

Attachment 1

Midtown Connector and Glenmore Transit Restructuring

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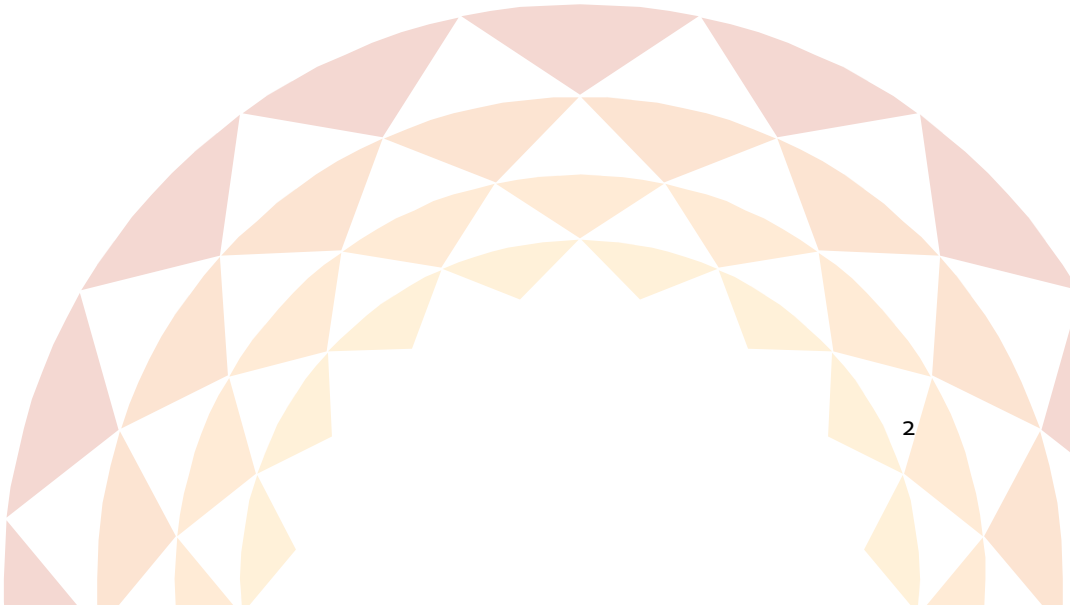
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Background

Introduction

This report has been prepared to brief Council on new transit service options that are being considered for the Glenmore area as a result of the completion of John Hindle Drive in the spring of 2018.

John Hindle Drive will connect Highway 97 to Glenmore Road at the UBC Okanagan Campus and provide an alternate route for transit services. To take advantage of this strategic transportation corridor, service changes are under consideration for the transit network in Glenmore.

This briefing report provides background information and rationale for proposed transit service options as well as expected operating and capital budget requirements. Prior to seeking final Council approval of the recommended option, BC Transit and City Staff will be conducting public engagement to receive comments from the community. The results of this engagement and a request for budget approval will be brought to Council in conjunction with the 2018 Budget Review Process.

Policy Context

In August 2011, Council endorsed the *Transit Future Plan* as the guiding document for expansion of transit service in Kelowna over the next 25 years.

The *Transit Future Plan* focuses on creating a grid-like Frequent Transit Network (FTN), operating at frequencies of 15 minutes or better throughout the day. The FTN will link urban centres, major employment areas, post-secondary institutions, and other key destinations across the region. This plan has provided direction for a number of transit service changes since 2011, including the implementation of a new Gordon Drive route (Route 5); realignments of Routes 1, 8, 15, 16, and 17; as well as increased service on Route 97.

Full implementation of the *Transit Future Plan* will require significant capital and operating investment. In late 2015, a *Transit Future Action Plan* process was initiated by BC Transit- in collaboration with local governments- to explore challenges and future opportunities for the Central Okanagan transit system.

To help guide consistent service and infrastructure planning decisions, the following objectives for transit service provision were identified:

- **Moving People More Efficiently**
 - A well-utilized transit system increases the people-moving efficiency of the transportation network in terms of the public investment required and carbon emissions generated. To meet this objective, the majority of transit service should be concentrated in corridors with high market potential that will generate the best returns for public investment.
- **Enabling Access for All**
 - A wide-reaching transit system provides an important lifeline for residents without access to other means of transportation, allowing them to fulfill their daily needs. To meet this objective, transit service should be offered within comfortable walking distance of as many residents and jobs as possible.

- **Connecting Urban Centres**

- A well-planned transit system supports community objectives of encouraging vibrant urban centres as well as healthier, safer and more sustainable neighbourhoods. To meet this objective, the transit network should be designed to maximize accessibility between centres of population and employment throughout the region.

Existing Transit Service

Route 7 – Glenmore

Provides frequent service every 15 minutes from Downtown to Midtown via Glenmore. Operates in a 'split-tail' configuration, where buses loop up and around through Glenmore in both directions.

Route 7 is currently the lowest performing of the core routes at an average of 23 passengers per revenue hour on fall weekdays. This is significantly below the target of 35 passengers per hour proposed in the *Transit Service Standards*. Although continued population growth and a potential direct connection to the university will boost ridership, major expansions of service hours in Glenmore may not be justified by market potential.

Route 6 – Glenmore/UBCO

A peak-only express service linking Downtown to UBCO via Glenmore and Sexsmith which operates from September until April. A total of eight trips are operated per day and there is no service on weekends.

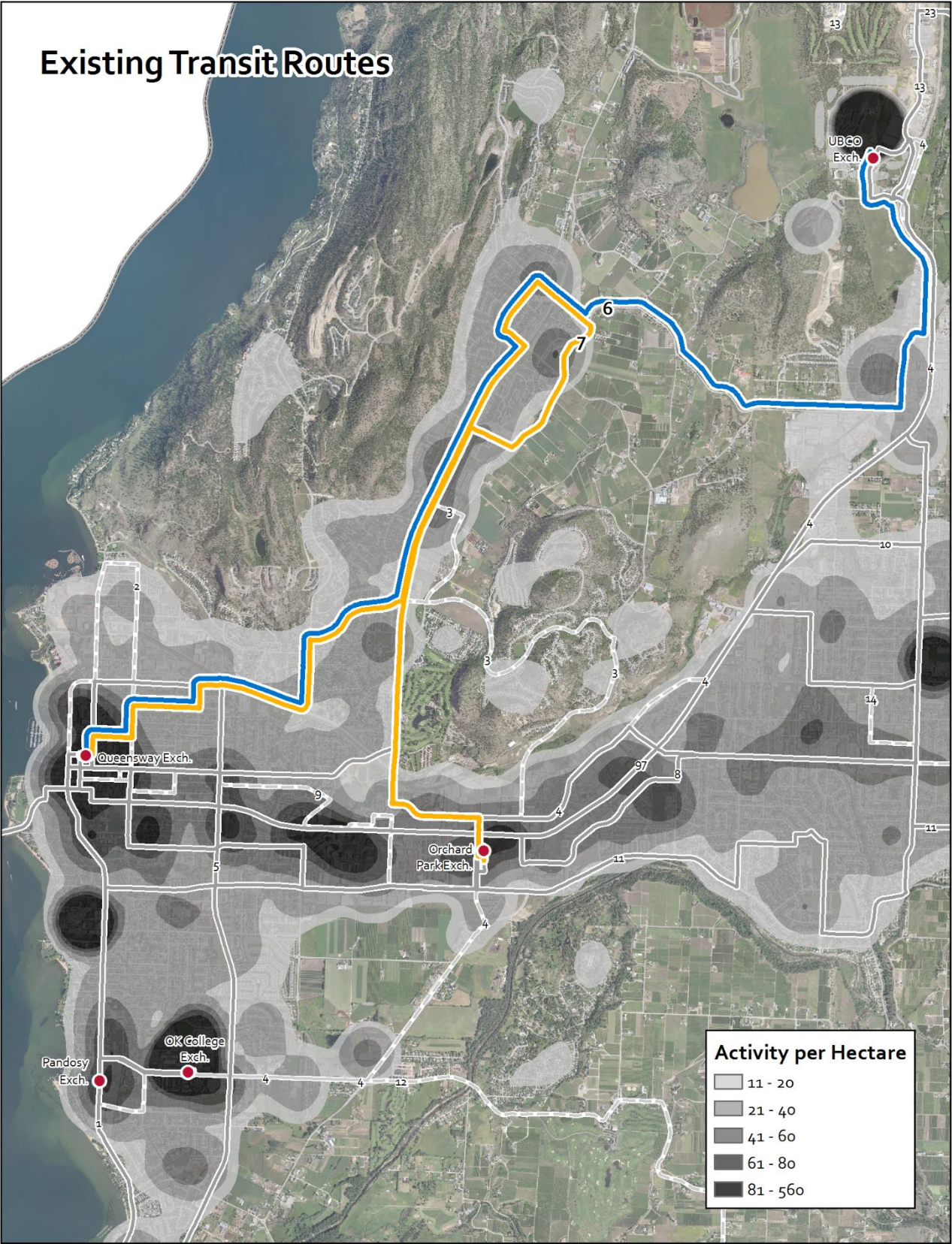
Together with the Route 4, this route also provides limited coverage to the Sexsmith industrial area.

Productivity is well above the system-wide average at 39 passengers per revenue hour, in part because service is limited to busy times.

Route 4 – Pandosy/UBCO Express

Another peak-only express service from Pandosy to UBCO via Benvoulin, Midtown, and Highway 97. Operates on a similar schedule to Route 6 – nine trips in peak hours on weekdays between September and April, with no weekend service. Besides the university and college, this route provides coverage along KLO Road and Benvoulin Road. Important destinations on this corridor include two private schools, KLO Middle School, and medium-density residential development on KLO which is beyond the typical walking catchment of service on Gordon Drive.

Despite being limited to peak hours, productivity is equal to the system-wide average at 25 boardings per revenue hour.



Nearby Land Use

The Glenmore area is comprised of a mix of low and medium density residential with small commercial nodes at major intersections and a village centre at Kane Road. Most of the multifamily developments in the area are located along Glenmore Road itself, in close proximity to transit service. The strong linear nature of the area provides strong support for transit oriented development.

There is a significant amount of multifamily growth occurring along Glenmore Road, particularly in the vicinity of Summit Road and Kane Road. The population along the Glenmore corridor is expected to grow by roughly 40% to 21,000 residents in 2040.

Projected Growth in Glenmore		
	Existing	Future
Population	15,000	21,000
Employment	1,200	1,800

Travel Patterns of Glenmore Residents

One way to evaluate transit network changes is to examine travel patterns by all modes. This provides a sense of the overall demand for travel between two places.

The table to the right summarizes the most common destination of trips originating in Glenmore during the morning peak from the 2013 Household Travel Survey. The most common destinations are within Glenmore itself. Travel to the five urban centres is relatively balanced, with slightly more trips destined for South Pandosy than the City Centre or Capri Landmark. This is likely due to the high concentration of enrolment at Okanagan College, Kelowna Secondary (the high school for Glenmore), and KLO Middle (regional French Immersion middle school).

Most Common Destinations from Glenmore (AM Peak, All Modes)	
Within Glenmore	30%
South Pandosy	13%
City Centre	10%
Capri/Landmark	10%
UBC Okanagan	8%
Midtown	7%
Rutland	4%
<i>Other Destinations</i>	<i>17%</i>

Students represent a major component of the regional transit market, and currently account for approximately 45% of ridership. UBC Okanagan and Okanagan College generate the largest number of transit trips, and will become more important as enrolment grows. The current and projected enrolment totals are provided below:

	UBCO	Okanagan College	KSS/KLO Middle
Current	8,500	5,000	2,500
2040	15,000	9,000	3,000

Service Options

Recommended Option – New Pandosy/UBCO via Glenmore Route

Description

This option would repurpose elements of Routes 4 and 7 to create a new Route 6 – UBCO to Pandosy through the Glenmore area. Unlike the existing Route 7 through Midtown, which heads north via Cooper and Enterprise, the new route will take Springfield and Spall in order to serve the Landmark area.

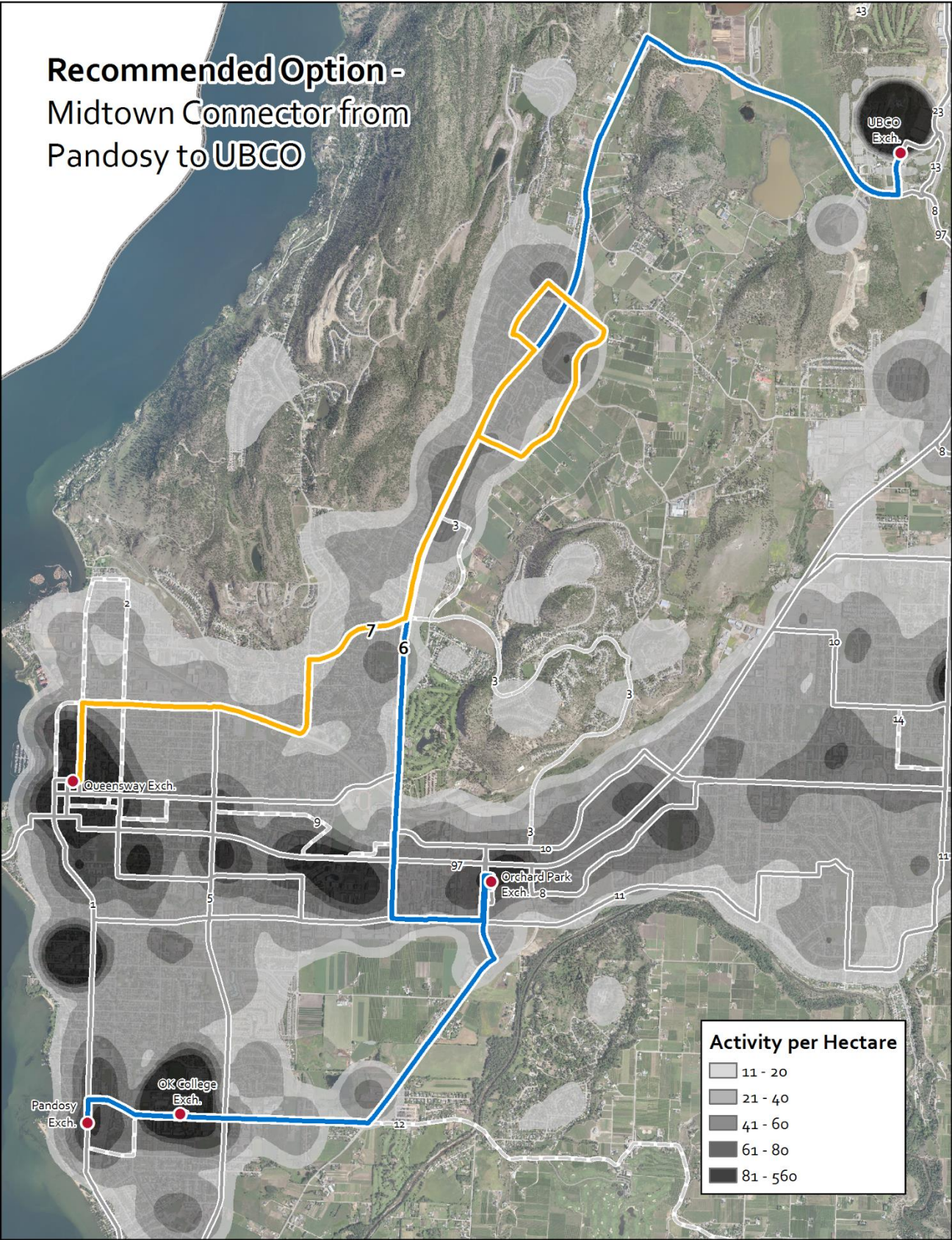
The new Route 6 or 'Midtown Connector' would operate all-day rather than in peak periods only. The Midtown 'leg' of Route 7 would be discontinued, and frequent service would still run between Downtown and Glenmore.

Benefits

- The destinations along the new Route 6- UBC Okanagan, Midtown, Landmark, and South Pandosy- account for roughly two-thirds of travel from Glenmore in the morning peak, significantly increasing the number of trips accommodated by transit without changing buses.
- Streamlines sections of duplicative routing between Routes 4 and 97 along the highway north of Midtown.
- As nearby catchment areas grow, service on the Route 6 could be expanded to provide a third north-south link in the FTN 'grid' (the first two being Lakeshore and Gordon).
- Realignment within Midtown to Springfield and Spall more than doubles the amount of nearby population and employment along this section compared to the existing Route 7.

Challenges

- An estimated 2,300 residents living along the existing Route 6 in the vicinity of Cawston, Clement, and Clifton will no longer have direct bus service to the university. An estimated 900 residents living along Glenmore Dr between Clement and High Road will gain a direct connection; in addition, roughly 1,000 residents along KLO Road east of Gordon will now have access to all-day service to UBCO, rather than at peak times only.
- Discontinues service along Sexsmith Road. The productivity of these segments was low, at an estimated 15 boardings and alightings per day. The new RapidBus station at Sexsmith will partially offset this loss of service at the eastern end of Sexsmith, where the majority of employment is located.
- Realignment of the Route 4 to John Hindle precludes an earlier proposal to serve Academy Way and the University Heights with these existing resources; however, it may be more efficient to serve this neighbourhood with an extension of the Route 13 Quail Ridge.



Alternative Option – Downtown/UBCO Express

Description

This alternate option would realign the current Route 6 (Downtown-UBCO) from Sexsmith to John Hindle, adding all-day service and increasing frequency. As in the previous option, the low performing service along Sexsmith Road would be discontinued. Route 7 would become a lower frequency local transit route operating from Glenmore to Midtown. Route 4 would continue to operate as today.

Benefits

- Provides a second frequent connection between Downtown and UBC Okanagan, although the estimated travel time is similar to the existing 97 RapidBus; therefore, this option is unlikely to attract many new riders from the City Centre.

Challenges

- Reduces the frequency of service from Glenmore to Landmark and Midtown.
- Maintains duplicative sections of service on Route 4 on Highway 97.

The change in catchment area for Routes 6 & 7 under the two service options is presented in the table below. Starting with Route 6, the recommended option (Pandosa-UBCO) would greatly increase the amount of activity- or combined population, employment, and enrolment- within walking distance of the route. Ranked among the existing routes for context, the Midtown Connector would be third in terms of overall catchment area. The alternate option (Downtown-UBCO via John Hindle) has a reduced catchment area compared to the existing Route 6, largely due to missing the Sexsmith Industrial Area.

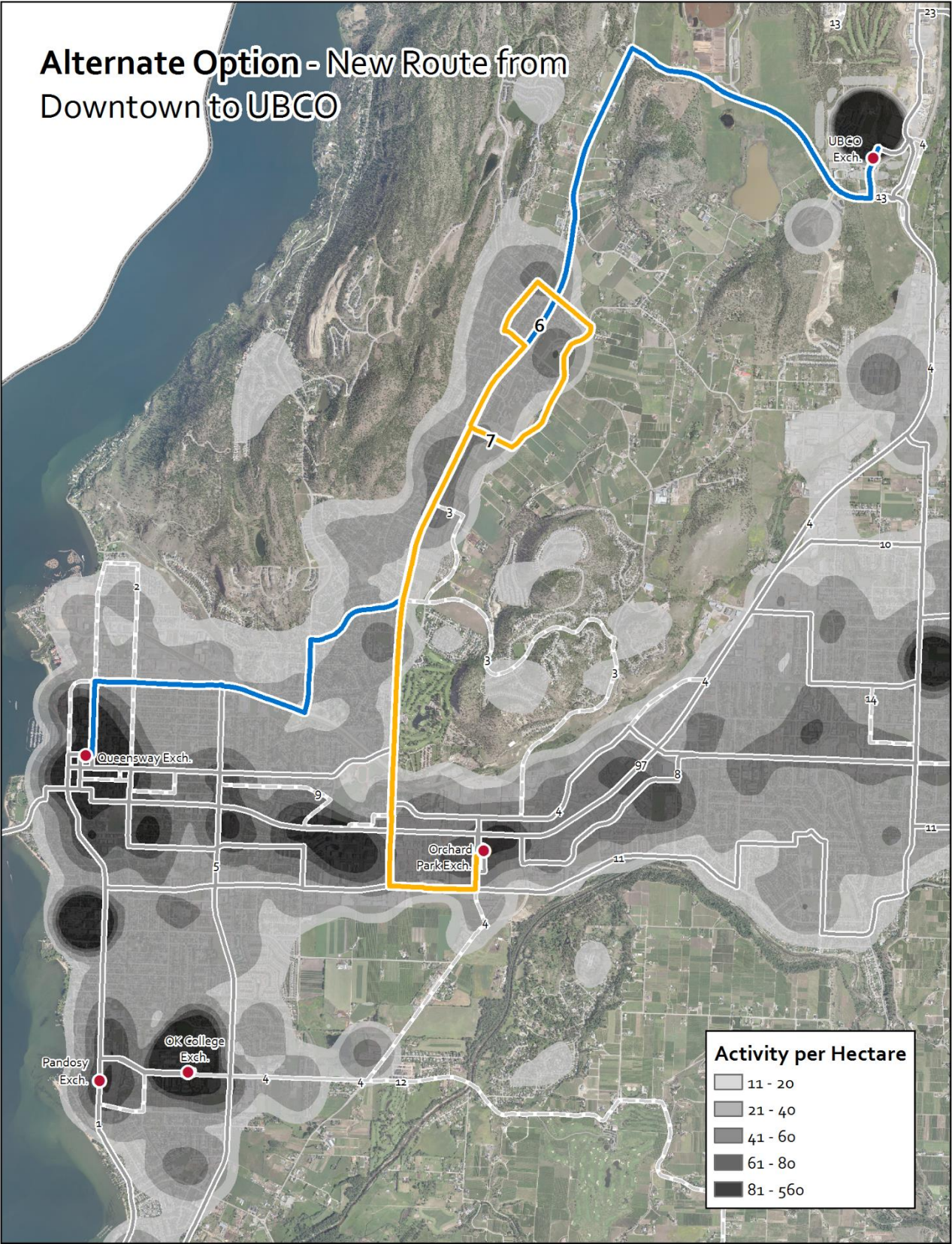
Route 6						
	Description	Length	Nearby Activity ¹		Activity per Km ²	
			Count	Rank	Count	Rank
Current	Downtown-UBCO via Sexsmith	15km	38,225	6 of 28	2,520	9 of 28
Recommended	Pandosa-UBCO via Glenmore	18km	47,800	3 of 28	2,650	8 of 28
Alternate	Downtown-UBCO via John Hindle	13km	33,200	7 of 28	2,530	9 of 28

For the Route 7, discontinuing the Midtown 'leg' in the recommended option would reduce the catchment area totals, although the nearby activity would be 15% higher on a per kilometre basis due to the shorter length. A similar pattern can be seen for the alternate option (Midtown-Glenmore), although the overall catchment would be smaller.

Route 7						
	Description	Length	Nearby Activity		Activity per Km	
			Count	Rank	Count	Rank
Current	Downtown-Midtown via Glenmore	15km	32,300	7 of 28	2,000	10 of 28
Recommended	Downtown-Glenmore	11km	24,600	11 of 28	2,300	10 of 28
Alternate	Midtown-Glenmore	10km	21,900	11 of 28	2,200	10 of 28

¹ Combined population, employment, and enrolment within 400 metres of the route.

² Total activity divided by the length of the route. A measure of the efficiency of the routing.



Summary

The recommended option moves people more efficiently by increasing the range of destinations accessible from Glenmore without transfers and repurposing duplicative elements of Route 4. It will support residents without access to other means of getting around, including roughly 650 units of retirement or supportive housing along the new Route 6, and significant postsecondary student populations in Glenmore. And finally, it connects three urban centres (Pandosy, Capri/Landmark, and Midtown) with Glenmore and the two largest educational centres in the region.

Option	Description	Resources Required	Key Benefits	Key Challenges
Recommended	New Pandosy-UBCO Route via Glenmore	2 expansion buses and 5,000 annual service hours	Reduces the amount of transfers required from Glenmore	Long route reduces flexibility to adjust service levels as seasonal demands change
Alternate	New Downtown-UBCO Route	2 expansion buses and 5,000 annual service hours	Provides a second direct route from Downtown to UBCO	Glenmore residents are required to transfer to reach Pandosy/KLO area

Budgetary Impacts

Operating Cost Requirements

In June 2016, Council endorsed a three-year Memorandum of Understanding for improvements to the conventional and custom transit systems. This endorsement enabled BC Transit to proceed with a request for funding to the Province on the City's behalf for new bus purchases and matching funds for operating costs, with the understanding that a more detailed budget would follow when service details were confirmed.

The proposed conventional system expansion initiative included 5,000 new service hours and two new buses in 2018/19 to realign the Route 6 and 7 Glenmore services with a new connection to UBCO via John Hindle Drive, as well as other investments to improve schedule reliability and alleviate overcrowding.

Recent work undertaken as part of the *Transit Future Action Plan* supports the proposal to proceed with the implementation of expanded transit service to UBCO via John Hindle Drive and to introduce service to University Heights in 2018/19.

The following table summarizes the operating requirements for these new services:

Proposed Expansion Initiatives						
AOA period	In-service date	Annual Hours	Vehicle Requirement	Estimated Annual Revenue	Estimated Annual Costs	Estimated Annual Net Municipal Share
2018/19	Sept '18	5,000	2*	\$75,892	\$532,148	\$207,796
		Description	Based on the results of the Transit Future Action Plan, these resources will be used for the introduction of expanded service to UBCO via John Hindle Drive as well as the realignment of existing services to Glenmore. In addition, new service will also be introduced to the Academy Way neighbourhood and improve on-time performance with Core Transit Services.			
2020/21	Sept '20	5,000	2	\$75,892	\$650,601	\$305,975
		Description	These resources will be used for the Rutland route realignment project that will be finalized as part of the Transit Future Action Plan process. On-time performance will also be improved on Core Transit services.			

*The local share of lease fees for the 2 vehicles required for the 2018/19 expansion will be covered through Gas Tax funding, which is reflected in the estimated annual municipal share figures outlined above.

Capital Cost Requirements

Since the majority of the proposed restructuring involves corridors where bus service operates today, the infrastructure requirements are relatively minor. However, some existing bus stops do not meet standards for safe, accessible design or lack basic amenities such as seating. There are three locations on the Glenmore corridor which will be targeted for bus stop upgrades.

Two major capital projects associated with this restructuring are the Glenmore/Summit intersection and accessibility improvements on Spall Road. Glenmore and Summit will become a strategic transfer point between the two Glenmore buses in the future. Safe and comfortable facilities sheltered from the roadway will improve passenger experience and provide space for buses to layover without affecting traffic.

Spall Road currently has a very low level of bus service south of Enterprise, and as such would require the most capital investment to support frequent transit. A new pair of bus stops in the vicinity of Parkinson Way will be required to provide access to the community centre; adjacent multi-family rental housing; and potential future high school. The four existing bus stops on Spall Road south of Harvey Avenue are extremely basic and will need to be upgraded to meet accessibility standards and improve passenger comfort. There is also no safe pedestrian crossing between Harvey Ave and Springfield Road, which makes it difficult for customers to reach bus stops.

Another challenge for transit operations on Spall Road is the queueing for left-turns onto Springfield during the afternoon peak. A study is currently underway to explore opportunities to improve the functioning of the Spall/Springfield intersection and reduce delays for transit. This will benefit both the new Route 6 and the existing east-west services on Springfield, Route 8 and 11. Based on the outcome of this study, improvements to the intersection could be completed in 2018.

The capital costs associated with the Glenmore restructuring are summarized below. Capital costs are to be funded through transit reserve, addressed in the 2018 budget review process.

Capital Cost Summary	
Glenmore Road Stop Accessibility Upgrades	\$25,000
Spall Road Stop Accessibility Upgrades	\$58,000
Glenmore/Summit Exchange	\$150,000
New Stops at Spall/Parkinson	\$60,000
Spall/Springfield Intersection	\$150,000

Summary and Next Steps

The connection of John Hindle Drive to the UBC Okanagan campus creates an opportunity to restructure bus routes in the Glenmore area to provide more direct service to this key destination. John Hindle was an important component of the Frequent Transit Network identified in the *Transit Future Plan*.

The two service options outlined here will be presented for public input in Fall 2017. The feedback received from the community and a request for budget approval will be brought back for Council's consideration in conjunction with the 2018 Budget Review Process.

Timeline for Implementation	
Fall 2017	Public engagement on proposed expansion
	City budget review process
Spring 2018	Begin work to implement service
Fall 2018	Implementation and service monitoring