves different land use patterns and passenger needs.
        - Conventional transit service will be operated on the arterial and collector road network and only on local roads as needed and on a limited basis.
        - Service may be less direct within lower density neighbourhoods and to serve particular passenger markets, including the use of demand-responsive services.
        - Service in more rural areas with very low density will focus on complementing transportation options (cycling, Park & Ride, ride share) that connect passengers to transit hubs.
    - For those areas of sufficient residential or employment density to warrant service, a walking distance to transit of approximately 400 metres will be defined as being within the service area of local services, and 800 metres for regional or express services.

3. **Ensure Accessibility** – **While different services may target different passenger markets, transit service design, infrastructure, vehicles and policies will be designed to serve all ages, abilities and economic backgrounds.**

   - People with mobility and cognitive impairments should be provided with a range of transit services best suited to meet their needs, including specialized transit and fully-accessible conventional transit vehicles and bus stop infrastructure.
   - Bus stop infrastructure design and installation should follow the guidelines detailed in **Section 9.2.3**.
   - Customer information should be designed to be straightforward, with simple route and schedule information conveyed through a suite of printed and electronic means. The system will focus on providing real time information and direct passenger access to trip booking as service and amenities evolve.
   - The other layers of the transit network should generally serve as a guide for the service area of specialized transit, with this area to be defined through the continued process of integrating specialized services. (A specialized transit service area within 2.5km of conventional services is typical). Specialized transit service span should seek to align as much as possible with that of other service types, while also reflecting that there may be differences due to the higher cost of this service per passenger and that it may also be delivered via alternate providers at certain times.

4. **Connect to the Larger Transportation Network** – **Transit services should connect to other layers within the transportation network—walking, cycling, private vehicles, other transportation providers—to enable residents to conveniently connect to other modes and to offer a suite of transportation options.**

   - Sidewalks and convenient pedestrian connections should be prioritized in areas served by the highest levels of the transit network.
   - Major transit infrastructure—particularly transit centres—should be designed to offer a range of connecting services, including bike racks, secure electric vehicle charging, and where feasible parking for car share or ride share vehicles.

All Photo source: Parkland County Municipal Development Plan – *One Parkland, Powerfully Connected*.

5. **Ensure Alignment with Long Term Strategy** - **Where possible, the system will seek to address issues with existing service before adding service to new areas and will ensure that any changes implemented align with longer term service and community direction.**

   - Additional investment and/or reallocation of service should be prioritized based on addressing the following issues (in priority order):
     - The safety of passengers, transit staff and system assets.
     - Universal accessibility.
     - On-time performance and connections.
     - Passenger over-crowding or service under-utilization.
     - Scheduling and routing changes required to ensure that existing passenger needs continue to be met.
   - Only when existing service is operating optimally and any of the above conditions have been confirmed and addressed should expansion to service span (hours and days of service) or service area be considered.
   - Transit service span and frequency/availability should evolve based on the guidelines outlined in **Section 9.2.1** for each service layer type.
   - **Service to new areas will be considered if the following guidelines are met:**
     - The area has a minimum density of at least 20 Dwelling Units per Hectare (DU per Ha) or a commercial site coverage of at least 20%, when measured over a minimum developed area of 10 hectares.
     - There is sufficient road and pedestrian infrastructure in place to enable safe, direct access and efficient operation of transit service.
   - In some cases, demand responsive services may be implemented to new areas that offer regionally significant services or employment that do not otherwise meet the above criteria.

In Focus: Examples of Transit-Supportive Density in the Tri-Municipal Region

The following shows examples of estimate land use in the City of Spruce Grove, Town of Stony Plain and Parkland County that meets the suggested 20 Dwelling Units per Hectare (20 DU/Ha) minimum to support viable new transit service. (Source: 2017 GIS from the respective municipalities).

Apartments: Spruce Grove (84 DU/Ha)

Single Family Homes: Stony Plain (21 DU/Ha)

Mobile Homes: Parkland Village (24 DU/Ha

9.2 Design Standards By Service Type

Design standards by service type define minimum levels and types of transit service, infrastructure and vehicles desired to meet Tri-Municipal Region community needs and continued development. The design standards build from the network strategy and service layers defined earlier in this plan and summarized below. They define service span (hours and days of service), frequency, vehicles, infrastructure and on time performance standards for the system.

PROPOSED LONG TERM TRI-MUNICIPAL REGION TRANSIT NETWORK SERVICE LAYERS

Service Layer	Definition	Service Types
Regional Connector	High quality* service between Tri-Municipal Region (Stony Plain, Spruce Grove and Acheson) and the Edmonton Metropolitan Region (EMR).	• Conventional Express
Local Connector	Higher frequency service (every 15 minutes or better) connecting key destinations and higher population corridors within the Tri-Region, particularly between Stony Plain and Spruce Grove.	• Fixed Route using smaller vehicles • Flex Route and Deviated Service are possible during non-commute times, especially to start
Local Core	Higher frequency service on key corridors within municipalities connecting to Regional and Local Connectors.	• Fixed Route • Primarily smaller vehicles; potentially Regional Connector vehicles
Neighbourhood	Service to lower density residential and industrial areas that connects to the higher order local and regional network at key points.	• Fixed Route using smaller vehicles • Demand Responsive (with or without trip windows)
Targeted Transit	Service targeted for specific users and markets, such as industrial area commuters or special events.	• Fixed Route • Flex Route

*"High quality" and "higher frequency" service thresholds and amenities are defined in Section 9.0 Service Design Standards and Performance Guidelines.

Where possible, the service standards defined here will align with those currently in place within the Edmonton Transit System, while also reflecting the unique nature and needs of the Tri-Municipal Region. As transit evolves in the Tri-Municipal Region and the larger Edmonton Metropolitan Region, these standards should continue to be reassessed to ensure they meet the values of the communities they serve as well as align with other transit services across the larger Edmonton region.

9.2.1 Service Span and Frequency Standards

The following table defines the proposed **target minimum** service span and frequency for each service layer. It should be noted that transit in the Tri-Municipal Region is evolving and therefore targets are shown for the medium term (4-10 year period), as well as longer term 25 year outlook.

TARGET MINIMUM SERVICE SPANS AND FREQUENCIES

Service Layer	Medium Term Target Minimums		Longer Term Target Minimums	
	Service Span	Service Frequency	Service Span	Service Frequency
Regional Connector	Wkd: 5:00 a.m. - 10:30 p.m. Sat: 7:00 a.m. - 10:30 p.m. Sun: 8:30 a.m. - 10:30 p.m.	Wkd Peak: 30 min Wkd Base: 90 min Sat: 120 min Sun: 120 min	Wkd: 5:00 a.m. - 12:00 a.m. Sat: 7:00 a.m. - 12:00 a.m. Sun: 8:30 a.m. - 10:30 p.m.	Wkd Peak: 15 min Wkd Base: 60 min Sat: 60 min Sun: 120 min
Local Connector	Wkd: 5:00 a.m. - 10:30 p.m. Sat: 7:00 a.m. - 10:30 p.m. Sun: 8:30 a.m. - 10:30 p.m.	Wkd Peak: 30 min Wkd Base: 30 min Sat: 30 min Sun: 60 min	Wkd: 5:00 a.m. - 12:00 a.m. Sat: 7:00 a.m. - 12:00 a.m. Sun: 8:30 a.m. - 10:30 p.m.	.Wkd Peak: 15 min Wkd Base: 15 min Sat: 15 min Sun: 30 min
Local Core	Wkd: 5:00 a.m. - 10:30 p.m. Sat: 7:00 a.m. - 10:30 p.m. Sun: 8:30 a.m. - 10:30 p.m.	Wkd Peak: 30 min Wkd Base: 30 min Sat: 30 min Sun: 60 min	Wkd: 5:00 a.m. - 12:00 a.m. Sat: 7:00 a.m. - 12:00 a.m. Sun: 8:30 a.m. - 10:30 p.m.	Wkd Peak: 15 min Wkd Base: 30 min Sat: 30 min Sun: 30 min
Neigh-bourhood	Wkd: 5:00 a.m.- 8:30 p.m. Sat: 8:00 a.m. - 8:30 p.m. Sun: 9:00 a.m. - 6:00 p.m.	Wkd Peak: 60 min Wkd Base: 120 min Sat: 120 min Sun: 120 min	Wkd: 5:00 a.m. - 10:00 p.m. Sat: 8:00 a.m. - 10:00 p.m. Sun: 9:00 a.m. - 8:00 p.m.	Wkd Peak: 30 min Wkd Base: 60 min Sat: 60 min Sun: 60 min
Targeted Transit	Varies: • Commuter: Wkd Peak only • Special Events: As needed	Varies as required	Varies: • Commuter: Wkd Peak only • Special Events: As needed	Varies as required
Specialized Transit	Wkd: 7:00 a.m.- 6:00 p.m. Sat: 9:00 a.m. - 4:00 p.m. Sun: 9:00 a.m. - 4:00 p.m.	• Local: As required • Regional Wkd: 2 trips/day • Regional Sat: 2 trips/day	Wkd: 7:00 a.m. - 10:00 p.m. Sat: 8:00 a.m. - 10:00 p.m. Sun: 9:00 a.m. - 9:00 p.m.	• Local: As required • Regional Wkd: 3 trips/day • Regional Sat and Sun: 3 trips/day

Abbreviations

- **Wkd** – Weekday
- **Sat** – Saturday
- **Sun** – Sunday, and eventually also Statutory Holidays as service matures)
- **Peak** – Weekday peak commuting times for people travelling primarily for work and school purposes. To facilitate connections to/from Edmonton, in the Tri-Municipal Region the peak period may encompass 5:00 a.m. to 9:00 a.m. and 3:00 p.m. to 7:00 p.m.
- **Base** – Weekday travel at non-commuting times, primarily during middays (9:00 a.m. to 3:00 p.m.) and evenings (after 7:00 p.m.)

9.2.2 Vehicle Type and Capacity Standards

Vehicle type is related to passenger loads during the peak service periods, as well as requirements of the specific service type (for instance, smaller, more maneuverable vehicles are required for on-demand service).

- On services where bus capacity is exceeded, consideration should be given to operating vehicles with additional capacity or service with increased frequency.
- On routes where a smaller bus would accommodate passenger loads at peak times, consideration should be given to operating a smaller vehicle and maintaining existing service frequency.
- Standing passengers on local service during peak periods is acceptable as long as the number of passengers on board meets the safe operating standards for that vehicle and does not consistently exceed more than 80% of the maximum vehicle ridership load over the peak ridership hour. (Approximately 15+ standees on a 35-40 ft bus or 8+ standees on a smaller vehicle).
    - The capacity thresholds for regional service and non-peak local service should be lower. Trips that consistently have more than 5-10 standees should be investigated for further frequency or a larger vehicle.

The table on the following page describes the vehicle definitions, uses and attributes for the Tri-Municipal Region.

Example vehicles from the region: Spruce Grove STS vehicles (above) and Edmonton Transit System articulated bus (below). STS Photo: Arlene Berry.

VEHICLE TYPES, ATTRIBUTES AND APPLICABLE SERVICE TYPES, WITH EXAMPLE VEHICLES FROM THE EDMONTON REGION

	High Capacity Bus	Standard Bus	Shuttle Bus	Van
Example Vehicle[5]	 Strathcona County Double Decker	 Spruce Grove Conventional Bus	 Stony Plain HandiBus Shuttle	 Spruce Grove Specialized Transit Van
Attributes	• Double deck or articulated • Low floor • Minimum of two wheelchair positions • 40-60 ft or greater in length • 60+ passenger seats	• Low floor • Minimum of two wheelchair positions • 35 ft or greater in length • 30+ passenger seats	• Ideally low floor or otherwise accessible with wheelchair lift • Minimum of two wheelchair positions • 22 to 34 ft in length • 20-29 passenger seats	• Accessible with wheelchair lift (non-accessible vehicles may be used at times from third-party service providers) • Minimum of one wheelchair position • <22 ft in length • Minimum 3 passenger seats
Service Types	**Used for These Service Types:** • Regional Connector	• Regional Connector • Local Connector • Local Core	• Local Connector • Local Core • Neighbourhood • Targeted Transit • Specialized Transit	• Neighbourhood • Targeted Transit • Specialized Transit

[5] Photo Sources: High capacity vehicle - https://farm5.staticflickr.com/4201/34888558165_fe5d6fdcdc.jpg; Standard Vehicle - Martin Parsons, 2016;

9.2.3 Transit Infrastructure Guidelines and Amenity Standards

Transit infrastructure—primarily transit centres, bus stops and Park & Rides—are critical aspects of a convenient, comfortable, easy to use transit system. The following defines the overall best-practice transit infrastructure guidelines for the Tri-Municipal Region.

- **Design:** Transit infrastructure should be planned, designed and constructed following Crime Prevention Through Environmental Design (CPTED) guidelines, as well as any local, regional, provincial, national and industry standards.[6]

Transit Centres:

- Should provide weather protection (ideally heated indoor space or at least shelters), seating, lighting, quality passenger information (ideally real-time schedule display and local wayfinding information but at a minimum transit schedule and map information), off-board payment kiosks (where applicable) and should be universally accessible.
- Should be located within or adjacent to community activity centres (downtowns, mixed use developments, etc.) to improve the convenience of transit to access good and services, foster a perception of safety for waiting passengers and underscore the connection between transit and land use.
- Should provide washroom facilities for transit staff, and consider washroom facilities for passengers depending on area context and other nearby amenities.
- Should connect to other forms of transportation as described in **Section 6.4.2**.

[6] Alberta Design Guidelines for Pedestrian Accessibility (including transit stops and transfer points): http://www.transportation.alberta.ca/Content/docType369/Production/pedaccdesignng.pdf; City of Edmonton Complete Streets Guidelines: https://www.edmonton.ca/city_government/documents/Edmonton-Complete-Streets-

- **Bus Stops:**
  - Should be clearly designated with the appropriate signage.
  - Should be located in areas where it is safe for passengers to board and alight buses, ideally near intersections to minimize walking distance to transit.
    - Where possible, pedestrian and cycling connections should be provided to bus stops via sidewalks, pathways and crosswalks with curb ramps and barrier-free access.
    - Bus stops should be located on the far side of crosswalks, or at least 20 metres in advance of a crosswalk.
    - Typically, buses may stop in the traffic lane if the posted speed limit is 50 km/hr or less. If above 50 km/hr, a dedicated bus pullout would usually be provided.[7]
    - Adequate sight distances should be achieved for motorists approaching the bus stop as well as transit passengers crossing the road from the bus.
  - Should be provided at major activity points and scheduled timing points.
    - In roadways with only one travel lane in that direction, bus stops associated with timing points should have a bus pull out.
  - Should include a hard-surfaced landing/waiting area and be universally accessible in more urban and established areas. In areas that are more rural or are in the process of development, accessible features should be installed based on request.
  - Should be spaced at about 400 metres in more urban areas and further apart in more rural areas.
    - Regional services may adopt a more limited stop spacing (800 m to 2 km) in urban settings, with intervening stops between communities only on an as needed basis.
    - On-Demand services do not typically require designated bus stops or signage, except potentially at connection points to other services. However, it can be advantageous to install poles and signage at strategic locations within on-demand zones to promote the service.
  - Should include a shelter, bench, adequate lighting, schedule information and garbage receptacle for highest-profile stops that meet the following criteria (in order of priority):
    - Connection point between transit services or to other modes of transportation.
    - Experiences a higher volume of boardings.
    - Adjacent to a major activity centre.
    - Bus shelter installation would likely encourage increased ridership from key identified markets in the neighbourhood

[7] A search of Alberta Transportation guidelines did not find specific direction on this. The standard described here is typical practice.

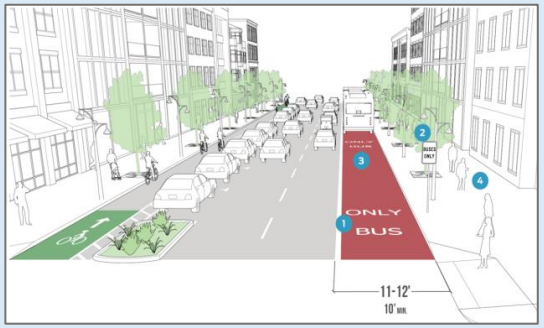
- **Park & Rides:**
  - Should be aligned with Transit Centres and/or major activity centres where possible.
  - Should follow the same amenity guidelines and standards as that described for Transit Centres, above.
  - Should provide priority space for shared use vehicles and charging stations for electric vehicles, if possible.
  - Should be physically designed in such a way (with curbs and provisional conduit placement) that it is possible to consider future conversion to a parking payment or capacity monitoring system.
  - Any new Park & Ride locations should include:
    - High quality passenger waiting facilities, including ideally heated indoor waiting area and services, or at least shelters.
    - Proximity to other destinations and services where possible to make it a safe, “people” place and reduce the need for passengers to further travel in their cars to access beverages, groceries, etc.
    - Bike lock up facilities.
    - Priority parking spaces for carpoolers.
    - Clear, safe and well-lit pedestrian connection to the surrounding area.
    - Passenger pick up and drop off zone and short-term parking that may be used by private vehicles, taxis, ride hailing services or point to point car share.
    - Consideration for charging stations for electric vehicles and e-bikes as well as typical vehicle plug ins.
    - Site design and consideration for integration of technology that assists with passenger ease of use, as well as future potential payment and enforcement. For instance, if the Park & Ride area is designed to minimize access points from the rest of the lot, it can be easier to install cameras with vehicle license plate recognition technology that can let drivers know ahead of time know which lots are full.

The Edmonton Transit System Lewis Farms Transit Centre and Park & Ride provides an example of many of the attributes described in this section.

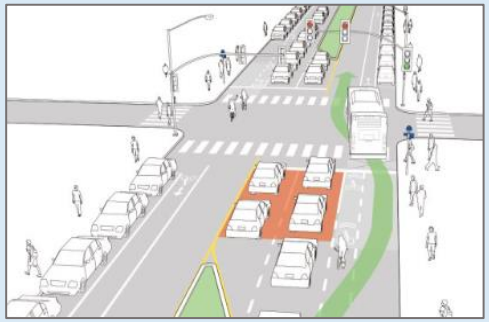
- **Transit Priority Measures:**
  - These are measures to ensure the timely and efficient use of transit resources. In cases where increased ridership and congestion are causing delays or inconsistent schedule adherence, these measures can have a sizable impact on transit system operating costs and customer experience.
  - In the near term, transit priority measures for the Tri-Municipal Region should focus on supporting measures within the City of Edmonton where congestion is significant and the number of transit vehicles in a corridor is greater than 25 buses per hour.
  - As transit evolves within the Tri-Municipal Region, transit priority measures should be considered, particularly if emergency vehicle signal pre-emption projects are pursued. They should also be considered in relation to the implementation of new transit centres/Park & Rides and adjacent intersection signals, and over the longer term in conjunction with improvement projects on Hwy 16A.

In Focus: Typical Transit Priority Measures

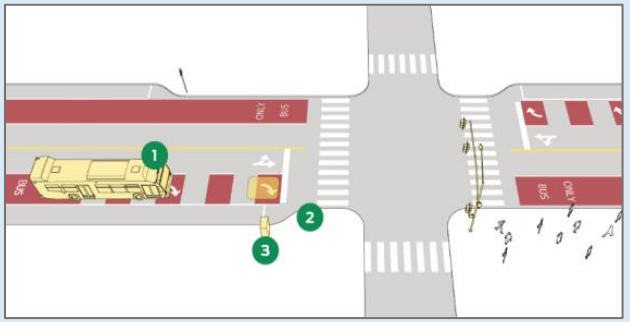
A starting point for transit priority measures is traffic signal coordination, which coordinates intersection signals along a corridor to optimize transit vehicle travel. In tandem with this, these other transit priority measures are common. (Example illustrations are from the NACTO *Transit Street Design Guide*, 2015)



Bus Lanes – Separate transit vehicle right-of-way that may also be time-based or shared with High Occupancy Vehicle (HOV) lanes.



Queue Jump Lanes – Short lanes leading up to intersections and complementing transit-signals which enable transit vehicles to by-pass areas of congestion leading up to intersections.



Traffic Signal Priority – On board bus transmitters and traffic signal equipment that provides the ability for transit vehicles approaching intersections to lengthen green lights or shorten red lights to enable them to pass through intersections in a more-timely way. In smaller communities, this measure is sometimes employed at a specific intersection—for instance at a left-turn signal—rather than along a corridor.

9.3 On Time Performance Standards

On time performance standards typically apply to both conventional transit and specialized transit systems.

- **Conventional Transit On-Time Performance** may look at service reliability (vehicles pulling out from the transit garage on time) and schedule adherence (actual leave times from timing points that is within an acceptable threshold for being “on time,” such as no more than one minute early and two minutes late).
- **Specialized Transit On-Time Performance** typically tracks trips that exceed a stated window (such as 15 minutes before or after the stated pick up or drop off time) and may also set a guideline for maximum time any one passenger should be on the bus (such as one hour).

No transit on-time performance standards are provided for the Tri-Municipal Region at this time other than that **transit passenger and staff reports of schedule issues will be investigated and addressed as they arise**.

As service and supporting monitoring processes further develop, it is recommended that a process be implemented with conventional services and the Acheson Shuttle to include schedule adherence information as part of reports. Similarly, on-time performance reporting should become a part of specialized transit reports as Spruce Grove STS and Stony Plain HandiBus acquire improved technology. At that time, more fulsome schedule adherence standards should be considered for implementation in the system.

9.4 Performance Guidelines

Performance guidelines are tools that can be used to help plan new transit services, make adjustments to existing service and measure how well the transit system is progressing towards achieving its goals. They define the thresholds and targets for a system and its services.

9.4.1 Performance Guideline Purpose and Use

Different layers of service within the Tri-Municipal Region will be tasked with serving different passenger needs and land use patterns, and therefore the performance targets for the respective service layers will be different.

Likewise, performance of service against targets also depends on the maturity of the route and the neighbourhood it serves: it typically takes three years for a new route to reach its full ridership potential and its performance will also be impacted by the pace of its surrounding land use development.

Generally for the overall system and its routes, the objectives for performance guidelines are to help the system achieve a balance between the resources (vehicles, trips and their associated service hours) allocated to service and the corresponding ridership and demand.

Ideally, a performance guideline assessment process takes place on at least an annual basis to review system and route performance against targets and identify issues requiring further investigation. In some cases, performance above or below the targets will be deemed acceptable for a variety of reasons. For instance, lower ridership on a neighbourhood conventional route that might deviate to a senior's care facility might be acceptable if it means that the specialized transit service—which costs considerably more to operate—doesn't need to go to that destination as often to serve resident needs. In other cases, corrective action will be taken drawing from a number of the measures outlined below in "Actions to Achieve Optimal Performance."

In Focus: Actions to Achieve Optimal Performance

When transit supply and demand become out of balance (either because transit services are underutilized or too crowded), a number of measures can be considered to address this:

- Altering service frequency or (in the case of specialized transit) the number of transit vehicles on the road at a particular time.
- Changing hours and days of operation (service span).
- Changing routing to make service more direct or to serve new markets.
- Changing bus stop spacing or size of area served.
- Changing vehicle type and allocation.
- Changing service type (i.e. from conventional to demand responsive, or vice versa).
- Further marketing and promoting service or re-examining fare policy.

9.4.2 Establishiing a Comprehensive Performance Framework

Performance Monitoring Current Status

Currently there is no comprehensive and consistent approach to collecting and monitoring performance information across the Tri-Municipal Region's existing services. Each service reports metrics but there is no consistency between what is being tracked and how it is being reported.

Likewise, Spruce Grove reports conventional transit statistical information to the Canadian Urban Transit Association's (CUTA) transit data collection process but this does not reflect all service in the region. Monitoring inconsistencies also exist at the larger Edmonton Metropolitan Region level, particularly with respect to the financial information captured. For instance, costs for municipal staff associated with the transit function (administration, planning, vehicle maintenance, etc.) are sometimes part of system cost metrics and sometimes not.

The lack of consistency and process to collect and monitor transit performance across the Tri-Municipal Region and the larger Edmonton Metropolitan Region is the key barrier to developing and implementing performance guidelines by service layer and refining them based on peer comparison.

Performance Monitoring Recommended Priority Actions

Performance measures can be a tremendous tool to monitor and refine service holistically within the Tri-Municipal Region. It is recommended that in concert with other activities to pursue a more collaborative approach to transit, the Tri-Municipal Region partners work towards implementing a Service Performance Framework by undertaking the following:

- Review and discuss the proposed suite of system- and service-level performance measures presented in **Section 9.3.3**.
- Designate a specific partner/staff person who will serve the function as acting as the point person for collecting, summarizing and reporting on system statistics.
- Consider consolidating the existing CUTA memberships into a single membership for a consolidated Tri-Municipal Regional Transit System that would include reporting for both the conventional and specialized transit services.
- Implement a standardized Excel spreadsheet—that includes fulsome description of what each statistic includes—and provide it to each existing operating partner (ETS, Acheson Shuttle, Spruce Grove STS, and Stony Plain HandiBus) for submission of operating cost, vehicle, service hour and ridership summary statistics on a monthly basis.
- Use this spreadsheet—or a slightly different version—to collect relevant municipal salary actuals on an annual basis for positions related to the transit system.
- A typical list of transit system cost and performance metric accounts is provided in **Appendix B** as a starting point for discussion.
- Summarize and report on transit operational metrics quarterly and overall system performance annually, potentially in conjunction with CUTA annual statistical submission guidelines.
- At the Edmonton Metropolitan Regional level, consider seeking agreement between area transit systems on how CUTA statistics are measured and reported.

9.4.3 Proposed Performance Measures

Performance measures evaluate the effectiveness of service planning investments on a system- and route-level basis. It is proposed that the following metrics (and their supporting information) form the basis for a performance guideline framework. The source for metric definitions is the Canadian Urban Transit Association (CUTA).

Typical System-Level Measures

The measures typically used for system-level guidelines are:

- **Operating cost per revenue hour (efficiency indicator**): measures total operating cost of operating service per revenue hour provided.
- **Passenger trips per revenue hour (effectiveness indicator):** measures the total volume of ridership as compared to the supply of transit service.
- **Operating cost per passenger trip (efficiency indicator):** measures the average cost to provide service per passenger trips generated.
- **Operating cost recovery (efficiency indicator):** measure the financial performance of the transit system, usually expressed in terms of total operating revenue/total operating expense.
- **Passenger trips per capita (effectiveness indicator):** measures the ratio between transit trips and the population of the service area to provide a sense of the level of resident use of transit.

Typical Route/Service Layer Measures

The typical measures used to measure performance at the route or service layer level are:

- **Average boardings per revenue hour** – measures the total volume of ridership as compared to the supply of transit service.
- **Average boardings per trip** – measures the total volume of ridership compared to each trip. In the case where services may be delivered by alternate service providers (such as the Acheson Shuttle where revenue hours may not be applicable) or where service operates a mix of long, regional trips and short local trips, this metric can provide a useful counterpoint to average boardings per revenue hour.
- **Unmet trips** – specifically for specialized transit and other demand-responsive services, measures each case where a client calls to book a trip and their request cannot be met. This measure is important for measuring demand against available supply in those types of services.

In Focus: What is a "Revenue Hour" of Service?

A revenue hour is the unit by which the supply of transit service is measured. One revenue hour is equal to one vehicle on the road for one hour of service, excluding deadhead time travelling to/from garage, maintenance and training. (CUTA definition).

10.0 GOVERNANCE AND SERVICE DELIVERY

As discussed in **Section 4.0**, to be most efficient and effective it is crucial that regional transit in the Tri-Municipal Region be supported by a sustainable governance structure and operating strategy that integrates as much as possible and at the very least presents a coordinated approach to communications, service delivery and monitoring.

Led through the Intermunicipal Collaboration Committee (ICC) and its Transit subcommittee and supported by reports developed by Parkland County staff in coordination with this plan process, work has been underway to evaluate and confirm a future approach to governance and transit service delivery within the Tri-Municipal Region. Separate reports have been prepared that explored these subjects in detail and are included as appendices to this plan. The following summarizes key findings.

10.1 Governance Structures

Background – Decisions on governance define the highest-level decision-making and coordination for the system including setting direction, creating high-level goals, and providing oversight.

The governance levels primarily address **public policy functions** typically led by elected officials, and these include strategic planning (including the allocation of resources), securing funding, setting policy (including fare policy and social equity objectives), approving service plans and regional capital programs, and establishing the desired integration with other regional policies including land use and broader transportation policy.

Options Explored – The governance structures explored included:

- **Incorporated Separate Entity** - A separate legal entity is established with accountability to provide regional transit. Although there are various specific legal structures possible, there are common elements in all that can be used to assess the model.
- **Formed by Agreement -** In this model the municipalities form an agreement to collaborate to provide regional transit. While the specific elements of the agreement are subject to negotiation it is likely that the staff would be employees of one or more municipalities, seconded or have allocated time commitments.

Recommendation – The ICC Transit subcommittee reviewed the options for transit governance in the Tri-municipal region, compared them using evaluation criteria weighted to align with the perceived values of the member municipalities, and concluded that a Regional Services Commission is the best long term option. The Commission option will require a greater amount of work and will take longer to implement, but is the recommended choice.

In order to pursue the implementation of a regional governance model, the subcommittee requested that the ICC confirm that the Regional Services Commission is the option to pursue and that it define allocation of dedicated staff time and expectations for deliverables.

10.2 Service Delivery Models

Background – Service delivery refers to the execution of service according to the goals, objectives, standards and guidelines approved by the governance authority. The exact scope of service delivery may vary depending on the local governance structure chosen and may include some combination of system management functions and operational functions.

Success factors for service delivery models are primarily measures of how efficiently the service (as defined by the authority) is delivered and include:

- **System management functions** such as operational service planning (implementing and fine-tuning services to maintain the desired service plan), vehicle scheduling and crew scheduling, managing finances, revenue collection, human resources, labour relations, procurement, capital projects, marketing and communications.
- **Operational functions** such as maintenance, dispatch, road supervision and security. In some systems these functions are provided by a contractor, while in others these are delivered by public employees.

At one end of the spectrum, some systems choose to have all these functions delivered by public employees. Others choose to have all the functions delivered by a private contractor or concessionaire. Between these, though there are examples where systems choose to contract portions of the delivery.

Options Explored – Four different types of service delivery models were explored, each of which is currently operating within the Tri-Municipal Region:

- **Public sector operation**, whereby a municipality operates service (Stony Plain Handi-Bus).
- **Public sector contract**, whereby a municipality is contracted by another to operate service (Spruce Grove and Acheson conventional commuter services operated by the ETS).
- **Private contract**, whereby a non-profit organization operates service on behalf of a municipality, in this case a non-profit example (Spruce Grove STS).
- **Public/Private operate and maintain contract**, whereby a private transit management company operates service and also provides vehicles (Acheson Shuttle, operated by Southland Transportation Ltd., a division of Pacific Western Transportation Ltd.

Recommendation – The ICC process concluded that a committee should be formed to establish the steps required to form a partnership that is able to deliver the service as desired by the Tri-Municipal Region. This committee would prepare a business case to confirm the most cost-effective method of service delivery, accepting that conditions may change in the near future.

The desired service delivery model is a public sector operation. This needs to be confirmed by the committee and the ouncils of the Tri-Municipal Region.

11.0 CONCLUSION AND NEXT STEPS

11.1 Ready for Further Transit Investment

Beyond outlining how transit service might evolve in an integrated manner in the Tri-Municipal Region, a key defining question for this project was “Are the communities ready for expanded transit service?”

The response to this question is a resounding “Yes!”, particularly since local and regional transit service is already happening in one form or another in each of the partner communities. Rather than starting from nothing, there is already a base of passengers and resources that can act as the foundation for further local and regional connection.

Beyond the existing presence of initial transit, there are several other factors that support increased local and regional transportation investment in the Tri-Municipal Region:

- **There is demand for further transit to meet the transportation needs of many residents that are not being met by current services**, in particular youth, lower income families, and many seniors who may not feel like they qualify for “specialized transit.” Not only does increased investment in transit align with community plans and support citizen equity and participation, the passenger markets noted here can also be some of the strongest riders of further transit.
- **There is recognition on the part of all three partner municipalities that their individual prosperity can be most effectively realized through collaboration**. Not only is this principle enshrined in the strategic documents of the City of Spruce Grove, Town of Stony Plain and Parkland County, but the municipalities have been actively putting this concept into action through past initiatives and the collaborative committees and partnerships that occurred in tandem with this plan’s development.
- **There is already an established openness to try new approaches, explore further integration and make use of innovative partnerships**. Services in the area already make use of many different operating models and partnerships spanning the Tri-Municipal and Edmonton Metropolitan regions. Participants in this project have shown an openness to explore further local and regional coordination and this Regional Transit Plan shows a demonstrated opportunity for the municipalities to achieve far more value for their citizens through an integrated and layered approach to transit than is possible separately.
- **The level of projected investment aligns with that of peer communities.** As shown in **Section 7.5**, the level of service increase proposed for the Tri-Municipal Region is in line with that of communities of comparable populations. Not only is increased transit in the Tri-Municipal Region needed to serve its growing population, it is also key in continuing to attract residents and economic development to the area.

11.2 Recommended Next Steps

The Tri-Municipal Regional Transit Plan outlines a path for the municipalities to provide even more viable transportation options and to grow transit service in a coordinated and integrated way.

Now is the time to move from plan to action.

The Plan will be presented to the individual municipal Councils with the recommendations to:

- Receive the Tri-Municipal Regional Transit Plan for information.
- Allocate resources and direct staff to form an Implementation Committee to undertake roll out of further transit improvements and steps toward integration.
- Request that staff report back on budget implications for near-term implementation options, service integration opportunities, and progress by Q2/Q3 2018.

The suite of integration activities to be considered by the Implementation Committee may encompass a full range of transit system aspects, including service, marketing, passenger information, monitoring, system support, policies, operations and governance.

As requested by the project partners, this Plan has focussed on aggregating the many existing individual area transit plans, supplemented by analysis, field work and targeted outreach to key stakeholders. As the Plan's recommendations move forward to implementation, the success of resulting initiatives will depend on involving a larger cross-section of the community. This involvement should encompass not only the inclusion of front-line transit staff in further developing the detailed implementation plans for new service, but also the larger community, particularly existing transit passengers, youth, seniors, people with a disability, family support organizations and neighbourhood groups.

Whether transit or other initiative, there is much that can be accomplished in the Tri-Municipal Region by working together.

APPENDICES

Appendix A: Tri-Municipal Regional Transit Plan Service Provider and Key Stakeholder Workshops Outcomes Summary

Methodology

The Tri-Municipal Regional Transit Plan has been examining public transportation opportunities over the short and long term within the City of Spruce Grove, the Town of Stony Plain and Parkland County, including connection to Edmonton. In support of the plan, two workshops were conducted to discuss and refine the draft plan's recommendations.

The first "Service Provider" workshop on October 17, 2017 (10:00 a.m. - 2:00 p.m., 10 participants) brought together representatives from the existing transit service providers:

- Stony Plain HandiBus.
- Spruce Grove Specialized Transit Services Society.
- Edmonton Transit System (ETS).

The second "Key Stakeholder" workshop on October 18, 2017 (10:00 a.m. - 12:00 p.m., 14 participants) brought together:

- Staff from various roles within the partner municipalities of the City of Spruce Grove, the Town of Stony Plain and Parkland County, including representatives from planning, engineering/public works, economic development and recreation.
- Enoch Cree Nation.
- Acheson Business Association.
- Stony Plain Family and Community Support Services.

The project Steering Committee made up of staff representatives from the three partner municipalities also participated in and assisted both workshops. This Committee has been guiding the plan and its recommendations to date and includes Pat Inglis (City of Spruce Grove), Miles Dibble (Town of Stony Plain) and Erin Felker (Parkland County). The sessions were led by Watt Consulting Group staff with space provided by the City of Spruce Grove.

All workshop input was noted and then discussed by the project team in a subsequent meeting to determine how the feedback should shape the final plan. This summary captures the key feedback received and the resulting recommended course of action.

Workshop with municipal staff and representatives from area stakeholders to provide feedback on draft Tri-Municipal Regional Transit Plan key findings, service options and recommendations.

Workshop Objectives

Workshop objectives were:

- Provide information to key community stakeholders on Tri-Municipal Regional Transit Plan and process to date.
- Provide an overview of how this plan fits in with other transit initiatives in the larger Edmonton Metropolitan Region.
- Describe and check in on the key transportation issues and opportunities already heard from stakeholders through the first phase of the plan process.
- Gather feedback from participants on the proposed Tri-Municipal Regional Transit Plan elements, including:
  - Proposed transit service types, including specialized transit and industrial area services.
  - Proposed short and long-term routes and service levels.
  - Proposed priority order for improvements.
  - Proposed thresholds and measures for new service.
- Describe the next steps in the plan process.

Key Areas of Feedback and Resulting Recommendations

- The tables on the following pages list key feedback received and subsequent recommendations from the project team after each item had been discussed further at the follow up meeting.
- Generally, participants were positive about the proposed plan's overall direction with feedback received on specific elements, particularly existing ridership patterns and customer needs in the Service Provider workshop and routing trade-offs within Stony Plain in the Key Stakeholder workshop.
- There was also general agreement in both workshops regarding the opportunities and desire to increase integration between the existing area transit services.

Workshop discussion at the Service Providers Workshop.

Service Provider Workshop Outcomes (October 17, 2017)	
Participant Feedback Received	**Result of Subsequent Discussion by Project Team**
Need to emphasize the diverse spectrum of needs currently served by area specialized transit: not just medical appointments but also social connection and basics of life, as well as need for work commuter travel and weekend/evening travel for people with a disability.	• Report will be reviewed to ensure these themes are included. (Participants were happy that evening and weekend specialized transit were included in options).
Information clarified on current specialized transit mandates, policies and the age-based eligibility requirements of both specialized transit providers, as well as the existing scheduling software ("Ride Scheduler" which is being used by Stony Plain HandiBus (as well as Drive Happiness out of Edmonton).	• Adjustments/additions to report information will be made as needed. • There seemed to be general agreement to a revised and aligned eligibility approach focused on ability not age. However, this should also clearly state approach to grandfathering in existing customers. • There is general openness to discussions about potentially sharing or aligning the scheduling software between the two specialized transit organizations to improve coordination and monitoring. • A discussion on trip prioritization should be included in the report; many specialized transit organizations are moving away from formally declaring a trip purpose hierarchy (medical, work, recreation, social, shopping) for human rights reasons.
The timeline information should be updated to include: 1. Clarify the wording around presentations to councils 2. Include the Edmonton Region Route Network Strategy 3. Opening of Valley Line - Southeast LRT Line 4. Mitchell Facility capacity constraints 5. Arrival of electric buses in the ETS fleet.	• Points 1, 2 and 3 will be added/adjusted to the timeline and the report. Points 4 and 5 will be added to the report's background section but not the timeline as Point 4 would be an outcome of an Edmonton Regional Route Strategy and Point 5 is less relevant to the timeline information.
The role of Alberta Health Services and its health policies and location of services impact on local and regional travel demand was discussed, in particular dialysis and cancer treatment.	• These themes will be captured in the report. • The report's recommendation of forming a Technical Team to lead the process of further integrating area specialized transit services to also include representation from Alberta Health Services.
Should the two long term Regional routes shown in the Long Term Network Strategy Map (on both Hwy 16 and Hwy 16A) actually just be one? And/or should the one on Hwy 16A be shown as a priority?	• Decision from the Steering Committee was that for now both should be shown as they will continue to function that way over the medium term, particularly until the Valley Line West LRT is built. However, a note will be added to the map that matches the language in the plan that the Hwy 16A corridor would likely have precedence and increased resources over time.

Key Stakeholder Workshop Outcomes (October 18, 2017)	
Participant Feedback Received	**Result of Subsequent Discussion by Project Team**
The plan should include Duffield in the consideration of transit to rural places within Parkland County.	• Maps will be amended to include Duffield as one of the hamlets where on-demand service may be provided. (The map will not show a connecting line but this service is described in the report).
The proposed Park & Ride location at Veterans Boulevard at Hwy 16A and future terminus point for the regional connector should be moved to either downtown Stony Plain or Heritage Park instead.	• Park & Rides and Regional Connection points for communities are typically placed on the edge closest to the regional destination point. This removes the requirement for residents to "backtrack" when moving from local service to regional service. • In Stony Plain's case, a downtown connection point for the regional service is also not advisable since it would mean crossing the rail line, which may impact on-time performance and connections throughout the system and is not likely the land use desired by the Town for a vibrant downtown. • Tri-Municipal Connector route offers direct connection from most Stony Plain areas and downtown to the regional service. • In the case of Heritage Park, the site is too busy during events to offer a Park & Ride function, and the parking lot is bookable (and chargable), so Park & Ride use would decrease potential revenue. • Rather than extend the Regional Transit route to downtown Stony Plain or Heritage Park, a targeted transit route will be shown for these destinations.
Adjust the future on-demand area for Enoch Cree Nation to include proposed industrial development, as well as show full extent of Enoch Cree Nation to 215 Street. Direct connection from the Millenium Development/River Cree Casino Resort to Edmonton is also seen as a critical community priority, particularly given projected population growth.	• The on-demand service area will be adjusted as requested. The frame used for detailed maps will also be adjusted to include 215 Street. • A conceptual arrow on the Regional Overview map will show that a potential connection between ETS services and River Cree Resort is also possible, noting that further discussion is required with the ETS and is beyond the scope of this project.
Service to Acheson should have good frequency in both directions, enabling connection from both Edmonton and Spruce Grove/Stony Plain.	• This was clarified that this is the case in the plan, with the connecting regional services proposed to operate at 15 minute frequencies in the longer term.
Is there a reason why the transit route does not extend to Memorial Composite High School?	• During fieldwork, many students were observed to be walking to the school from 79 Avenue, an 800 m distance. While a longer walk is less than ideal, keeping transit on 79 Avenue means that the bus does not have to veer off a more direct route to do a "lollipop" to serve the school (covering the same path twice) and also keeps transit vehicles out of the congested zone in front of the school.

Key Stakeholder Workshop Outcomes (October 18, 2017), Continued	
Participant Feedback Received	**Result of Subsequent Discussion by Project Team**
Why does the initial Stony Plain route (1 Tri-Municipal Connector) not also serve Fairways Drive/Veterans Boulevard area?	• Transit is always a balance of trying to be as effective as possible within resources, while not trying to do so much that service quality is compromised. • The existing proposed Stony Plain loop is based on the principle that people should have two-way access to their nearest service centres, in this case Downtown Stony Plain and then destinations along the 48 Street and 44 Avenue corridors. Extending the loop to Fairways Drive at this point would reduce that directness to key destinations and make the service more circuitous. • A second route is introduced in the medium term to serve this area, as shown in the existing Long Term Map. A conceptual map will be developed for the plan to show priority areas for the second route.
General discussion about circuitous routing and wait times for present system and benefits of revised plan, as well as need to ensure that any transfers are as pleasant as possible.	• The need for a positive transfer point experience—where it occurs—will be highlighted in plan. • Preliminary route planning has taken transfer times into account as part of route design and any follow up work towards implementation should also do so.
Encouragement to reach out to schools/youth to learn more about their thoughts/perceptions of transit and how it could work better for them.	• This is a theme in the plan. However, it will be reviewed to ensure it is emphasized.

Suggested Final Amendments to Plan

As part of the plan review and workshop outcomes discussed by the team, the following other amendments were suggested:

- Adjust Option 2a – Introductory 1 Tri-Municipal Connector to retain a slightly larger proportion of existing hours so that a short overlapping shift of on-demand service can be provided to ensure needs of existing HandiBus users continue to be met.
- Keep all three options shown for Option 3 – New Regional Midday Service but strengthen the language around Option 3c. Add an additional Option 3d with increased midday regional service beyond what is currently in the City of Spruce Grove budget.
- Add an Option 4b that includes provision for on-demand service to the Greenbury area at the same time that other Spruce Grove local routes are implemented until fixed route service is incorporated into this area of Spruce Grove.
- Add further Medium Term options to provide high level costs for:
  - Route restructuring within Spruce Grove to extend service to the Veterans Boulevard, Cook Lands and Pioneer Road areas.
  - Increasing regional service to 15 minute frequencies during commuter periods.
  - Increasing connecting local service to 15 minute frequencies during commuter periods.
- As part of the plan finalization:
  - Provide a cost estimate for bus stop implementation.
  - Provide an overview of similar places where multiple specialized transit services became more integrated with each other.
  - Confirm Alberta car seat laws with respect to smaller buses operating in fixed route and/or specialized service, as well as Alberta operating authority requirements and any other regulatory requirements.
  - Provide an overall total for the plan in terms of cost and ridership projections and compare this to population projections from Edmonton Metropolitan Region Board to confirm realism of options.
- Adjust the Regional Network Strategy Map to correct an error on that map currently shows regional services routing into Walmart. These actually would stay on Hwy 16A.

Appendix B: Suggested List of Operating Accounts and Metrics

The following is a list of financial and performance accounts that could be implemented to show budget and metrics at a consistent level of detail to better enable cost and performance monitoring across services. **Note: vehicle capital accounts (vehicle debt service, acquisition or replacement funds) not shown here.**

Operating Costs

Overhead Costs

These costs are relatively consistent from month to month, regardless of service levels.

- Manager's salary/management fee
- Supervisory/clerical staff wages and benefits
- Dispatch staff wages and benefits
- Driver's uniforms
- Training and development
- Cleaning staff wages and benefits
- Shop supplies (bus wash soap, window wash fluid, etc.)
- Vehicle insurance
- Office legal/insurance
- Property lease, tax, maintenance
- Utilities
- Miscellaneous office supplies
- Printing and promotion
- Equipment and technology

Direct Operating Costs

These costs vary depending on the level of service.

- Driver wages, including wage rate and estimated payroll hours by type (regularly scheduled shifts, incidental overtime, special events, etc.)
- Driver benefits
- Fuel/energy cost
- Tire cost
- Maintenance – ongoing
- Maintenance – major repairs/replacements
- Maintenance – accident repairs

General Administration Expenses

Salaries, wages and benefits for staff positions not covered above, such as municipal staff who may assist with transit system management, planning, marketing, human resources, finance, etc.

Revenue

- Cash fares
- Ticket sales (by type)
- Monthly pass sales (by type)
- UPass revenue
- Advertising revenue
- Municipal grants (as applicable)
- Donations/fundraising (as applicable)

Key Metrics by Month and Year

- Total boardings (if possible, by passenger type, regional/local and mobility aid use where applicable)
- Total actual revenue service hours (i.e. the number of hours of service actually delivered)
- Total scheduled service hours
- Unmet trips (where a specialized transit passenger calls to book a trip and the trip cannot be scheduled due to lack of capacity, service, etc.)
- No show trips (where a specialized transit vehicle arrives at a passenger's house and no one is there)
- Late cancellations.
- Number of commendations and complaints
- Total kilometres
- Total fuel/energy (in unit of measurement)
- Total greenhouse gas emissions
- Total population: municipal and service area
- Total trips