

Rapid Transit Network Operational Review

SUMMARY AND CONCLUSIONS

An operational review was carried out by Transit Services planning staff in order to examine how the city-wide transit system would operate at each stage of construction of the approved Rapid Transit Network, assess the value of each element of the network for transit customers and for the transit system as a business, and examine the potential savings in transit operating costs of each element of the network. The review provided input into the development of a preferred option for the construction and expansion of the network.

For each element of the network, staff examined:

- Service characteristics, which included service patterns, connections and service levels;
- Benefits for customers, which included travel time savings;
- Benefits for the transit system as a business, which included operating cost savings and increases in transit ridership, and reliability of service;
- Benefits for City priorities, which included downtown capacity and operations and urban development goals;
- Performance, which included ridership, productivity, and fleet size changes; and
- Efficiency, which included the available capacity for growth downtown and operating cost savings.

As well, for each element, staff developed an index comparing operational cost savings to capital investment levels and an index comparing the amount of expected passenger travel to capital investment levels.

As detailed in Appendix C, staff examined each element of the 2031 that was a candidate for construction by 2021, including:

- Light rail, Tunney's Pasture Station – Blair Station
- Light rail, Baseline Station – Tunney's Pasture Station
- Light rail, Riverside South Town Centre – Bayview Station
- Light rail, Airport connection
- O-Train, Leirtrim Station – Greenboro Station
- Cumberland Transitway, Millennium Station – Chapel Hill Station
- Blackburn Hamlet Bypass Bus Lanes, Navan Rd – Blair/Innes
- Hospital Transitway, Blair/Innes – Lycée Claudel Station
- Southwest Transitway, Norice Street – Baseline Station
- Southwest Transitway, Barrhaven Town Centre – Fallowfield Station
- West Transitway, Palladium Drive – Eagleson Road
- West Transitway, Moodie Drive – Bayshore Station
- West Transitway, Pinecrest Station – Southwest Transitway

The conclusions of the operational review were drawn for five priorities:

- Travel time reductions
- Operating cost savings
- Downtown capacity increases
- Improved mobility
- Increases ridership from development and intensification

As well, other important benefits that were also examined included reliability of transit service, reduced bus operation in downtown, and improved service/capacity for park and ride lots.

PRINCIPAL FINDINGS

Service Characteristics

The following are the service characteristics for the two main types of network elements:

- Light Rail lines
 - Frequent service will be provided from Blair Station, Baseline Station, and Riverside South Town Centre to downtown.
 - Supplementary service will also be provided from Hurdman Station and Lincoln Fields Station to downtown in the morning peak period.
 - Consistent all-day local bus connections will be made at bus terminals and other major transfer stations.
 - Direct bus services to downtown will be removed.
- New sections of Transitway
 - Frequent bus service will be provided from suburban areas to light rail stations.
 - Bus service along the Transitway will benefit from reduced travel time, improved reliability, and reduced operating costs.

Benefits for Customers

The benefits for customers was determined to include:

- The growth of downtown employment will continue through the ability to increased capacity on transit service in the downtown on light Rail lines.
- Customers will see reduced travel times either in the downtown as a result of the light rail tunnel or along new sections of Transitway in comparison to operation on city streets.
- Improved reliability will be attained as the light rail tunnel removes conflict with auto traffic, service vehicles, and pedestrian crossings and new sections of Transitway remove buses from congested auto traffic.

Benefits for City priorities

The benefits that will achieve City priorities include:

- Reduced bus operation downtown – The light rail tunnel and light rail lines from Blair, Baseline, and South Keys Stations will allow removal of bus operations on Albert and Slater Streets. Once all three lines are built, only local buses will need to remain in downtown
- Development and intensification – The light rail tunnel will allow for redevelopment and transit-integrated development in the downtown. The light rail line from Baseline Station and the Transitway extension from Norice Street to Baseline Station will allow for a transit-integrated development at Centrepointe and Algonquin College. The light rail line from Riverside South Town Centre will promote transit use and employment in Riverside South. New sections of Transitway in Kanata, Barrhaven, and Orléans will promote transit use and employment within these communities.

Performance Indicators

The two indicators of performance were determined by three variables, ridership, amount of passenger kilometers traveled and fleet size changes in 2021.

Ridership - morning peak hour

Network Element	Ridership per hour
Light Rail, Blair– Downtown	10,200
Light Rail, Baseline– Downtown	8,300
West Transitway, Moodie– Bayshore	5,100
Southwest Transitway, Norice to Baseline	3,900
Transitway on Blair Road and bus lanes on Blackburn Hamlet Bypass, Chapel Hill – Blair Station	3,300
Light rail, Riverside South – Downtown	3,100
Other elements	1,200 to 3,000

Passenger-km of Travel – morning peak hour

Network Element	Passenger-km of Travel
Light Rail, Baseline– Downtown	225,000
Light Rail, Blair– Downtown	142,000
Light rail, Riverside South – Downtown	42,000
Transitway on Blair Road and bus lanes on Blackburn Hamlet Bypass, Chapel Hill – Blair Station	25,000
West Transitway, Moodie– Bayshore	14,000
Other elements	6,000 to 10,000

Changes in Fleet Size

Network Element	Buses	Light Rail Cars
Light Rail, Blair–Downtown	-152	+78
Light Rail, Baseline–Downtown	-88	+57
Light Rail, Riverside South–Downtown	-66	+36
New sections of Transitway and transit priority measures	-49	–

Efficiency

System efficiencies will be achieved through:

- Increasing capacity in the downtown. If light rail tunnel and line from Blair Station are not built, downtown capacity will be exhausted in 2018. Available capacity for transit ridership in the downtown will double after light rail tunnel and all three lines built
- Savings in operating costs. All light rail lines will allow for cost savings through the introduction of higher-capacity trains. All new sections of Transitway and transit priority measures will allow cost savings from faster operation of buses.
- A greater operational cost savings compared to capital investment. An index was developed comparing the operational cost savings per dollar of capital investment, as shown in Appendix A.

- An increase in the passenger travel compared to investment. An index was developed comparing the annual passenger kilometers traveled per capital investment, as shown in Appendix A.

RELATIONSHIP TO TRANSIT SYSTEM PRIORITIES

Travel Time Reductions

New sections of Transitway and transit priority measures will allow service to operate at reduced travel times as compared to operations on city streets. As well, the light rail tunnel will reduce travel time downtown. The elements, which provided the highest values in travel time reductions, are:

- West Transitway, Moodie Drive – Bayshore Station, which allowed for faster operation for buses from Kanata to central areas of Ottawa.
- Transitway on Blair Road and Bus lanes on Blackburn Hamlet Bypass, Blair Station – Chapel Hill Station, which allowed for faster operation for buses from southern Orleans to central areas of Ottawa.

Operating Cost Savings

The light rail lines will reduce operating costs by replacing buses with higher-capacity trains. New sections of Transitway and transit priority measures will reduce operating costs by allowing faster operation of buses. The elements, which provided the highest values in operating cost savings, are:

- Light rail, Blair – Downtown
- Light rail, Baseline – Downtown
- Light rail, Riverside South – Downtown
- Cumberland Transitway

Downtown Capacity Increases

The light rail tunnel will provide much greater capacity to and through the downtown and would allow for the removal of caps on future ridership. Increased transit capacity will allow for continued growth of downtown employment. The elements, which provided the highest values in increasing downtown capacity, are:

- Light Rail, Blair Station – Downtown, which replaced bus operation into downtown and thereby increased transit capacity from the east. This line also allows the system ridership to grow beyond 2018 levels.
- Light Rail, Baseline Station – Downtown, which replaced bus operation into downtown to increase capacity from the west and allows the system ridership to grow beyond 2027 levels

Without the construction of the downtown tunnel and the east LRT line from Blair Station, ridership from the east will be capped at 2018 levels. Ridership from the west will be capped at 2027 levels if the LRT line between Baseline and Downtown is not built. Therefore, the transit system would be constrained at 132 million riders by 2018 if tunnel were not built, see Appendix B. This assumes the continued purchase of articulated fleet to achieve 180 buses per hour through downtown. By the time the full system is built in 2031, 174 million riders will be generated – or 42 million new riders (2018 to 2031). Incremental ridership will be possible with

corresponding increases in downtown capacity. The southern light rail line will only add ridership incrementally after tunnel is built, assuming the Riverside community is built.

Improved mobility

New rapid transit lines will allow for improved travel from many parts of the City. The elements, which provided the highest value in improved mobility, are:

- Southwest Transitway, Barrhaven Town Centre – Fallowfield Station, which will provide better access to transit network from Barrhaven.
- Light Rail, South Keys Station – Downtown, which will provide better access to transit network from Greenboro, Alta Vista, central Nepean, Carleton University, and Preston Street areas.
- Cumberland Transitway, Millennium Station – Chapel Hill Station, which will provide better access to transit network from southern Orléans.

Increased transit ridership from development and intensification

The improvements to the transit system network will encourage transit-oriented developments around station areas, which will increase transit ridership and revenue. The elements, which provided the highest value in meeting City development and intensification objectives, are:

- Light Rail tunnel in downtown, which allows/promotes redevelopment and transit-integrated development in the downtown.
- West Transitway, Norice Street – Baseline Station, which allows/promotes transit-integrated development in the Centrepointe/Algonquin College area.
- Light Rail, Riverside South Town Centre – South Keys Station, which promotes transit use and employment in Riverside South.
- West Transitway, Palladium Drive – Eagleson Road, which promotes transit use and employment in Kanata and Kanata West.
- Cumberland Transitway, Millennium Station – Chapel Hill Station, which promotes transit use and employment in southern Orléans.

Other Important Benefits

Reliability of the transit will in the downtown because of the downtown tunnel by removing conflicts with auto traffic, service vehicles and pedestrians crossings. New sections of the Transitway will remove buses from congested auto traffic. The elements, which provide the highest value by improving reliability of the transit service, are:

- West Transitway, Moodie Drive – Bayshore Station
- Transitway on Blair Road and Bus lanes on Blackburn Hamlet Bypass, Blair Station – Chapel Hill Station
- Light Rail, Blair Station – Downtown
- Light Rail, Baseline Station – Downtown

- Light Rail, South Keys Station – Downtown

The light rail lines will reduce operations in the downtown by replacing buses with higher-capacity and more reliable train service. Removal of buses along Albert and Slate will allow for street improvements and improve the urban conditions of the downtown. Once all three lines are built, only local buses will be required to operate in the downtown. The elements, which provided the highest value by reducing bus operations in the downtown, are:

- Light Rail, Blair Station – Downtown
- Light Rail, Baseline Station – Downtown
- Light Rail, South Keys Station – Downtown

Park and ride lots allow for the use of the rapid transit network by people outside the transit service area. As well, they allow for the use of the rapid transit network for multi-purpose trips. The elements, which provided the highest value by increasing use at the park and ride lots, are:

- Southwest Transitway, Barrhaven Town Centre – Fallowfield Station, which will promote use of the Fallowfield and Strandherd park and ride lots.
- Transitway on Blair Road and Bus lanes on Blackburn Hamlet Bypass, Blair Station – Chapel Hill Station, which will promote use of the Chapel Hill park and ride lot.
- Transit Priority Measures on Strandherd and Woodroffe, Riverview Station to Fallowfield Station, which will promote use of the future Strandherd park and ride lot.
- Cumberland Transitway, Millennium Station – Chapel Hill Station, which will promote the use of the Millennium and Chapel Hill park and ride lots.
- Light Rail, Riverside South Town Centre – South Keys Station, which will promote the use of Leitrim and Riverview park and ride lots.

CONCLUSIONS

The downtown tunnel and light rail lines become the most necessary elements in order to support the continued City growth and also improve reliability of service. The most important element of the network will be the construction of the light rail line Blair–Downtown. The second most important element is the light rail line Baseline–Downtown. Light rail lines, new sections of Transitway, and transit priority measures will be necessary to improve transit quality of service by greater reliability and allow improved efficiency of transit system. Specifically, the construction of the West Transitway, Moodie–Bayshore, and Transitway and bus lanes, Blair–Chapel Hill, will offer the greatest savings for moderate capital investment.

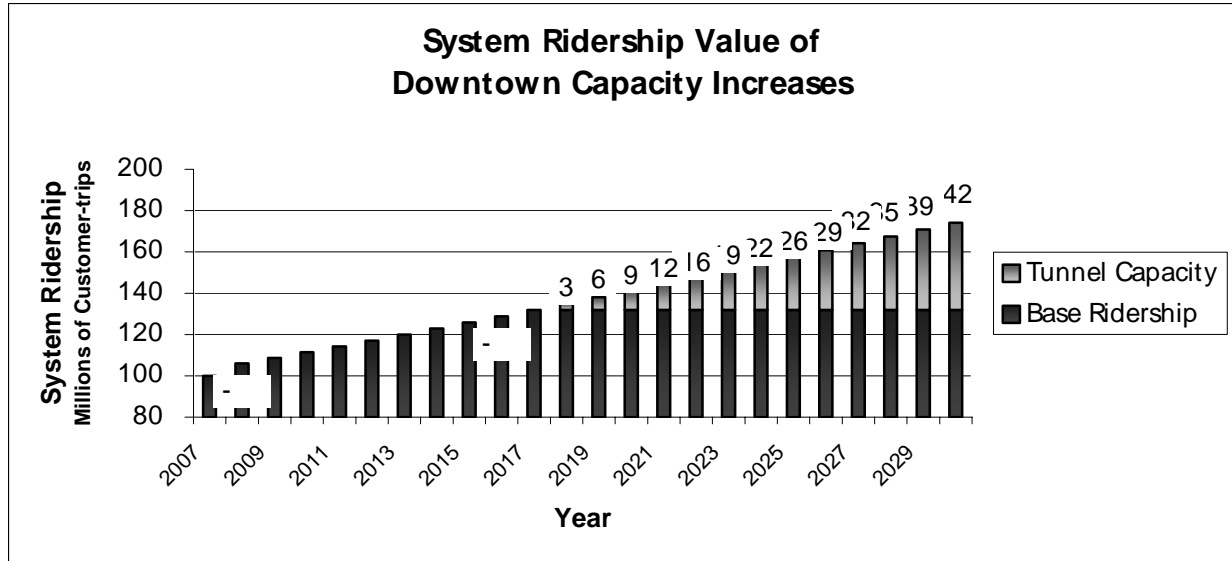
As well, the light rail lines and new sections of Transitway will address other important City priorities. Specifically, it will:

- Support intensification and transit-integrated development at major stations
- Reduce bus operation in downtown
- Improved access to transit network
- Promote use of transit in residential areas
- Promote employment in areas outside Greenbelt

**Operational Review
Summary of Performance Indicators**

Section	Capital Cost (\$M)	Operating Savings (\$M)	Cost Savings/ Investment (Operating Cost Savings / Capital Cost [x100])	Performance/ Investment (Passenger-km / Capital Cost)
Light rail, Blair - Downtown	227	9.6	4.3	1.31
Light rail, Baseline - Downtown	194	5.0	2.6	0.9
Light rail, Riverside South - Downtown	423	4.0	1.0	0.22
Light rail, Airport Connection	75	increase 0.8	N/A	0.01
O-Train, Leitrim - Greenboro	45	increase 0.2	N/A	0.11
Southwest Transitway, Barrhaven - Fallowfield	46	1.7	3.7	0.47
Hospital Transitway, Blair/Innes – Lycée Claudel	88	3.7	4.3	0.47
Cumberland Transitway, Millennium – Chapel Hill	64	3.3	5.2	0.38
Southwest Transitway, Norice - Baseline	185	0.5	0.3	0.05
West Transitway, Palladium - Eagleson	79	0.7	0.9	0.16
West Transitway, Moodie - Bayshore	18	1.9	10.7	1.65
West Transitway, Pinecrest - Southwest Transitway	171	2.7	1.6	0.15
Blackburn Bypass Bus Lanes, Navan - Blair/Innes	20	2.0	9.9	2.61

**Downtown Capacity Increases
– System Growth Possible Beyond 2018**



<p>Light Rail, Blair Stn – Tunney’s Pasture Stn ◦ Capital cost \$227-million (<i>line east of tunnel only</i>) ◦ Possible opening date - 2017</p>	
<p>Service ◦ Frequent trains Blair-Tunney’s Pasture 7 days/week ◦ Extra service Hurdman-Tunney’s Pasture in morning peak ◦ Combined interval 2-3 min ◦ Bus connections at Blair from Orleans and at Hurdman from Southeast Transitway ◦ Bus service from Nepean/Kanata continues to run on Albert/Slater</p>	<p>Performance in 2021 ◦ Bus fleet size reduced by 152 ◦ Light rail fleet increased by 78 ◦ Ridership at busiest point 10,190 per hour</p>
<p>Benefits ◦ Increased capacity for ridership growth to and through downtown ◦ Reduced travel time for customers to and through downtown ◦ More reliable service – avoid cross-street traffic and pedestrians ◦ Operating cost savings by replacing buses with larger light rail cars ◦ Reduces bus operation on Albert/Slater ◦ Opportunities for redevelopment and integrated development</p>	<p>Efficiency in 2021 ◦ Downtown at 48% of maximum capacity ◦ Operating cost savings \$9.6-million per year ◦ Cost savings/investment 4.3 ◦ Performance/investment 1.07</p>

<p>Light Rail, Baseline Stn – Tunney’s Pasture Stn</p> <ul style="list-style-type: none"> ◦ Requires Light rail, Blair Stn-Tunney’s Pasture Stn to be open ◦ Capital cost \$194-million (<i>line west of tunnel only</i>) ◦ Possible opening date – 2017 	
<p>Service</p> <ul style="list-style-type: none"> ◦ Frequent trains Baseline - Tunney’s Pasture 7 days/week ◦ Extra service Lincoln Fields - Hurdman in morning peak ◦ Combined interval 2-3 min ◦ Bus connections at Baseline from Barrhaven and at Lincoln Fields from Kanata ◦ Only local downtown routes continue on Albert/Slater 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ◦ Bus fleet size reduced by 88 ◦ Light rail fleet increased by 57 ◦ Ridership at busiest point 8,250 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ◦ Increased capacity for ridership growth to and through downtown ◦ Reduced travel time for customers to and through downtown ◦ More reliable service – avoid cross-street traffic and pedestrians ◦ Operating cost savings by replacing buses with larger light rail cars ◦ Reduces bus operation on Albert/Slater ◦ Opportunities for redevelopment and integrated development 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ◦ Operating cost savings \$5.0-million per year ◦ Cost savings/investment 2.6 ◦ Performance/investment 0.90

<p>Light Rail, Riverside South Town Centre - Bayview Stn</p> <ul style="list-style-type: none"> ▫ Capital cost \$423-million (<i>line only</i>) ▫ Possible opening date – 2017 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Frequent trains, Riverside South Town Centre – Hurdman/Blair ▫ Bus connections at Greenboro from southeast Ottawa ▫ Bus connections at Riverside South from Barrhaven 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 66 ▫ Light rail fleet increased by 36 ▫ Ridership at busiest point 3,144 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Increased capacity for ridership growth to and through downtown ▫ Reduced travel time to Central Ottawa ▫ More reliable service - avoid cross-street traffic and pedestrians ▫ Reduces bus operation on Albert/Slater ▫ Opportunities for redevelopment and integrated development 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost saving \$4.0-million per year ▫ Cost savings/investment 1.0 ▫ Performance/investment 0.22

<p>Light Rail, Airport Connection</p> <ul style="list-style-type: none"> ◦ Requires Light rail, Leirim Stn-Bayview Stn to be open ◦ Capital cost \$75-million (<i>line only</i>) ◦ Possible opening date – 2017 	
<p>Service</p> <ul style="list-style-type: none"> ◦ 15-minute frequency from/to Airport 7 days/week 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ◦ Bus fleet size reduced by 1 ◦ Light rail fleet increased by 3 ◦ Ridership at busiest point 130 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ◦ Opportunities for transit integration at Airport 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ◦ Operating cost <u>increase</u> \$0.8-million per year ◦ Cost savings/investment N/A ◦ Performance/investment 0.01

<p>O-Train, Leirtrim Station – Greenboro Station</p> <ul style="list-style-type: none"> ▫ Capital cost \$45-million (line only) ▫ Possible opening date - early 2011 	
<p>Service</p> <ul style="list-style-type: none"> ▫ 15-minute frequency trains Leirtrim-Bayview 7 days/week ▫ Bus connections at Leirtrim from Riverside South 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 4 ▫ O-Train fleet increased by 2 ▫ Ridership at busiest point 300 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time to central Ottawa ▫ Establishes rapid transit service south of the Greenbelt 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost <u>increase</u> \$0.2-million per year ▫ Cost savings/investment N/A ▫ Performance/investment 0.11

<p>Cumberland Transitway, Millennium Station – Chapel Hill Station</p> <ul style="list-style-type: none"> ▫ Capital cost \$64-million ▫ Possible opening date – late 2018 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses will operate from Millennium to Blair Stn 7 days/week ▫ If built prior to light rail line, buses will run through downtown to Tunney’s Station ▫ Local and express bus connections at stations from Orléans 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 15 ▫ Ridership at busiest point 1813 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time to central Ottawa ▫ More reliable service ▫ Opportunities for transit integrated development 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$3.3-million per year ▫ Cost savings/investment 5.2 ▫ Performance/investment 0.38

<p>Blackburn Bypass Bus Lanes, Navan Rd – Blair/Innes</p> <ul style="list-style-type: none"> ▫ Capital cost \$20-million ▫ Possible opening date – late 2018 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses will operate from Blackburn Hamlet to Blair 7 days/week ▫ If built prior to East LRT, buses will run through downtown to Tunney’s Station ▫ Express and local buses from Blackburn Hamlet and Orléans 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 14 ▫ Ridership at busiest point 3,454 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Increased capacity for ridership growth to and through downtown ▫ Reduced travel time for customers to and through downtown ▫ More reliable service 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$2.0-million per year ▫ Cost savings/investment 9.9 ▫ Performance/investment 2.61

<p>Hospital Transitway, Blair/Innes to Lycée Claudel Station</p> <ul style="list-style-type: none"> ▫ Capital cost \$88-million ▫ Possible opening date – early 2014 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses will operate between Blair/Innes to Hurdman 7 days/week 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 17 ▫ Ridership at busiest point 3,118 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time to central Ottawa ▫ More reliable service ▫ Greater visibility and integration with hospital lands 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$3.7-million per year ▫ Cost savings/investment 4.3 ▫ Performance/investment 0.47

<p>Southwest Transitway, Norice Street to Baseline Stn</p> <ul style="list-style-type: none"> ▫ Capital cost \$185-million ▫ Possible opening date - mid 2011 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses from Barrhaven Town Centre and Meadowlands will operate 7 days/week ▫ If built before LRT extended to Baseline Stn, buses will operate through downtown to Place d'Orléans 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 3 ▫ Ridership at busiest point 3,873 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time for customers to central Ottawa and Centrepointe ▫ More reliable service ▫ Opportunities for transit integrated development with Centrepointe, Constellation and Algonquin College buildings 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$0.5-million per year ▫ Cost savings/investment 0.3 ▫ Performance/investment 0.05

<p>Southwest Transitway, Barrhaven Town Centre – Fallowfield Station</p> <ul style="list-style-type: none"> ▫ Capital cost \$46-million ▫ Possible opening date – late 2017 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses from Barrhaven Town Centre will operate 7 days/week ▫ Bus connections at stations from Barrhaven ▫ If built before LRT extended to Baseline Stn, buses will operate through downtown to Hurdman Stn 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 7 ▫ Ridership at busiest point 1,888 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time for customers to central Ottawa ▫ More reliable service ▫ Opportunities for transit integrated development at Barrhaven Town Centre 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$1.7-million per year ▫ Cost savings/investment 3.7 ▫ Performance/investment 0.47

<p>West Transitway, Palladium Dr – Eagleson Rd</p> <ul style="list-style-type: none"> ▫ Capital cost \$79-million ▫ Possible opening date - late 2018 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses from Palladium will operate 7 days/week ▫ Bus connections at stations from Stittsville and Kanata ▫ Buses will operate through downtown to Hurdman Stn 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 3 ▫ Ridership at busiest point 1,223 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time for customers to central Ottawa ▫ More reliable service ▫ Opportunities for transit integrated development at Scotiabank Place 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$0.7-million per year ▫ Cost savings/investment 0.9 ▫ Performance/investment 0.16

<p>West Transitway, Moodie Dr – Bayshore Station</p> <ul style="list-style-type: none"> ▫ Capital cost \$18-million ▫ Possible opening date – mid 2013 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses from Moodie Dr to Bayshore Stn will operate 7 days/week ▫ Bus connections at stations from Kanata and Bells Corners ▫ Buses will operate through downtown to Hurdman Stn 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 8 ▫ Ridership at busiest point 5,121 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time for customers to central Ottawa ▫ More reliable service 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$1.9-million per year ▫ Cost savings/investment 10.7 ▫ Performance/investment 1.65

<p>West Transitway, Pinecrest Stn – Southwest Transitway</p> <ul style="list-style-type: none"> ▫ Capital cost \$171-million ▫ Possible opening date – mid 2016 	
<p>Service</p> <ul style="list-style-type: none"> ▫ Buses from Pinecrest to Southwest Transitway will operate 7 days/week ▫ Bus connections at stations from West Transitway ▫ Buses originating west of Bayshore will operate through downtown to Hurdman Stn ▫ If built prior to LRT is extended to Lincoln Fields, buses will operate through downtown to Hurdman Stn 	<p>Performance in 2021</p> <ul style="list-style-type: none"> ▫ Bus fleet size reduced by 11 ▫ Ridership at busiest point 5,838 per hour
<p>Benefits</p> <ul style="list-style-type: none"> ▫ Reduced travel time for customers to central Ottawa ▫ More reliable service 	<p>Efficiency in 2021</p> <ul style="list-style-type: none"> ▫ Operating cost savings \$2.7-million per year ▫ Cost savings/investment 1.6 ▫ Performance/investment 0.15

