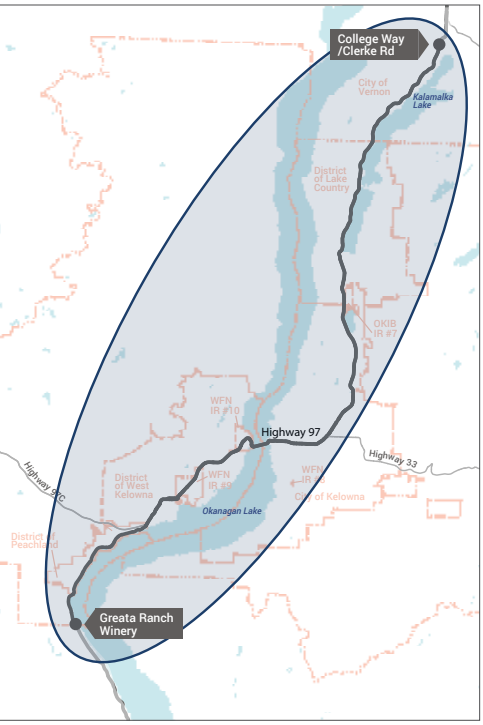
Okanagan Lake Second Crossing Project

Central Okanagan Planning Study
Future Conditions Assessment

Consultation Companion
Open House — Fall 2015

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure



Welcome

Thank you for participating in the second part of Phase 1 consultation for the Okanagan Lake Second Crossing Project. This Consultation Companion document looks at factors that will influence where and when a possible second crossing of Okanagan Lake might be established in the future. The accompanying Feedback Form seeks your input on these considerations.

How to get involved and help plan for the future:

- Visit engage.gov.bc.ca/okanagansecondcrossing – read consultation materials and technical information
- Attend an open house – see schedule below
- Arrange a presentation/dialogue session for your group or organization
- Read this Consultation Companion and complete a Feedback Form (online or hard copy)
- Sign up to receive ongoing updates – see contact details below

Please submit your feedback by January 8, 2016.

Public Open House Schedule*

Community	Date	Time	Venue
West Kelowna	Monday, November 30, 2015	4:30 pm – 8:00 pm	Westbank Lions Community Centre, 2466 Main Street, West Kelowna
Kelowna	Tuesday, December 1, 2015	4:30 pm – 8:00 pm	Ramada Kelowna Hotel and Conference Centre, 2170 Harvey Avenue, Kelowna

Please visit **engage.gov.bc.ca/okanagansecondcrossing for the most current information*

Stakeholder Meetings

In addition to open houses and online consultation, the project team is meeting with stakeholder groups that have been established in consultation with local governments and organizations, allowing more in-depth discussion with representatives of local and regional business, environmental, transportation, agricultural and other interests.

Other Opportunities

Presentations and dialogue sessions with local groups and organizations can be arranged by contacting us via the information below.

Web: engage.gov.bc.ca/okanagansecondcrossing
Email: okanagansecondcrossing@gov.bc.ca
Phone: 250-712-3660

Study is Progressing

In late 2014, work began on the first part of the Central Okanagan Planning Study to help the Ministry of Transportation and Infrastructure understand and explore the transportation needs of the area. The study area extends from Greata Ranch, 4 km south of Peachland, northward to Clerke Road / College Way south of Vernon, encompassing the communities of Peachland, West Kelowna, Kelowna, Lake Country, the West Bank First Nation and Okanagan Indian Band.

The study began with a review and analysis of the existing conditions and performance of the corridor. The results were shared with the public for feedback in May 2015.

The second part of the study's first phase, now nearing completion, has involved forecasting future conditions to assess the future transportation needs of the Highway 97 corridor. This work will eventually lead to the examination of options for meeting those needs, including preferred locations and timing for a possible second crossing of Okanagan Lake.

Your Input is Important

Your input throughout the study will continue to be considered by the Ministry, together with the input of local governments, technical data, overall provincial government plans and other information as it prepares options to meet the future transportation needs of the area.

Purpose of this Consultation

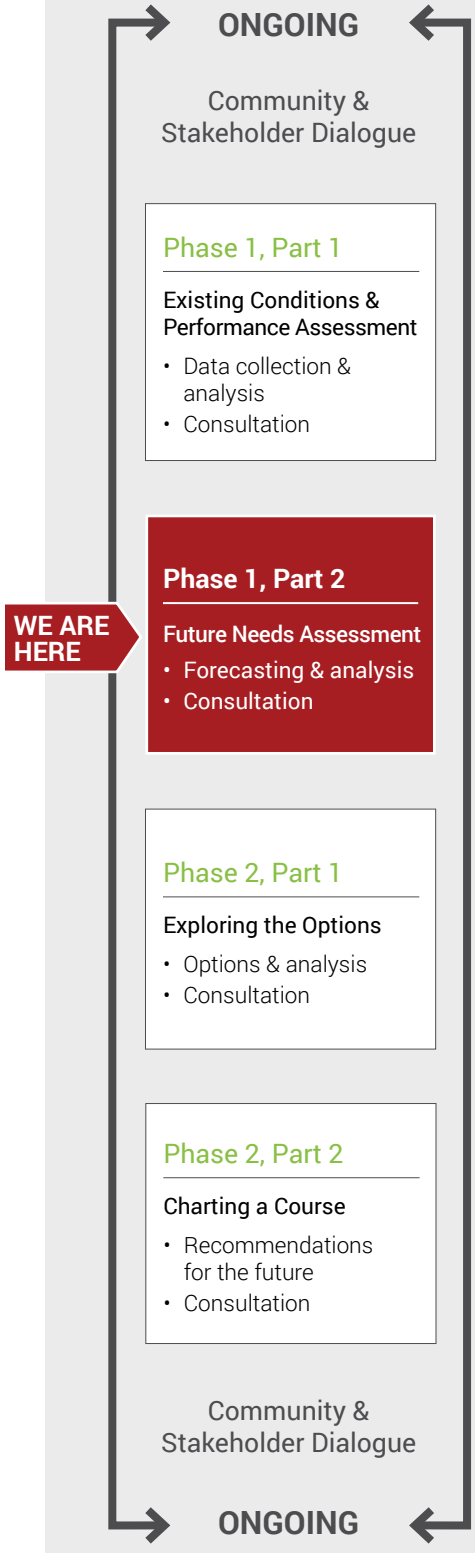
The purpose of this consultation is to obtain your input which will be applied in the assessment of future needs, which will also consider:

- Land use and economic baseline projections based on trend analysis and information from local governments including Official Community Plans and economic forecasts, workshops and additional studies
- A "baseline" transportation corridor for study purposes, based on existing plans and past studies
- Future travel demand, based on future land use and economic projections
- Future corridor conditions and performance assessment, based on the future baseline transportation corridor and travel demand

We also invite your views on where we should focus our attention in the next phase of the study, when we explore future options.

Future consultations will consider possible improvement options for the long and near-to-intermediate term.

Stages of Planning and Consultation



Recap of Existing Conditions Assessment (May 2015)

Travel Patterns

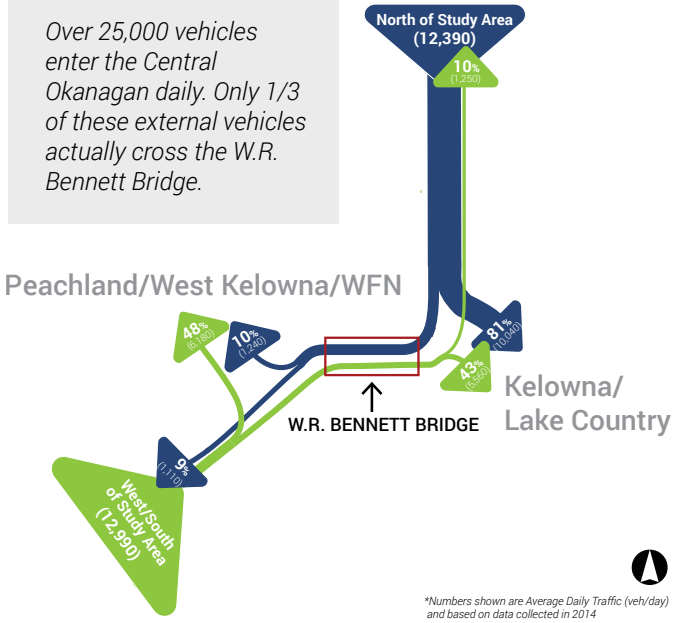
The purpose of the first part of the study was to confirm existing conditions and assess the performance of the Highway 97 corridor. While the regular user of the corridor might find the conditions and performance to be self-evident, planning for the future requires us to obtain the full-day, four-season profile and understand where trips start and end.

While the existence and locations of congestion were generally well-known, there were some interesting—and sometimes surprising—findings. These included:

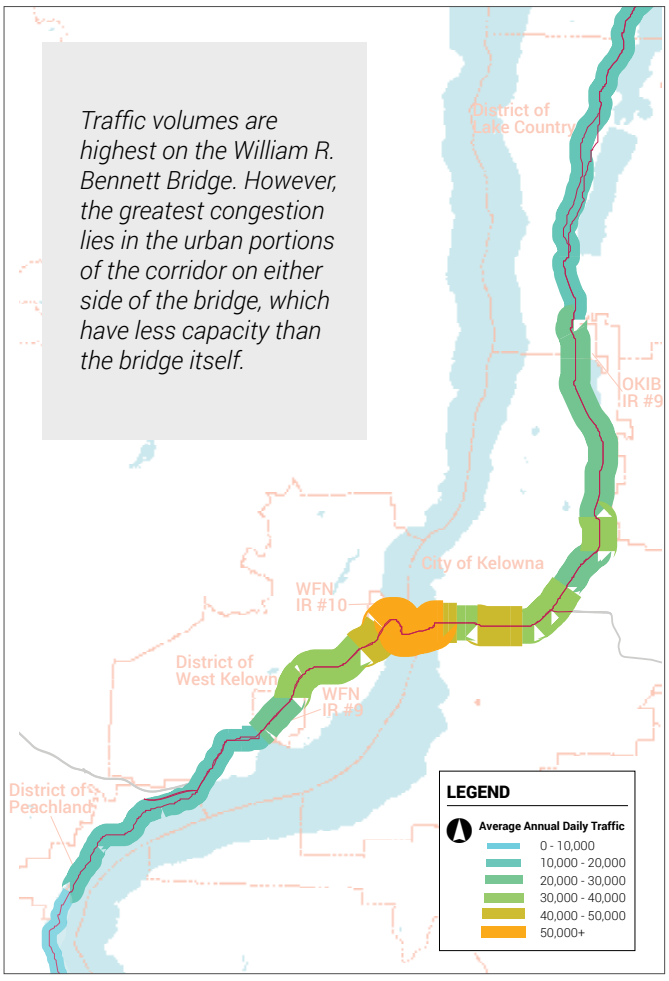
- Nearly three-quarters of all trips on the corridor involve Kelowna in some way.
- Only 1/3 of the vehicles entering the Central Okanagan from outside the area actually cross the W. R. Bennett Bridge.
- Traffic volumes are highest on the bridge, but the congestion occurs in the urban portions of the corridor on either side
- The crossing is dominated by local traffic: only 4% of the traffic on the bridge is just passing through the Central Okanagan.

The bottom line: congestion on the corridor is primarily the result of local/regional traffic, not inter-regional traffic, or traffic passing through the region.

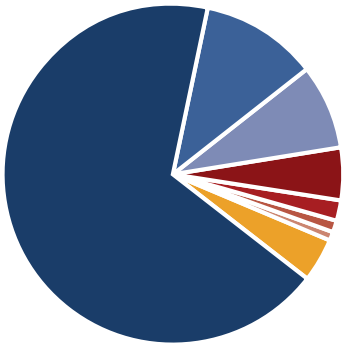
Over 25,000 vehicles enter the Central Okanagan daily. Only 1/3 of these external vehicles actually cross the W.R. Bennett Bridge.



Traffic volumes are highest on the William R. Bennett Bridge. However, the greatest congestion lies in the urban portions of the corridor on either side of the bridge, which have less capacity than the bridge itself.



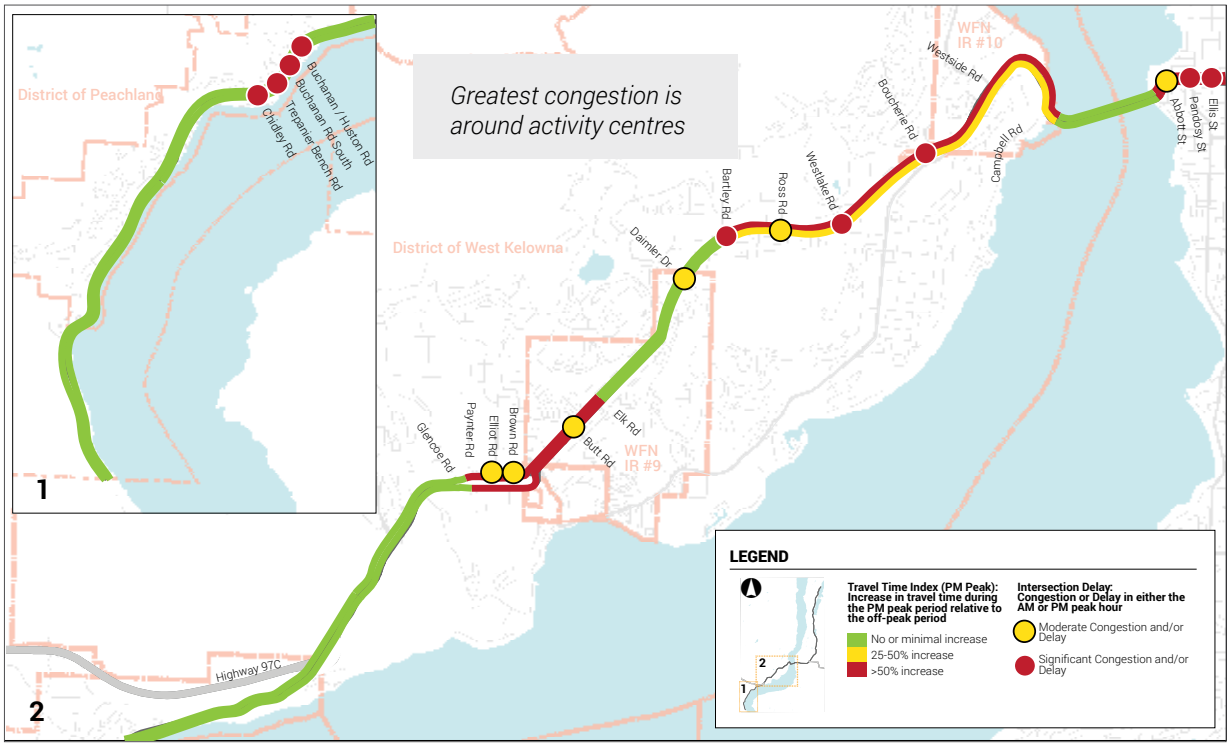
Where are the trips between?

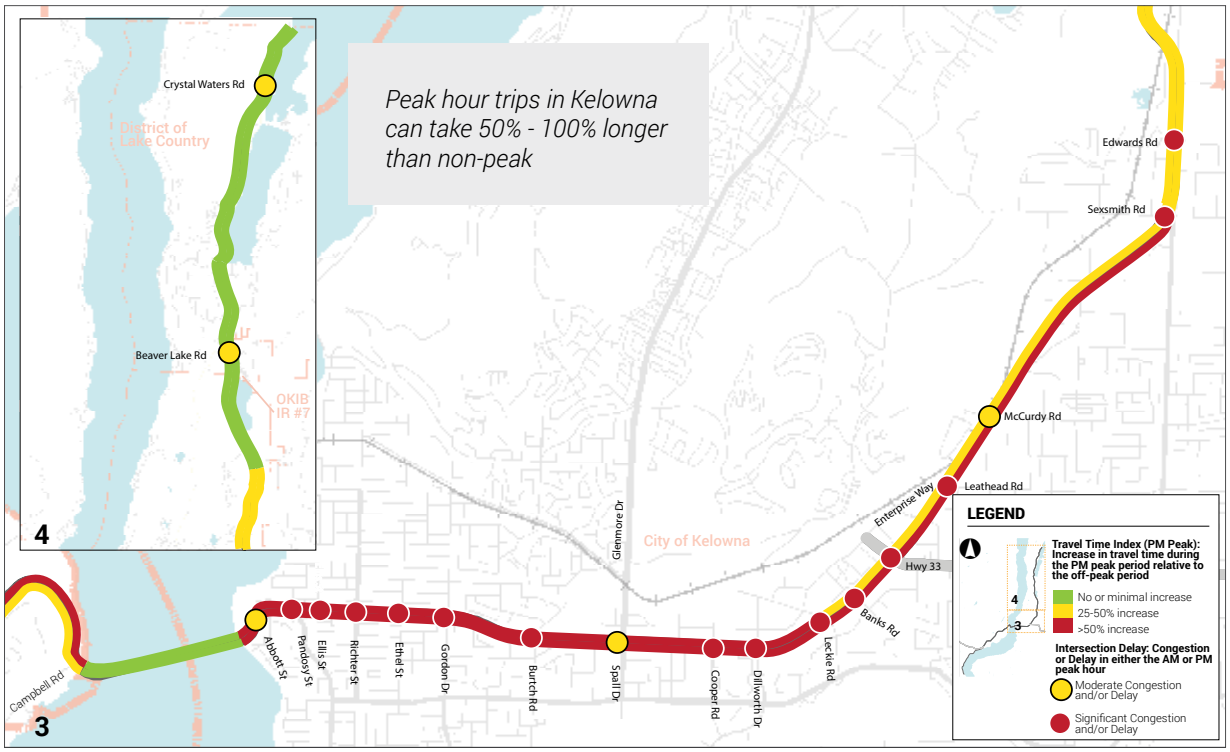


68%	are between the City of Kelowna and Peachland/ West Kelowna/WFN	87%
11%	are between the City of Kelowna and south of Peachland	
8%	are between the City of Kelowna and Hwy 97C	
5%	are between Peachland/ West Kelowna/WFN and north of RDCO	13%
2%	are between Peachland/ West Kelowna/WFN and other Central Okanagan locations	
1%	are between Hwy 97C and other Central Okanagan locations	
1%	are between south of Peachland and other Central Okanagan locations	
4%	pass through the Central Okanagan	

Traffic Congestion

With the concentration of activity centres on the Highway 97 corridor and few alternative routes, the greatest congestion is around these activity destinations. The impact of the commute is significant, as peak hour trips over certain portions of the corridor can take up to twice as long as those taken off-peak.





How to use this Consultation Companion

This booklet is designed to work as a companion to information displays and the Feedback Form, which includes questions related to each section of the Companion.

Relevant Feedback Form questions are noted at the end of the booklet.

Your responses, combined with those of other participants, will help in the development of future transportation improvement options.

Photo courtesy: tourismkelowna.com - Enviro Foto Inc. J.F. Bergeron

The Role of the Highway 97 Corridor

The Vision for the Okanagan Valley Transportation System

The 2011 Okanagan Valley Transportation Symposium identified the following vision for the transportation system:

"The long range Okanagan Valley Transportation system will:

- Be a safe, functional & efficient network
- Include fully accessible public & active transportation options within and between communities
- Be a coordinated approach to multi-modal and sustainable transportation
- Protect & preserve rail & other ROWs [rights of way] for the future
- Plan network improvements, assisting in community revitalization and provision of alternate routes"

The "Spine"

Highway 97 is the "spine" of the transportation network in the Central Okanagan. BC on the Move, the Province's 10-year transportation plan released in March 2015, noted: "Highway 97 is British Columbia's most important north-south connection, running from the Canada-U.S. border at Osoyoos to the B.C.-Yukon border. The Okanagan Valley Corridor runs from Osoyoos to Highway 1. With a growing population and a thriving tourist industry, the Okanagan Valley Corridor is an important link through the Okanagan. It is also the busiest route in the Interior."

As an essential part of the local transportation system, Highway 97 currently performs many functions: supporting goods movement in, out and through the area, carrying local, inter-regional and inter-provincial traffic of all kinds, including transit, providing local access to residential, employment, educational, and commercial centres, delivering virtually unlimited access to the local and regional road networks, and offering the only practical route between communities on opposite sides of Okanagan Lake. Many of these functions are incompatible with one another, leading to operational conflicts, overload and congestion.

A provincial highway emphasizes trips that are of provincial significance. In the Central Okanagan, the primary role of Highway 97 is to connect the region's communities, regional/provincial activity centres and other provincial highways, including trips for commuting.

Visualizing the Future Corridor

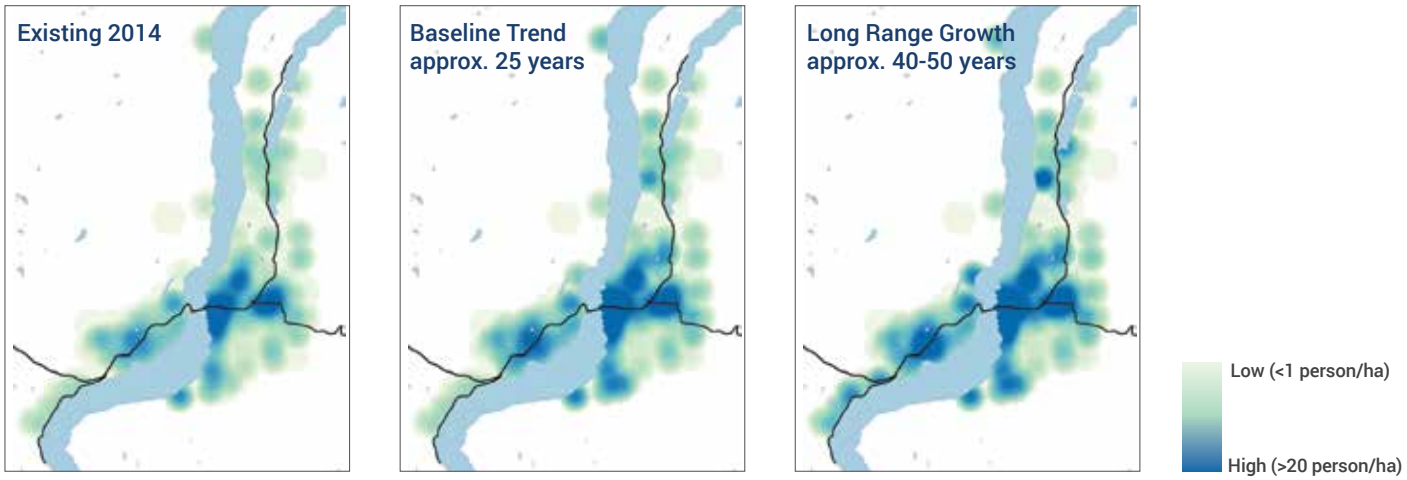
Within the overall transportation system in the Okanagan Valley, what is the appropriate role of the provincial highway facility in the future? What should its characteristics be? Should access points be restricted to allow longer-distance traffic to move unfettered? Should the alignment of the provincial highway be moved? Should the highway bypass the region? What would happen to the existing facility? These are among the many questions the Ministry must consider in the development of future options. We welcome your input and have reserved a major section of the Feedback Form to obtain your views of the future role of the highway.

Establishing the Future Baseline

Population / Employment Growth and Land Use / Distribution

The population of the Central Okanagan area has been growing much faster than the provincial average. While the year-over-year rate is expected to slow slightly after 2020, the population will continue to grow strongly in the future, with employment keeping pace.

Population Density Changes



The Baseline Trend

The Baseline Trend is a scenario for growth in the Central Okanagan to a regional population of almost 275,000 over the next 25 years. It assumes that past growth trends and patterns will continue, based on reviews of official community plans (OCPs), BC Stats forecasts (which form the basis for the Regional Growth Strategy) and recent growth trends in the communities of the Central Okanagan.

This scenario is the basis for identifying future issues and problems. It will be used to evaluate the effectiveness of potential land use and transportation infrastructure improvements.

Long Range Growth

The Long Range Growth scenario represents full development of the land inventory as currently identified in the Regional District of Central Okanagan Regional Growth Strategy. It assumes that within the next 40 to 50 years, the regional population will reach a population of about 325,000. This scenario will be used to evaluate the sensitivity of growth in some areas, and long-term resilience of options to be evaluated.

The Future Baseline - A Summary

Existing

- Today's conditions
- 192,000 population
- 450 jobs/ 1,000 population

Baseline Trend

- Approx. 25-year horizon
- 275,000 population
- 482 jobs/ 1,000 population

Beyond the Future Baseline

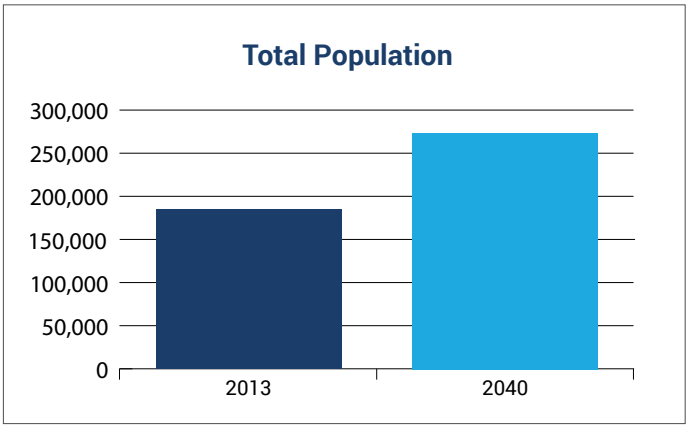
Long Range Growth

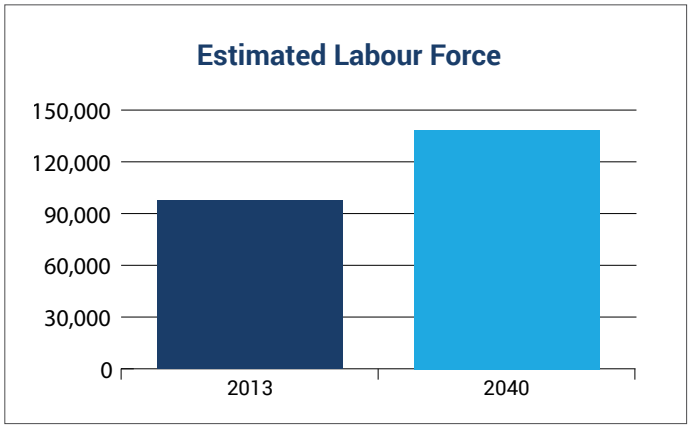
- Approx. 40-50 year horizon
- 325,000 population
- 474 jobs/ 1,000 population

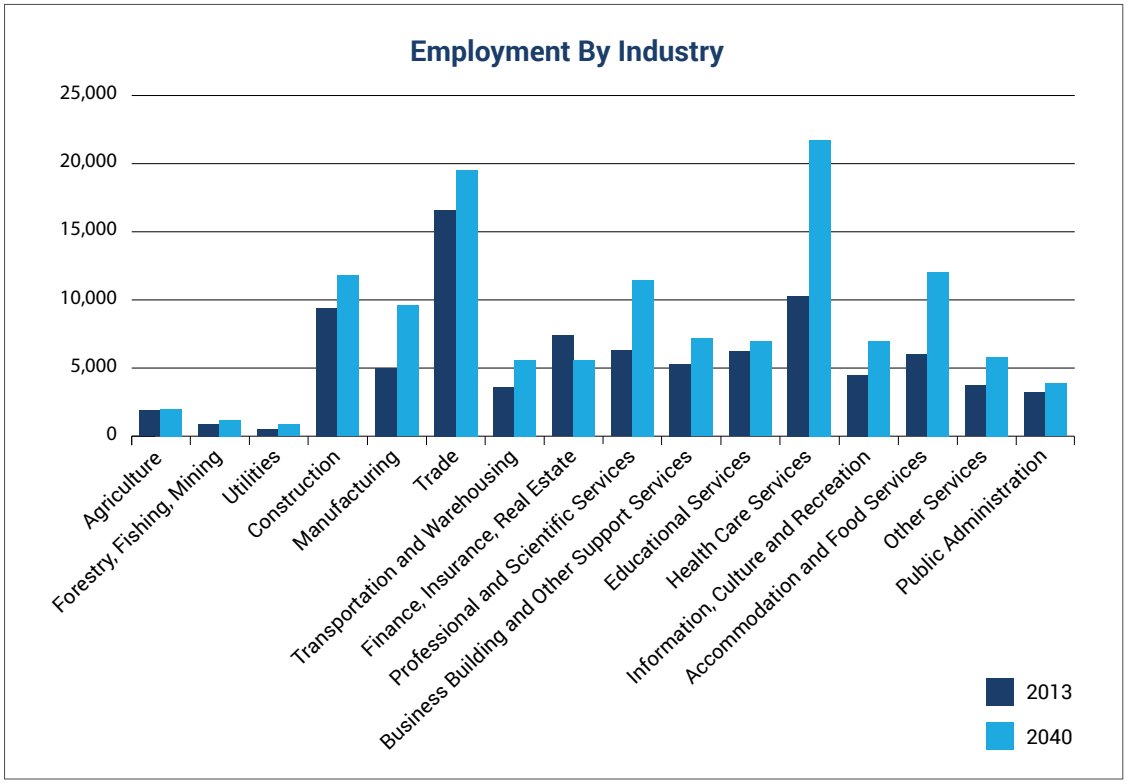
Employment Growth Sectors

The strongest employment growth sectors (trade and health care services) will meet the general needs of a growing population, and particularly, an aging one.

The growth in the labour force will be similar to the growth in the overall population, and it is expected that commuting to and from work will continue to be a major part of the future transportation demand.







The major growth sectors are responsible for a significant portion of the total employment, and much of the overall growth will occur in industries that are highly dependent on the transportation network. The competitiveness of the region relies on good quality transportation infrastructure that supports both regional and distant connections.

Transportation Modelling: How Future Traffic Growth is Predicted

To predict the future traffic volumes along Highway 97 and the adjacent road network within the Central Okanagan Region, a transportation model was developed. The transportation model estimates future traffic volumes based on expected population and employment growth within the region. The transportation model was developed to provide traffic volume estimates for the morning rush hour and afternoon rush hour for a typical fall weekday.

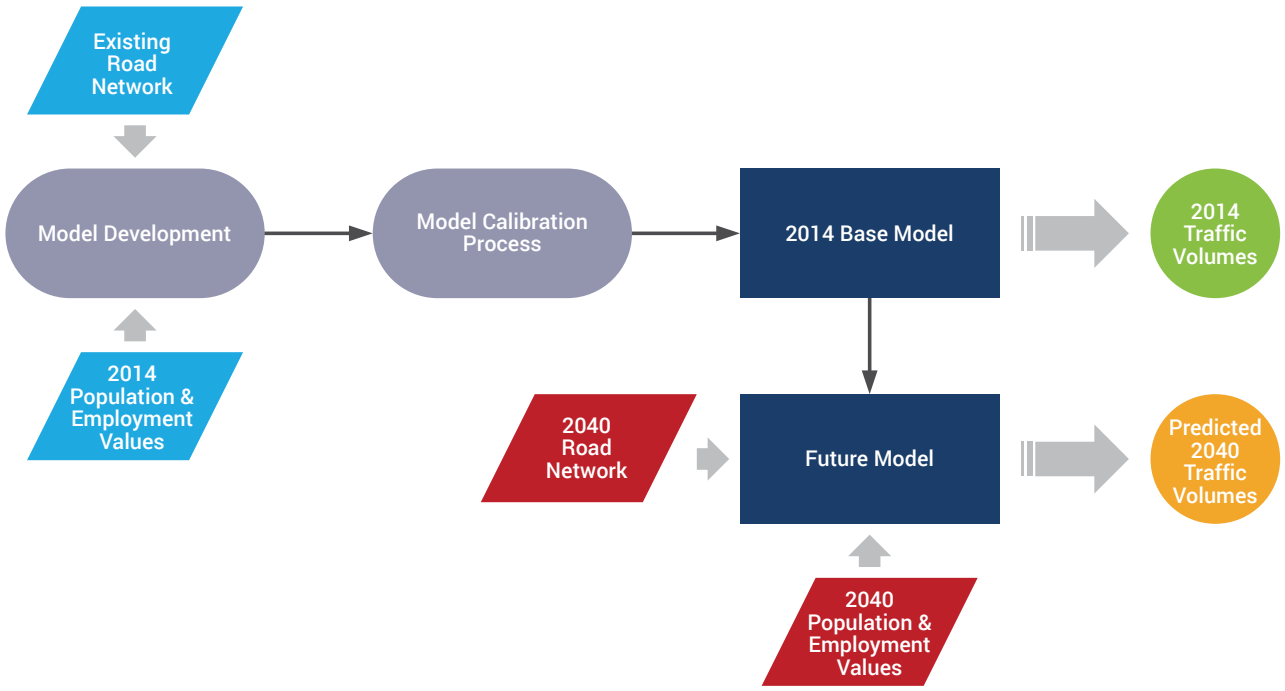
The transportation model developed for this study is a complex planning tool used by experienced transportation specialists. It has two main parts: a road network and rush hour traffic volumes which are applied to the network. To estimate the overall traffic volumes and how this traffic is applied to the road network, the transportation model involves four primary steps:

- **Trip Generation** – where the number of trips for the rush hour are estimated for the entire region based on where people live and where they work.
- **Mode Estimation** – the breakdown of trips made by walking, cycling, transit, or car.
- **Trip Distribution** – an estimate of where each trip starts (origin) and finishes (destination) within the region.
- **Traffic Assignment** – how the traffic gets from the origin to the destination, based on the most efficient routing. Only transit and auto trips are assigned to the road network.

Before it is used to estimate traffic volumes for future years, the transportation model is tested by estimating current conditions and then comparing the outcome to actual traffic counts to confirm the model's accuracy. A 2013 household travel survey, which asked numerous local residents to report their travel patterns and trip purposes for a typical weekday, was also used to ensure that the model represents real life travel patterns.

For the current Study, the Ministry of Transportation and Infrastructure worked closely with the various municipalities within the Central Okanagan Region to estimate future 2040 population and employment values. The current 2014 values were used in the fine-tuning of the transportation model.

Once the transportation model was ready, the future population and employment estimates for the region were entered into the model to estimate the future traffic volumes within the regional road network.



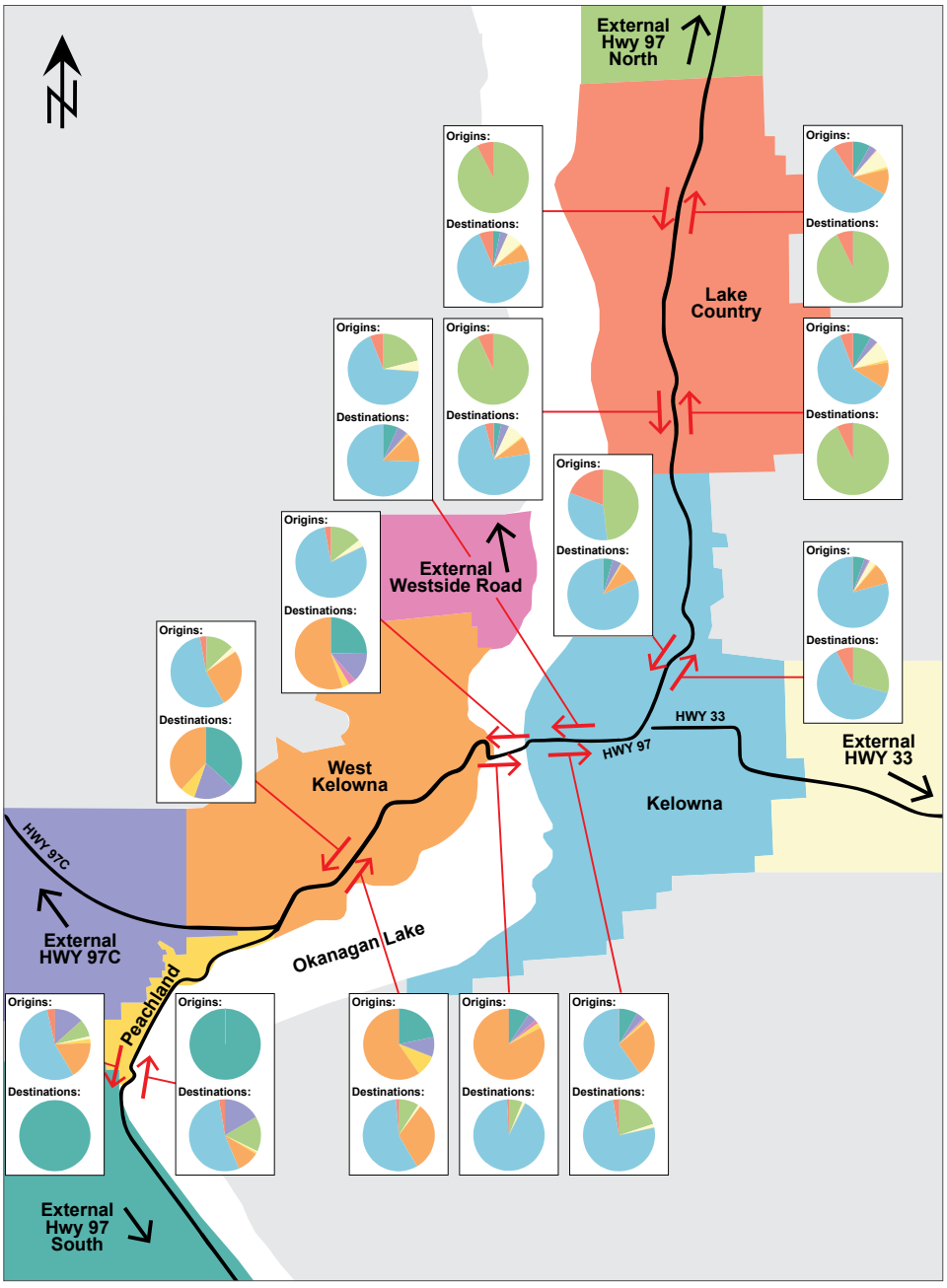
Who Will Be Using the Highway?

Trip Origins / Destinations: Where they will start and finish (Morning Peak Period—2040)

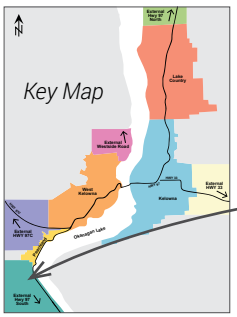
Key Discoveries

Modelling shows that the vast majority of traffic on the bridge travelling northbound will originate in West Kelowna; however, north of Highway 33, West Kelowna traffic will represent slightly less than 10% of the traffic on Highway 97 travelling northbound. This illustrates the strong travel pattern of bridge traffic being destined to areas of Kelowna located between the Bridge and Highway 33.

In the southbound direction, external traffic from north of the region will represent the majority of traffic on all Highway 97 segments through Lake Country and in the northern areas of Kelowna. The proportion of external traffic from the north will be reduced substantially south of Highway 33 but will still represent nearly 15% of the traffic crossing the W.R. Bennett Bridge.

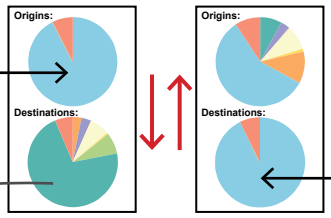


How to Read These Charts



Southbound

Northbound



Proportion of Southbound (Westbound) traffic travelling FROM Kelowna.

Proportion of Northbound (Eastbound) traffic travelling TO Kelowna.

Match the colour in the pie to the colour on the map.

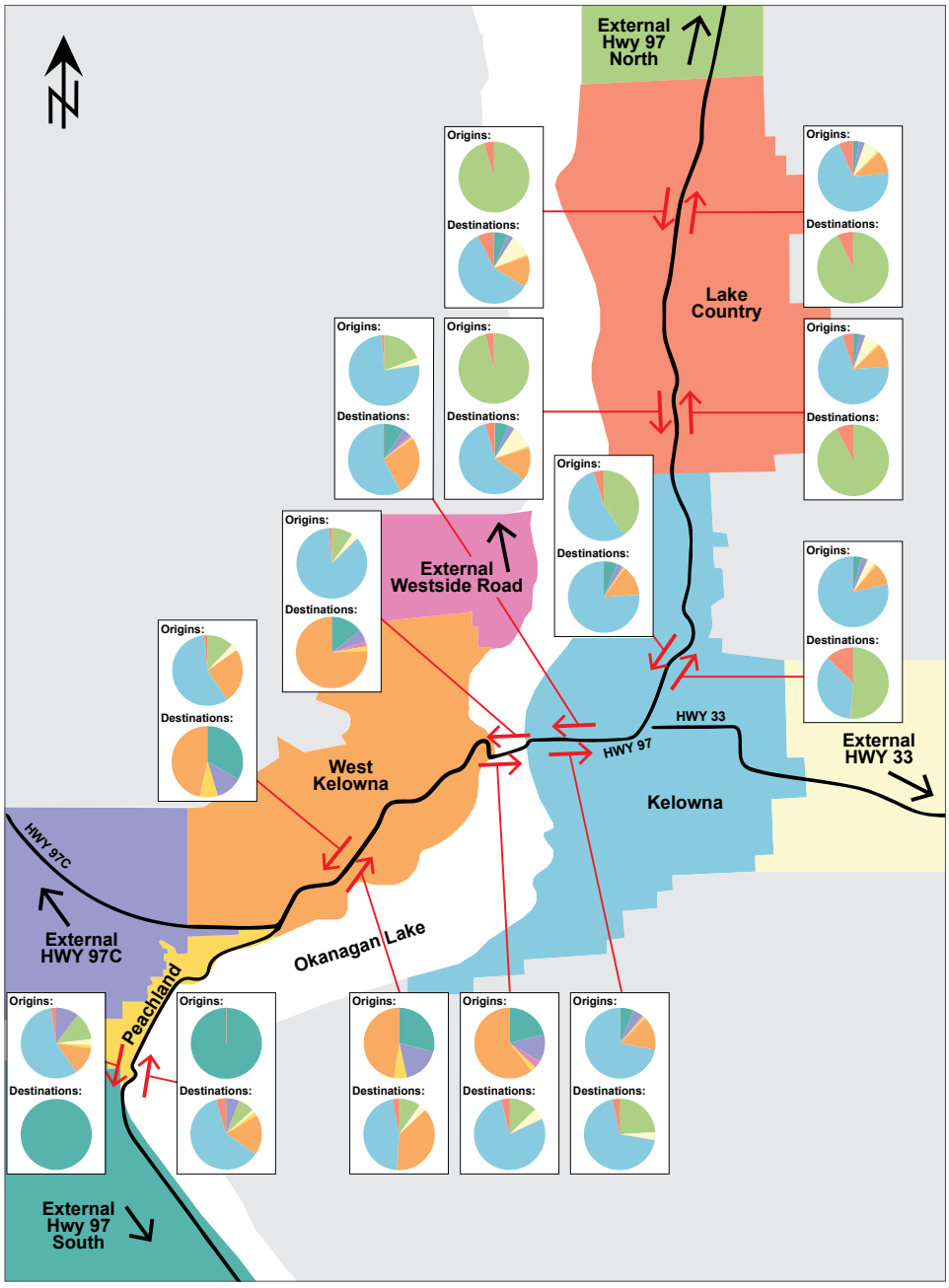
The map shows the proportion of the traffic from each municipality that is predicted to use a specific segment of Highway 97. For each identified segment the origins by municipality are shown in the top pie and destinations on the bottom pie chart. Match the colours in the pies with the areas on the map to identify locations.

Trip Origins / Destinations: Where they will start and finish (Afternoon Peak Period—2040)

Key Discoveries

Modelling shows that in the southbound direction, traffic originating in Kelowna will represent more than 85% of the traffic on the W.R. Bennett Bridge. Over 75% of this bridge traffic will be destined to West Kelowna with another 15% travelling through to destinations south of the region. This traffic pattern again reinforces the strong pattern of short distance trips using the bridge, but with a noticeable amount of longer distance travel from Kelowna to south of the region.

East of the bridge, traffic destined to areas north of the region will represent a significant portion of the traffic travelling through Kelowna and especially through Lake Country. For example, from within Kelowna, external destined traffic will represent approximately 25% of the northbound traffic on Highway 97. This grows to over 50% on segments of Highway 97 north of Highway 33, and then to over 90% of Highway 97 traffic on segments located just south of Lake Country.



Traffic Volume Growth

2014—2040

How to Read These Charts

The growth in peak hour traffic volumes between 2014 and 2040 is illustrated at several representative locations along Highway 97 within the Central Okanagan Region. At each representative location, the current traffic volumes, future predicted traffic volumes, and the approximate growth between the two sets of traffic volumes are depicted for both the AM and PM peak hours in each direction of travel. For example, at the W.R. Bennett Bridge, there is a predicted increase of 23% in northbound travel during the AM peak hour whereas there is only an 18% increase in northbound travel during the PM peak hour.

Highlights—AM Peak Hour

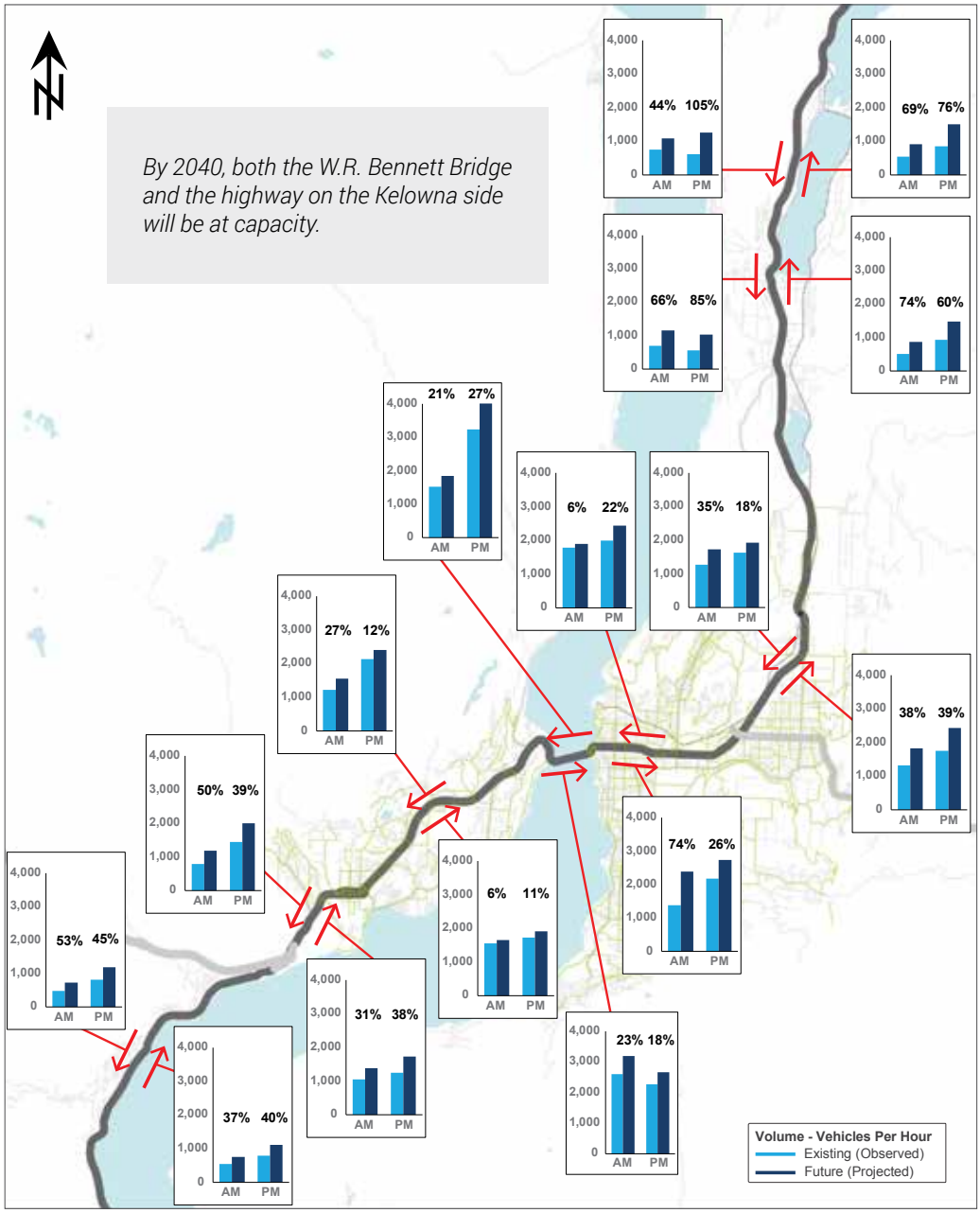
At the W.R. Bennett Bridge, current traffic volumes are forecasted to grow by approximately 23% in the northbound direction and by 21% in the southbound direction.

High growth, where current traffic volumes are forecast to increase by over 50%, is anticipated on segments of Highway 97 north of the airport in both directions of travel.

Highlights—PM Peak Hour

At the W.R. Bennett Bridge, current traffic volumes are forecasted to grow by approximately 18% in the northbound direction and by 27% in the southbound direction.

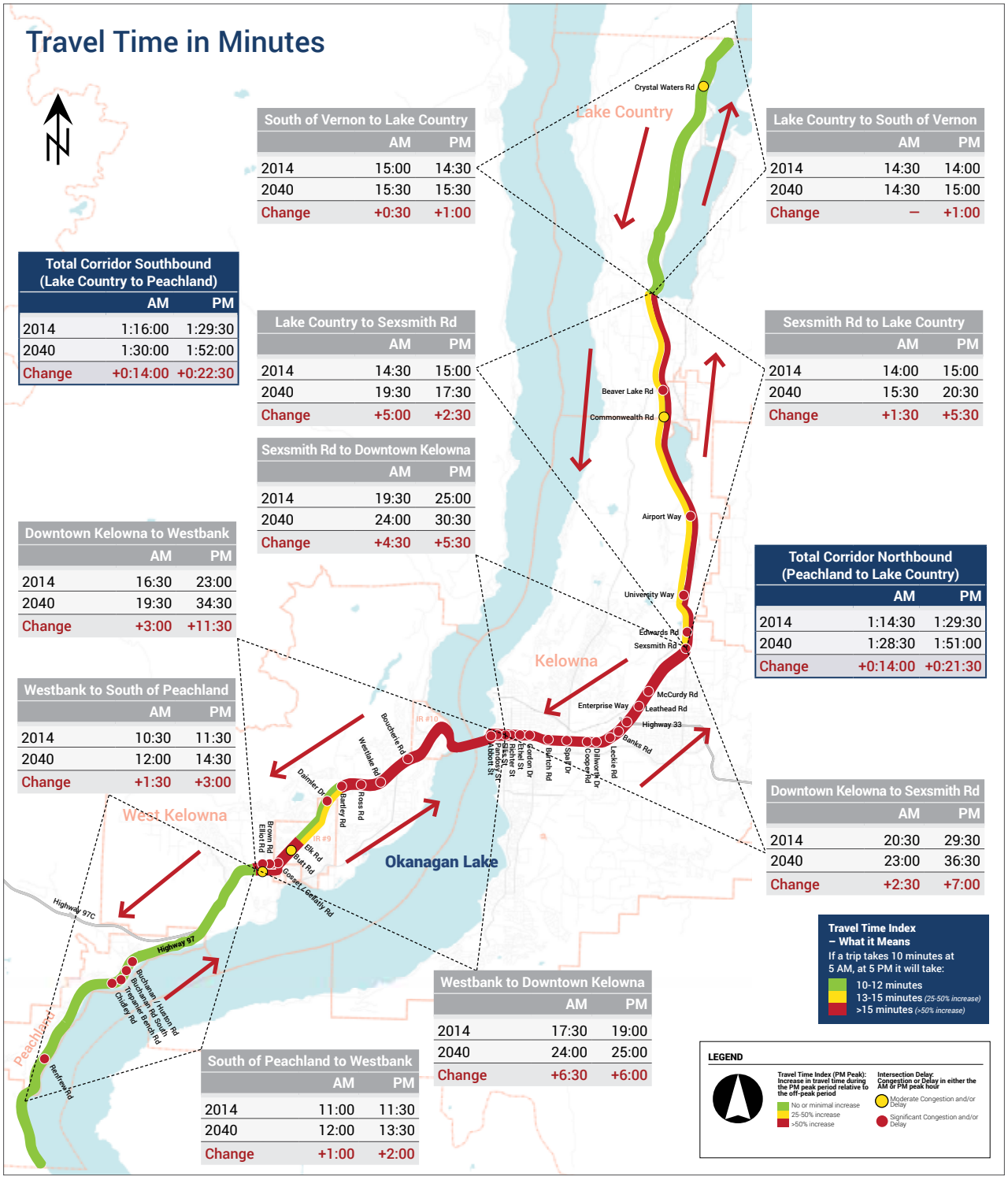
High growth, near or exceeding a 50% increase on current traffic volumes, is anticipated on segments of Highway 97 south of Highway 97C and north of the airport.



Future Transportation Corridor (Baseline)

The future baseline transportation corridor is assumed to include currently-planned improvements such as widening Highway 97 to six lanes between Highway 33 and Edwards Road.

However, with travel demand in 2040 throughout the network expected to be greater than today, peak hour congestion is expected to grow as well, leading to a decline in network performance. And because only 4% of traffic crossing the bridge comes from or goes outside the Central Okanagan area, almost all of the congestion will continue to be the result of local and regional trips.



Summary of Key Findings

- *By 2040, the W.R. Bennett Bridge will reach capacity in its current configuration; the approaches on the Kelowna side will reach capacity before then.*
- *A trip along the full length of the corridor (between Peachland and Lake Country) will take almost 15 minutes longer in the AM peak hour and up to 24 minutes longer in the PM peak hour.*
- *Almost all signalized intersections within developed areas will have significant congestion and delay.*

The Highway 97 Corridor – What Should Its Role Be in the Future?

On page 6 we discuss the current role of Highway 97. But what should its role be in the future? We are looking for your views. The Feedback Form (provided separately) contains a survey listing the statements shown below, describing possible functions of the corridor. Please use the Feedback Form to indicate your level of agreement or disagreement with each statement.

- Highway 97 should provide a direct route to access downtown Kelowna.
- Highway 97 is for long-distance trips. Local trips should use the existing street network.
- There should be direct business access (driveways) to and from Highway 97.
- Highway 97 should connect to all major local streets.
- Highway 97 should be completely grade-separated (interchanges only and no intersections with traffic signals).
- Access to Central Okanagan communities from Highway 97 should be limited to major entry points only.
- There should be frequent and convenient opportunities to turn on and off, and to cross Highway 97 through developed areas.
- Highway 97 should be the “Main Street” in the communities through which it passes.
- Cycling facilities should be provided on or adjacent to Highway 97.
- Rapid transit (bus, light rail) should operate on or next to Highway 97.

Please use separate Feedback Form for your responses.

What Would You Do?

While the process of generating long-term options to improve future mobility in the Central Okanagan has not yet begun, the Ministry has already been receiving input from local government planners and engineers on the Technical Advisory Committee, and from community citizen/stakeholder representatives on the Community Working Group. Both groups recently participated in workshops, where they applied information gained earlier in the study (summarized on pages 4-5 in this booklet) to generate ideas to address some of the corridor mobility issues. Not confined to second crossing concepts but recognizing that almost all of the traffic is generated within the region, ideas included restricting turns to/from the highway, creating overpasses and underpasses on Harvey Avenue, even double-decking a portion of Highway 97. Localized "ring roads" to divide and disperse the traffic, LRT, and of course, some second crossing options, have also been suggested.

Now the Ministry wants to hear from you. What do you think should be done to deal with congestion along the Highway 97 corridor?

Use a marker on the map provided with the Feedback Form to show us where you would make improvements or add a second crossing. Tell us the problem your suggestion would solve and how.

What Do You Think?

Your input is important to this study, and your responses to the following questions will be especially valuable.

- How should future congestion be addressed?
  improved current corridor / reduce accesses to highway / replace signals with overpasses / alternate route to Highway 97 / build another bridge / other (specify)
- If you favour an additional bridge across the lake, where should it go?
  north of the current location / at or near the current location / south of the current location / don't favour an additional bridge
- What alternatives should we consider to reduce traffic demand?
  increased transit / more cycling facilities / more mixed-use development / more HOV/carpool lanes / other (specify)
- What improvements on Hwy 97 would you undertake right away to get immediate relief from congestion?
- Is there any specific information/research you would like to see presented at a future session?

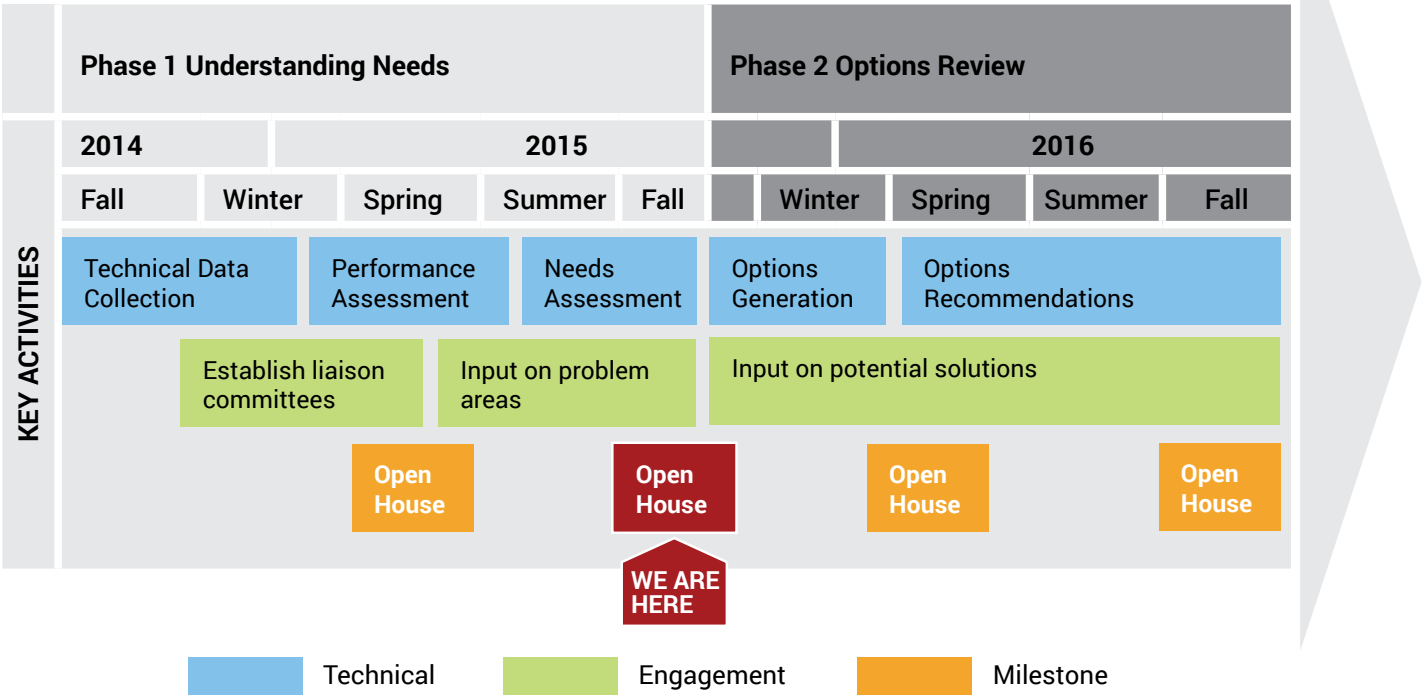
Please use separate Feedback Form for your responses.

Next Steps

Now that we have a sense of the future conditions which will form the basis of future needs, and with a collection of historical work as a reference, we will proceed with the generation of preliminary corridor options. Input received during this consultation and in recent meetings with our Technical Advisory Committee and Community Working Group will be applied, and we will return in spring 2016 to present the options for further feedback.

More localized improvement options, many of which have already been assumed in our description of the future basic network, may also be refined for development in the nearer term.

Central Okanagan Planning Study Process Snapshot



Sources:

BC Transit
BC Stats
City of Kelowna
City of Vernon
District of Lake Country
District of Peachland
District of West Kelowna
HDR Consultants
Ministry of Transportation and Infrastructure
Okanagan Indian Band
Parsons – Central Okanagan Planning Study
Partnerships BC
Regional District of Central Okanagan
Statistics Canada
Sustainable Transportation Partnership of the Central Okanagan
Tourism Kelowna
Westbank First Nation

Contact Information:

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