

## APPENDIX 2

### Comparison of Health Impacts of the Remove and Hybrid Alternatives

Criterion	Option with the greatest health benefit	Comment
<b>Transportation and Infrastructure</b>		
<b>Transit Availability</b>	Both	Both options are similar in terms of impacts on access to transit. Both options allow for planned or proposed transit improvements (LRT / Smart Track). Transit is associated with higher levels of physical activity and also facilitates access to employment, services and healthy food, thereby enabling better health.
<b>Pedestrian Movements</b>	Remove	The Remove option allows for a more pedestrian friendly infrastructure that promotes walking and increases opportunities for physical activity which benefit health. It allows for sidewalks to be built to City standards along the entire length of Lake Shore Boulevard and for use on the north and south sides of the Boulevard. Pedestrian crossing distances are shorter with the Remove option than the Hybrid option
<b>Cycling Infrastructure</b>	Both	Both options offer an opportunity for 4,200 metres of new cycling infrastructure from Yonge to Leslie Street. This can connect with existing and planned infrastructure, thereby expanding the cycling network. Improving the cycling environment makes it more attractive for people to cycle and increases opportunities for physical activity which benefits health.
<b>Road Safety</b>	Remove	<p>The Remove option provides greater road safety for pedestrians, cyclists and motorists which is associated with fewer deaths or injuries from collisions. Greater road safety with the Remove option is possible due to the following:</p> <p>Pedestrian Safety: Shorter crossing length, normalized intersections and removal of Gardiner columns that improves sight lines. Greater volume of traffic will be at grade; street, design speed will be lower and road can be designed to accommodate expected volume to meet safety standards.</p> <p>Cyclist Safety: Eliminates all free flow right turns and removal of Gardiner columns improves sight lines.</p> <p>Driver Safety: Eliminates existing road safety concerns at Jarvis Street, Sherbourne Street, and the Don Roadway.</p>

Criterion	Option with the greatest health benefit	Comment
<b>Urban Design</b>		
<b>Planning Objectives</b>	Remove	<p>The Remove option better achieves the Central Waterfront Secondary Plan principles by improving north-south crossings, creation of a continuous trail, adding park space, and creating a tree-lined urban boulevard. Such environments are associated with increased physical activity which is important for health.</p> <p>Limited access roads (like expressways) create barriers to walking and cycling. The Remove option replaces the expressway with a tree lined boulevard with sidewalks and provides for more frequent pedestrian crossing points. Retail space at grade also helps animate the street. These factors create a more walkable environment and are associated with an increase in physical activity and enhanced social interaction.</p>
<b>Urban Realm</b>	Remove	<p>The Remove option better enhances the streetscape than the hybrid option through more public space for pedestrians, patios, parks, recreation, and trails. The Remove option replaces the expressway with a tree lined boulevard with sidewalks, retail space at grade and additional parks. These factors create a more vibrant public realm, which is associated with an increase in physical activity and enhanced social interaction.</p>
<b>Built Form</b>	Remove	<p>The Remove option provides more opportunities for a mix of retail and other uses, which is associated with more walkable neighbourhoods, which supports health. Density, mixed uses and increased intersection density create an environment that is more conducive to cycling and walking eliminating the elevated expressway improves the environment at the base of buildings making it more pleasant for users and providing for additional at-grade retail.</p>
<b>Environment</b>		
<b>Social and Health Impacts</b>	Remove	<p>The Remove option would result in lower greenhouse gas emissions (12 percent) and fewer releases of air pollutants due to the lower vehicle kilometers travelled in the transportation system.</p> <p>The City has made a commitment to reduce emissions of greenhouse gases by 30% by 2020 and 80% by 2050 (1990 base year). Climate change is associated with increased heat-related illness and mortality, degraded air quality leading to respiratory and cardiovascular outcomes, and increases in vector-borne diseases and extreme weather events such as flooding.</p> <p>While air pollution has improved in Toronto, air pollution continues to be an important contributor to the burden of illness in Toronto (1300 premature deaths and 3550 hospitalization per year). The transportation sector is the largest source of air pollution in Toronto.</p>

Criterion	Option with the greatest health benefit	Comment
<b>Natural Environment Impacts</b>	Remove	<p>The Remove option provides more and better opportunities to create new natural habitat. Less area of impervious surface results in reduced storm water runoff and an improved micro-climate in the corridor. This reduces the negative health impacts from heat and extreme weather and increases climate change resilience.</p> <p>Enhancing natural areas along the Keating Channel will improve the City's resilience to extreme weather events. The Remove option allows the integration of storm water management and water quality features into the rebuilt corridor. The Remove option has approximately 1/3 less paved surface than the Hybrid option. The Remove option provides full access to sunlight along the corridor allowing for the planting of trees (1,237 new trees estimated providing 52% canopy coverage in the corridor compared to 12% coverage with the Hybrid option). These features reduce the negative health impacts from heat and extreme weather and increases climate change resilience.</p>
<b>Economics</b>		
<b>Global and Regional Competitiveness</b>	Hybrid	<p>The Remove option may make the downtown less attractive for employers and employees due to concerns about increased travel time. This could have a negative impact on employment potential in the downtown, affecting economic prosperity which contributes to health.</p> <p>Employment is an important determinant of health. While the EA indicates that removal of the expressway could make the downtown a less attractive place for people to work in or employers to establish themselves, experience in other cities shows that removal of expressways from central urban areas can result in an overall economic benefit due to the improved urban realm. One potential negative impact of the revitalisation of neighbourhoods that occurs after the removal of expressways is gentrification which can affect affordability of housing or commercial space.</p>
<b>Local Employment</b>	Remove	<p>The Remove option provides for a greater number of new jobs in the study area. Access to employment supports good health. The Remove option is expected to generate about 2,000 more jobs than the Hybrid option due to the improved retail/commercial environment along the proposed Boulevard.</p>