

2021 Cycling Network Plan Update

Date: November 18, 2021

To: Infrastructure and Environment Committee

From: General Manager, Transportation Services

Wards: All

SUMMARY

The Cycling Network Plan adopted by City Council in July 2019 seeks to build on the existing network of cycling routes to **Connect** gaps in the current network, **Grow** the network into new parts of the city, and **Renew** existing parts of the network to improve safety - with corresponding objectives and indicators for measuring and evaluating success.

The Cycling Network Plan consists of three components: a Long-Term Cycling Network Vision, the Major City-Wide Cycling Routes, and a three year rolling Near-Term Implementation Program. The plan components, objectives and indicators are aligned with a multitude of City policies including the Official Plan, TransformTO and the Vision Zero Road Safety Plan.

This report is a two year review of the Cycling Network Plan, as requested by City Council. It includes a status update of the 2019 - 2021 Near-Term Implementation Program, recommendations of new Major City-Wide Cycling Routes studies, and it seeks City Council endorsement of the 2022 – 2024 Near-Term Implementation Program. This report also includes additional recommendations to aid in the delivery of bikeways, and responds to a number of previous cycling-related motions.

The 2019 – 2021 Near-Term Implementation Program proposed 65 centreline km of new bikeways and over 35 centreline km of routes to be studied.

From 2019 to 2021, 65 centreline km of new bikeways were installed:

- 35 centreline km of cycle tracks;
- 11 centreline km of bike lanes;
- 6 centreline km of multi-use trails; and
- 13 centreline km of neighbourhood routes (6 km contra-flow bike lanes and 7 km sharrows, along with traffic calming).

There were also approximately 47 centreline km of upgrades and enhancements to existing cycling routes installed.

Meeting the 2019 – 2021 Near-Term Implementation Program delivery goals was made possible by the ActiveTO Cycling Network Expansion Program in 2020 and 2021, which accelerated 27 centreline km of bikeway projects. Without the ActiveTO program, Transportation Services would have fallen short of the Council directed Near-Term Implementation Program delivery goals.

While Transportation Services achieved the proposed targets, some of the ActiveTO routes displaced other projects originally identified for 2019 to 2021, so not every Near-Term Program project has been implemented.

The bikeway implementation over the past three years is unprecedented in Toronto's history and has resulted in faster progress towards the Cycling Network Plan's goal of having cycling accessible within close proximity (250 m and 500 m) of the City's population and jobs — 67.1% in 2021 up from 62.8% in 2018. This percentage increase translates to approximately 180,000 more people living and working with close access to a cycling route than did in 2018.

The demand for new bikeways in Toronto is high. City Council has directed Transportation Services through adopted policies contained in the TransformTO Climate Action Strategy, Vision Zero Road Safety Plan, the Toronto Office of Recovery and Rebuild's *COVID-19: Impacts and Opportunities* report, as well as a number of project-specific motions to continue to accelerate the delivery of an unprecedented amount of new bikeways.

Since the adoption of the Cycling Network Plan in 2019, Toronto has faced new and deepening challenges due to the COVID-19 pandemic. The pandemic has highlighted racial and socio-economic disparities in the City's health care, economic, and transportation systems. The inequitable outcomes of the current systems and past practices demonstrate the need to transform many of the City's systems including how transportation projects are planned and implemented, including bikeway projects delivered by the City.

The prioritization framework used to identify bikeway projects for the Near-Term Implementation Program is informed by new and emerging equity analyses, such as crowded transit routes, locations of essential services, and areas of parkland need.

The 2022 – 2024 Near-Term Implementation Program forecasts the delivery of approximately 100 centreline km of new bikeways, which is an increase over the 65 centreline km delivered in 2019 - 2021.

To achieve these targets and continue improving upon previous implementation rates of high-quality bikeways, the following is recommended:

- Working towards a streamlined reporting process, where new projects would be approved by Council for implementation following community consultation with an appropriate level of detail in order to accommodate minor changes to the projects as they may arise through detailed design and implementation with submission of the Bills for the associated By-law changes to reflect the constructed project to follow when appropriate;

- Enhancements to public consultation plans and events, supported by greater resources and staffing levels;
- An annual capital budget of approximately \$20 million, increasing annually as needed, in amounts to be confirmed in the annual capital budget process; and
- Additional staff to support design, consultation, delivery/construction, and monitoring for the delivery of bikeway projects.

The 2022 – 2024 Near-Term Implementation Program includes an ambitious number of kilometres compared to previous years' delivery rates, and includes a greater proportion of cycle tracks on arterial roadways.

Toronto is well on its way to becoming a safer and more equitable cycling city. The recommendations in this report reflect achievable advancements within the City's current implementation framework. The 2022 – 2024 Near-Term Implementation Program projects will be meaningful additions to Toronto's transportation system, connecting thousands of Toronto residents to a safe bikeway network, and transforming over 100 centreline km of streets into safer, more resilient places.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. City Council endorse, in principle, the new bikeway projects contained in the Near-Term Implementation Program (2022 – 2024) as outlined in Attachment 2 as the focus of Transportation Services' cycling budget and capital implementation program, including the initiation of feasibility analyses, public consultation, and detailed design.
2. City Council authorize the General Manager, Transportation Services, to initiate the near-term studies of the Major City-Wide Cycling Routes as outlined in Attachment 3, and to bring forward the findings of these studies and recommendations regarding future implementation at the appropriate time.
3. City Council direct the General Manager, Transportation Services to work with the City Clerk and the City Solicitor on streamlining the process for submission of By-law changes and Bills associated with Council-approved bikeways, in order to accommodate minor changes to the projects as may be necessary to address operational and safety issues as they may arise through the detailed design and implementation of approved bikeway process.
4. City Council direct the General Manager, Transportation Services, as part of the design, installation, and monitoring of new bikeway projects, to continue to work in consultation with the local Councillors, stakeholders, and residents to identify and implement changes to the bikeway projects contained in the Near-Term Implementation Program, before and after installation.
5. City Council direct the General Manager, Transportation Services, to request, as part of the annual budget process, the capital funding required to implement the Near-Term

Cycling Implementation Program (2022 - 2024), as well as the operating budget required to fund the maintenance costs of newly constructed bikeways.

FINANCIAL IMPACT

Capital Plan

The estimated cost to implement the Near-Term Program is approximately \$20 million per year over the 2022 – 2024 period, an increase from the previously required \$16 million per year scenario as noted in the Ten Year Cycling Network Plan adopted in 2016. The capital funding required to implement the cycling initiatives will be included in the Transportation Services budget submission as part of the 2022 to 2031 Capital Budget, subject to Council approval.

In order to effectively deliver the proposed capital budget for bikeways, Transportation Services will require increased capacity in the areas of project design and management (4 FTE), traffic systems (2 FTE), and data and analytics (1.5 FTE). New staff resources would be focused on the design, consultation, delivery/construction, and monitoring of the capital projects identified in the Cycling Network Plan and the positions are proposed to be fully funded from the Capital Budget. Transportation Services will seek Council approval to fund these positions as part of the 2022-2031 Capital Budget & Plan submission.

Operating Impact

The bikeways proposed in the Cycling Network Plan will require ongoing maintenance once installed. This maintenance service will include winter snow clearing and street sweeping at a level similar to the adjacent roadway (including enhanced winter maintenance on some routes). Additional operating costs for the maintenance of new bikeways will be identified as part of the reporting on specific bikeways proposed for installation. The operating budget impact of these capital investments will be considered as part of the 2022 Operating Budget submission for Transportation Services and future operating budget submissions.

EQUITY IMPACT STATEMENT

The City of Toronto's Equity Lens Tool and the Transportation Equity Lens Tool developed by Transportation Services have been used to assess potential impacts on Indigenous, Black and equity-deserving groups and to inform the 2021 Cycling Network Plan Update. Equity will continue to be emphasized throughout all phases of the development and delivery of the Cycling Network Plan, including the annual programming of the implementation schedule, and the public consultation process for each bikeway project.

Providing a range of safe, accessible mobility options, including a connected cycling network, has the potential to positively impact women, persons with low income, Indigenous Peoples, immigrants, refugees and undocumented individuals, LGBTQ2S+ people, persons with disabilities, racialized groups, Black Torontonians, vulnerable seniors, vulnerable youth, and vulnerable road users.

Many of the groups listed above have been disproportionately impacted by COVID-19, and Toronto has experienced deepening inequities in terms of health, social, and economic circumstances and outcomes.

Toronto's most vulnerable residents are facing growing barriers to accessing daily needs, including access to food, health services, public transit, shelters, training, employment, civic engagement, and programming. For many people, the pandemic has exacerbated mental health illness and social isolation.

A city-wide comprehensive, coordinated response is needed to minimize the health, social and economic impacts of the pandemic. The expansion of bikeways is one of the many recommendations identified in the *COVID-19: Impacts and Opportunities Report* for Toronto's recovery and rebuild process.

Expanding the cycling network, especially in areas hit hardest by the pandemic, has the potential to improve mental and physical health, increase access to places serving daily needs, and to provide an alternative to crowded transit routes. Facilitating safe opportunities for physical activity for populations that have the least access to recreational programming, particularly children and youth, is one of the ways bikeways can support mental health.

More work is necessary to improve upon the planning, engagement, and design of bikeways to advance the City's reconciliation efforts so that new bikeways better reflect the needs and lived experiences of Indigenous, Black, and equity-deserving groups. Transportation Services is taking active steps to reframe our capital program and budget to deliver projects and services more equitably, including how we prioritize the locations of new bikeway projects. We are also committed to making transportation accessible to all and have included in this report a prioritization framework for project delivery, to improve upon our past work, and add new best practices in order to build a more equitable transportation system.

DECISION HISTORY

On October 27, 28 and 30, 2020, City Council adopted a report from the City Manager on Towards Recovery and Building a Renewed Toronto, including the COVID-19: Impacts and Opportunities Report, providing a roadmap towards recovery and rebuild amidst the evolving pandemic.

(<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.EX17.1>)

On July 17, 2019 Toronto City Council approved the Cycling Network Plan Update, which established a new timeframe for cycling network programming and planning to improve road work coordination, accountability, and implementation.

(<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE6.11>)

On July 16 2019, as part of consideration of [IE6.8 Vision Zero 2.0 Road Safety Plan Update](#), City Council directed the General Manager, Transportation Services to plan and design road reconstruction projects using a complete streets approach, including

safety improvements such as vehicle lane width reductions, tightening curb radii, widening sidewalks and the potential for bicycle lanes, at the outset of all road reconstruction projects, in consultation with local councillors and stakeholders. (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE6.8>)

On July 4, 5, 6, and 7, 2017, City Council adopted TransformTO: Climate Action for a Healthy, Equitable and Prosperous Toronto - Report 2 - The Pathway to a Low Carbon Future. The report brought forward a series of long-term goals with necessary measures to realize a low-carbon Toronto in 2050 that achieves an 80 percent reduction in greenhouse gas emissions against 1990 levels. (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PE19.4>)

On February 28, 2017, the Complete Streets Guidelines were presented to the Public Works and Infrastructure Committee for information. The Complete Streets Guidelines, with their emphasis on safety of the most vulnerable - including those who walk and cycle - are an important tool for the implementation of the Cycling Network Plan. (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW19.3>).

On June 7, 2016, the Ten Year Cycling Network Plan was adopted, in principle, with amendments by City Council. (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW13.11>)

Attachment 7 provides further decision history of specific Councillor motions with responses.

COMMENTS

Toronto is a Cycling City

Each year in Toronto, the number of people riding bicycles grows. According to the 2016 Canadian Census ⁽¹⁾, some neighbourhoods in downtown Toronto have over 20% cycling mode share, with several neighbourhoods outside the core also at around 10%.

Since the onset of the COVID-19 pandemic in 2020, there has continued to be a shift in the demands on Toronto's streets, and how Torontonians are choosing to move through the city. While vehicle volumes initially dropped to 60-80% of previous volumes, cycling volumes remained at 90-105% of pre-COVID volumes during the weekdays and rose to 120-150% of pre-COVID volumes during the weekends.

However, not every area or street in Toronto feels like a cycling city yet. Many communities included in the [Toronto Strong Neighbourhoods Strategy](#) have historically received less investment in transportation infrastructure. Even in communities with higher cycling mode shares, many streets can pose real and perceived safety barriers.

¹ Statistics Canada, 2016. Data tables, 2016 Census. Journey to Work.

Cycling Network Plan

The goals of the Cycling Network Plan are to **Connect**, **Grow**, and **Renew** Toronto's cycling network, with objectives and indicators that correspond to the overarching goals and City policies, providing additional measures for evaluating success.

Goal	Objectives
Connect gaps in the network, and people to places	Connect between and to existing bikeways
	Connect to transit stations
	Connect to parks and natural areas, and to destinations serving daily needs
	Connect across barriers (such as highways and ravines)
Grow the cycling network into new parts of the city	Expand the network outside the downtown core
	Serve areas with latent cycling demand where infrastructure is lacking
	Expand the network in Neighbourhood Improvement Areas
Renew the existing cycling network routes where there are opportunities to improve quality	Upgrade existing bikeways for safety and comfort
	Upgrade infrastructure for convenience and clarity (such as wayfinding improvements)
	Improve cycling routes to schools and community hubs

The 2019 Cycling Network Plan Update built on the work of the 2016 Ten Year Cycling Network Plan with updated data sources, enhanced methodology, and a strengthened focus on safety and equity. The Cycling Network Plan continues to involve stakeholder engagement and internal collaboration, as well as apply the City's Equity Lens Tool to the process and the projects proposed in the plan.

Since 2019, the Cycling Network Plan follows a revised approach of short-term programming (Near-Term Implementation Program) paired with longer-term planning (Long-Term Cycling Network Vision with analysis scores, and Major City-Wide Cycling Routes) that better reflects the nature of capital coordination, development planning, and route-by-route feasibility assessments.

2019 – 2021 Implementation Progress

Since 2019, Toronto's cycling network has grown. From 2019 to 2021, 65 centreline km⁽²⁾ of new bikeways were installed:

- 35 centreline km of cycle tracks;
- 11 centreline km of bike lanes;
- 6 centreline km of multi-use trails; and
- 13 centreline km of neighbourhood routes (6 km contra-flow bike lanes and 7 km sharrows, along with traffic calming).

Additionally, 47 centreline km of existing cycling routes received significant upgrades and enhancements to improve safety and align with today's best practices of design.

*27 centreline km are currently temporary ActiveTO bikeways. No removed bikeways are included in this summary.

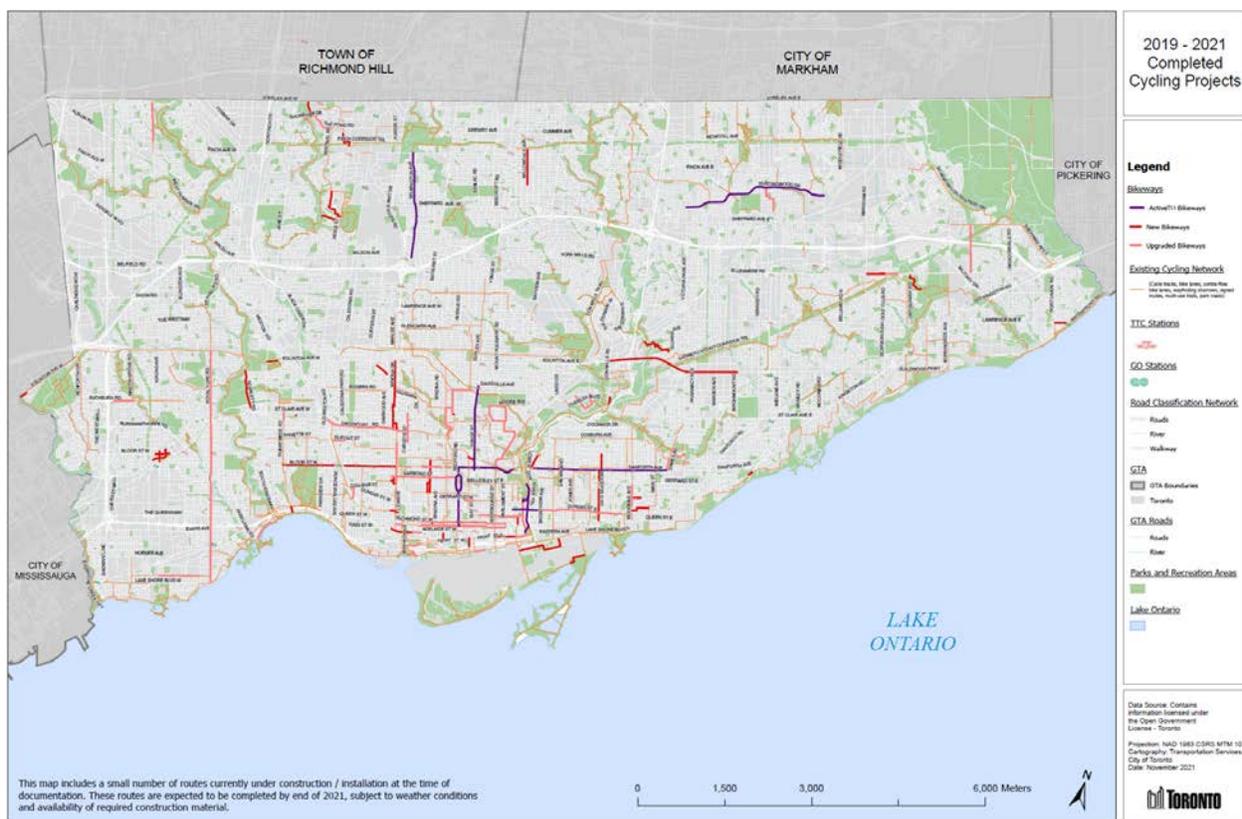


Figure 1 Map of 2019 - 2021 Completed Cycling Projects

The map of 2019 – 2021 Completed Cycling Projects and a detailed table is provided in Attachment 1.

The 2019 – 2021 Cycling Network Near-Term Implementation Program proposed 65 centreline km of new bikeways and over 35 centreline km of routes to be studied.

² Centreline kilometres measure the length of the road / trail segment. This is different to lane kilometres, which counts infrastructure on both sides of the street.

Transportation Services has met the delivery goals of the 65 proposed centreline km of new bikeways.

This achievement has been made possible by the ActiveTO Cycling Network Expansion Program in 2020 and 2021, which provided an opportunity to build a number of the Major City-Wide Cycling Routes, advancing the work from planned study to installation in a short timeframe. As a result of this acceleration, some routes initially identified in the 2019-2021 plan were delayed or deferred to future years.

Major City-Wide Cycling Routes: 2019 – 2021 Progress

The network of Major City-Wide Cycling Routes consists of approximately 500 centreline km. Today there are approximately 200 centreline km of this network in place, which accounts for approximately 40% of the Major City-Wide Routes network.

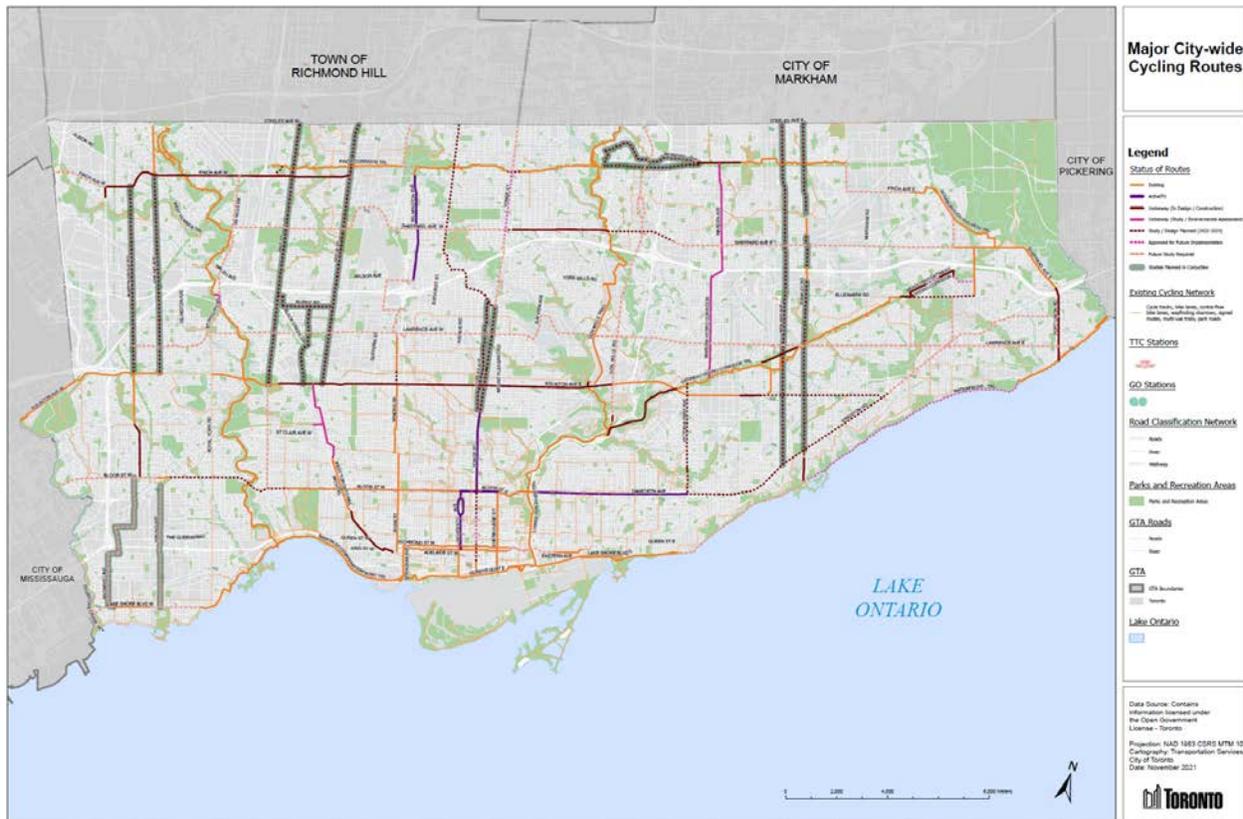


Figure 2 Map of Major City-Wide Cycling Routes

A detailed summary of progress on the Major City-Wide Cycling Routes is provided with the map in Attachment 3. A few highlights include:

Bloor Street / Danforth Avenue

- Bloor Street West (Shaw Street to Runnymede Avenue) – 4.1 km installed 2020.
- "Six Points" Bloor Street West / Dundas Avenue West / Kipling Avenue – 2.0 km installed 2020 (0.6 km of which is on Bloor Street West).
- Danforth Avenue (Broadview Avenue to Dawes Road) – 5.0 km installed 2020 (ActiveTO).
- Bloor Street East / West (Avenue Road to Castle Frank) – 2.2 km installed 2020 / 2021 (ActiveTO).

Don Trail / Gatineau Trail / The Meadoway

- East Don Phase 1 (Forks of the Don to Bermondsey Road) – 3.1 km construction underway.
- Lower Don Trail Improvements (Riverdale Park to Corktown Common) – 1.4 km detailed design complete and tender / approvals for construction underway.
- Gatineau Trail (Bermondsey Road to Eglinton Avenue East) – 0.7 km design underway, construction 2023.
- The Meadoway (Orton Park Road to Neilson Road) – 1.8 km phased construction - section from Orton Park Road to Highland Creek (900m) underway.
- The Meadoway (Military Trail to Morningside Avenue) – 700 metres design underway.
- The Meadoway (Scarborough SRT line to Marcos Boulevard) – 1.4 km design underway.

Humber Trail

- Mid-Humber Trail Gap (Mallaby Park to Crawford Jones Park) – 800 metres Environmental Assessment underway.

2019 – 2021 Implementation Outcomes

Growth in bikeways since the approval of the 2019 Cycling Network Plan Update has expanded the reach of the cycling network to serve more people. From 2018 to 2021, the proportion of people and places of employment within close proximity (250 m and 500 m) to a cycling route increased to 67.1% from 62.8% city-wide. This percentage increase translates to approximately 180,000 more people living and working with close access to a cycling route than did in 2018. Within Neighbourhood Improvement Areas specifically, the percentage rose to 61.3% from 59.9%. In terms of the Official Plan goal, which seeks to bring all people and jobs within 1 km of a cycling route, we are now at 91.5%, up from 90.0% in 2018. The table below uses population data from the 2016 Census and employment data from the 2016 Toronto Employment Survey.

The Canadian Census and Transportation Tomorrow Survey are each underway in 2021; results are not available yet. The next update of these measures will incorporate more recent survey data.

Cycling Network Coverage – All Bikeways ⁽³⁾				
	2018 ⁽⁴⁾	2019	2020	2021
Percentage of population and employment within 250m of a cycling route in Context 1 and within 500m in Context 2 ⁽⁵⁾	62.8%	63.1%	65.7%	67.1%
Percentage of population and employment in NIAs within 250 m of a cycling route in Context 1 and 500m in Context 2	59.9%	60.1%	60.4%	61.3%
Percentage of population and employment within 1 km of a cycling route (Official Plan Goal)	90.0%	90.0%	91.2%	91.5%

Another indicator of progress tracked by the City is the growth in ridership on routes with cycle tracks (protected bike lanes) installed. Counts of people cycling before and after demonstrate significant increases in the number of people travelling by bicycle. It is common that after the installation of bikeways, cycling volumes on these streets increase by 50% to 200% compared to the year before the bikeways were constructed.

³ All bikeways include bike lanes (buffered, contraflow), cycle track, multi-use trails (entrance, existing connector, boulevard), park roads, sharrows (wayfinding, connector), and signed routes. This calculation excludes edge lines and arterial sharrows.

⁴ The 2018 percentages here differ from the 2018 percentages presented in the 2019 report due to changes in methodology. The new calculation has been developed as a model in ArcGIS which can be re-run for consistency going forward.

⁵ Context 1 refers to the central area of Toronto, with high existing cycling mode share, high density of population, employment, and destinations, and a built-out environment with a tighter grid network and narrow street rights-of-way. Context 2 refers to the areas beyond central Toronto, with lower existing cycling mode share, and – in most but not all locations - lower density of population, employment, and destinations, more boulevard space, and greater distances between streets / blocks.

Improved bikeways make cycling safer and support physical health by encouraging more people to cycle. No loss of life as a result of traffic collisions is acceptable in a Vision Zero approach, and addressing road safety continues to be a priority.

Cycling Safety City-Wide	2017	2018	2019	2020
Number of Cyclist Fatalities	4	4	1	4
Number of Cyclists Seriously Injured	48	39	36	27
Rate of Cyclist Fatalities per 100,000 resident population ⁶	0.15	0.15	0.04	0.15
Rate of Cyclists Seriously Injured per 100,000 resident population	1.76	1.43	1.32	0.99

Cycling Network Near-Term Implementation Program: 2022 – 2024

This report contains the next Near-Term Implementation Program (2022 – 2024) of the Cycling Network Plan.

The 2022 – 2024 Near-Term Implementation Program includes 100 centreline kilometres expected to be completed by 2024 – this is ambitious compared to previous years' delivery rates, and includes a greater proportion of cycle tracks on arterial roadways.

Attachment 2 includes a map and table of the 2022 – 2024 Near-Term Program, and identifies projects in the following categories:

- **Underway:** Projects with design or construction underway, expected to be complete within the near-term program [50 centreline km].
- **New:** Proposed routes expected to be complete within the near-term program, pending detailed design, consultation and approvals [45 centreline km].
- **Renew:** Major enhancements or upgrades to existing routes, expected to be complete within the near-term program [40 centreline km].
- **Study:** Proposed routes requiring review of parallel options or substantial feasibility challenges; some may be achievable within the near-term program, while others will extend to 2025+ for installation, pending study results [90 centreline km].
- **Approved for Future Implementation:** Major growth projects with approved Environmental Assessments expected to be complete beyond the near-term program [21 centreline km].

⁶ Statistics Canada. 2016 Census Population – 2,731,571

The breakdown of kilometres by category demonstrates the lead time required for complex projects, especially those bundled with road reconstructions and resurfacings, developments, and transit projects. These timelines are, in large part, a result of the changing standards of our bikeways. Providing high quality bikeways involves complex analysis, consultation, and civil construction, which in turn takes substantial lead time, staff time, and budget. This is also true of complex intersection projects – especially the many protected intersection projects underway – which do not add to the kilometre totals, but require significant time and investment, and bring substantial improvements to the safety and comfort of the cycling network.

A few key projects to be installed through the 2022-2024 Near-Term Implementation Program include:

- Bathurst Street (from Steeles Avenue to Bainbridge Avenue)
- Bloor Street West extension (in phases from Runnymede Road to Royal York Road, and Royal York Road to Six Points)
- Centennial Park Boulevard trail (from Eglinton Avenue West to Rathburn Road)
- College Street upgrades (from Manning Avenue to Bay Street)
- Danforth Avenue extension and Kingston Road (in phases heading east from Dawes Road, with transition to Kingston Road to be determined, ultimately extending to Scarborough Golf Club Road)
- Eglinton Avenue (completing outstanding segments between Jane Street and Kennedy Road, some sections delivered by Metrolinx and some sections by City of Toronto; as well as initiating work on the extension to Kingston Road, the implementation of which will depend on further capital infrastructure coordination and Scarborough Subway Extension construction).
- Finch West bikeway with LRT delivered by Metrolinx (from Highway 27 to Keele Street)
- Finch Hydro Corridor trail (from Pharmacy Avenue to Birchmount Road)
- Port Union Road (from Sheppard Avenue East to Lawrence Avenue East)
- Scarborough Golf Club Road (from Ellesmere Road to Kingston Road)
- Sheppard Avenue East (from Bonnington Place to Betty Sutherland Trail, as well as initiating work on connection to Huntingwood Drive)
- The Queensway (from Humber River to Burma Drive)
- Wellington Street (from Strachan Avenue to Blue Jays Way, with upgrade of Douro Street)
- Willowdale Avenue (Sheppard Avenue East to Empress Avenue and the Finch Trail to Steeles Avenue East)

Projects identified in the categories of New and Study will undergo further feasibility analysis to confirm what is required to install the proposed bikeway type. The outcomes of this conceptual stage is one or a series of preferred alternative(s) to be carried forward to preliminary design and stakeholder, Councillor and public consultation. Confirmation of the preferred bikeway type and route is a result of both technical analysis and community input. The preferred option would be recommended in an implementation report to Infrastructure & Environment Committee for Council approval, before the finalized design is installed.

The table in Attachment 2 also identifies a list of projects of secondary priority not included in the maps, which may be brought into consideration for the near-term program in the event that a number of currently programmed projects are deferred due to capital coordination conflicts or a further increase in budget and staff capacity, provided that these changes take place early in the 2022-2024 timeframe.

Prioritization Process

The 2016 Ten Year Cycling Network Plan was the culmination of significant research, analysis, and extensive public consultation. The 2019 Cycling Network Plan Update built on the work of the Ten Year Plan, with:

- Updated data sources;
- A strengthened focus on safety and equity; and
- A revised approach to short-term programming and longer-term planning.

The 2019 - 2021 Near-Term Implementation Program was prioritized using these scores, though heavily influenced by previous commitments, feasibility constraints, and the state-of-good-repair road program.

As part of the 2021 Cycling Network Plan Update, new and emerging analyses are and will continue to be considered in the near-term prioritization framework through the category called Strategic Alignment. One of the key focus areas under Strategic Alignment is health and wellness, including data sets such as crowded transit routes and areas of parkland need. These inputs were in response to the unique challenges and needs highlighted by the pandemic, and will be reviewed and changed over time as other priority areas develop. An overview of the prioritization framework is provided in Attachment 4, with maps of new data sets in Attachment 5.

Transportation Services has also developed a more targeted version of the City's Equity Lens Tool, specific to the delivery of capital transportation projects, shared in Attachment 6. The process of using the tool helps staff reflect on the specific transportation needs and barriers of different equity-deserving groups, and requires the identification of both positive and negative equity impacts, as well as mitigation strategies. Some of the mitigation strategies proposed for the cycling program include advancing public consultation strategies that meaningfully engage equity-deserving groups in bikeway planning and design, and working towards a reconciliation framework for transportation projects that builds trust with communities and addresses past harm.

At the project level, this kind of work requires engaging early with residents, and meeting people where they are. It means listening to feedback and input, and making changes that respond to the needs of the people the projects are meant to serve. At the planning level, it means prioritizing neighbourhoods that are experiencing disparities, both in terms of transportation infrastructure as well as measures of social equity.

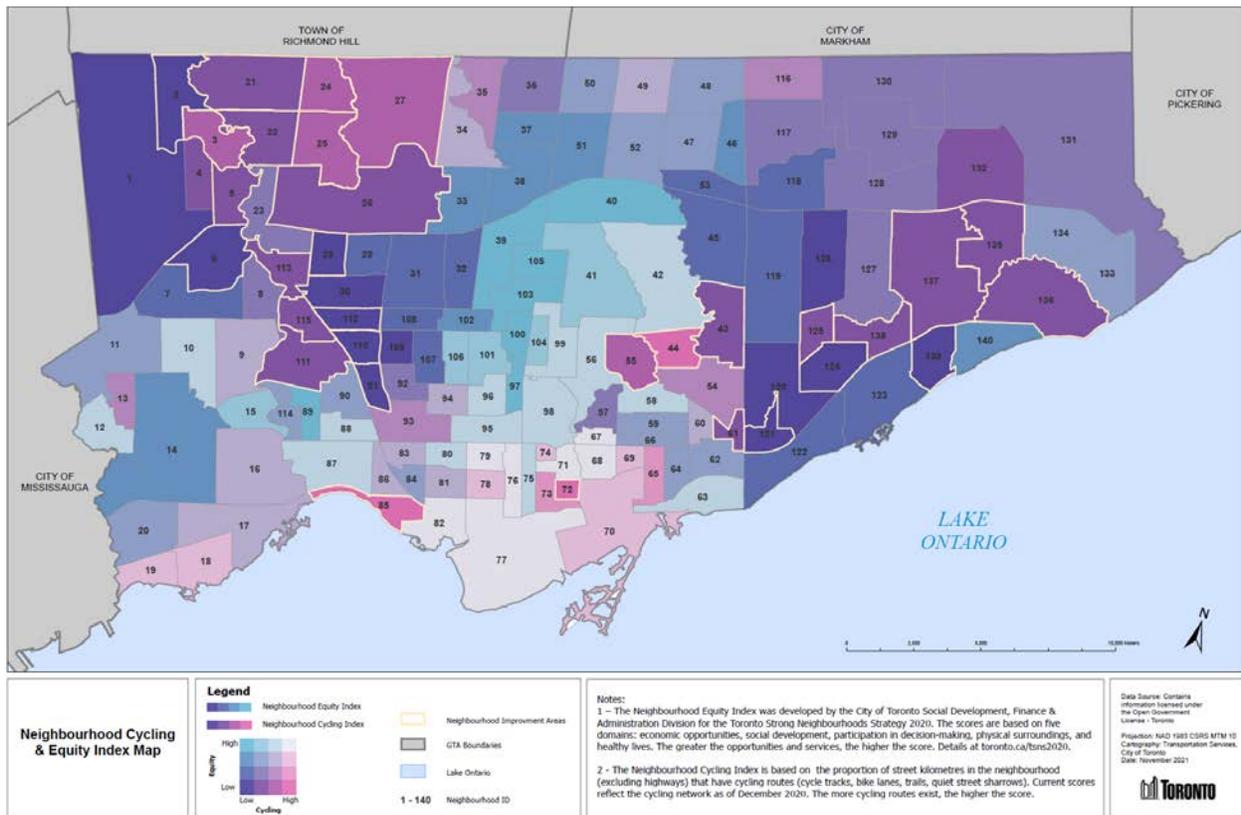


Figure 3 Neighbourhood Cycling and Equity Index Map

Many of the projects identified in the 2022 – 2024 Near-Term Implementation Program will advance neighbourhood bikeways and Major City-Wide Cycling Routes in areas of the city that have received less investment in transportation infrastructure in the past.

Planned Major City-Wide Cycling Routes

Attachment 3 provides details on new projects that are proposed to be initiated in 2022 to 2024, some for implementation in those years, and some in the years that follow.

The type of study, design, and consultation needed for each corridor may take different forms for different streets depending on the corridor's complexity of current and future uses, and the associated impacts. Some routes may include analysis of parallel streets to confirm the most feasible alignment of the route. For some of the longer corridors (over 5 km), the segments and phases of study have yet to be confirmed, and will be determined with input from local Councillors and stakeholders.

All studies will apply a Complete Streets design and Vision Zero approach to road safety.

Aligning the 2022 – 2024 Near-Term Implementation Program with City Policy Direction

The Cycling Network Plan and the 2022 – 2024 Near-Term Implementation Program are driven by City Council's foundational policies to transform Toronto into a safe, equitable, resilient and accessible cycling city.

TransformTO Climate Action Strategy

City Council adopted ambitious climate action goals to reduce the impacts of climate change in 2017, and in 2019 declared a climate emergency for the purpose of deepening our commitment to protecting our economy, our ecosystems, and our community from climate change.

The transportation sector is one of the largest emissions contributors, representing 36% of Toronto's emissions ⁽⁷⁾. The report states that to achieve Toronto's long-term 2050 targets, a massive shift to low-carbon modes of transportation will be needed. This means active transportation for short trips and electric public transit for longer trips.

A key goal in TransformTO is that by 2050, active transportation (cycling and walking) accounts for 75% of trips under 5 km city-wide. As of 2016, only 37% of trips under 5 km are taken by foot or bike ⁽⁸⁾. An updated goal is under consideration as part of the TransformTO Net Zero Strategy, proposing that by 2030, 75% of school/work trips under 5 km are walked, biked, or taken by transit. In order to meet these ambitious goals, the City needs to steadily continue to expand and improve the cycling network.

Aligning the Near-Term Program with TransformTO

Through a partnership with Transportation Services, the University of Toronto Department of Civil and Mineral Engineering recently undertook a research project to investigate the level of traffic stress experienced by people cycling within Toronto.

Traffic stress is an approach that quantifies the amount of discomfort that people feel when cycling on streets. Level of Traffic Stress (LTS) ranges from 1 to 4. LTS1 indicates low-stress streets for all people cycling including children. LTS2 streets are comfortable for the majority of the adult population. LTS3 is comfortable for "enthused and confident" cyclists, and LTS4 for "strong and fearless" cyclists.

In past studies, the LTS methodology has been used to link the mode share targets, such as the active transportation goal in TransformTO, into a more tangible new bikeway kilometre goal.

The University of Toronto research indicates that 1,200 centreline km (an average of 40 km/year) of new safe and comfortable bikeways are needed to meet the initial 2050 TransformTO goal to have 75% of trips walked or cycled, as it would lower the traffic stress and create a network of routes rated at LTS2 (60% connectivity). 2022 – 2024 Near-Term Implementation Program projects approximately 100 centreline km of new bikeways over three years (an average of 33 km/year) and additional upgrades which could also lower traffic stress, which would help align the Near-Term Implementation Program with the TransformTO goal.

Further analysis is needed to understand how many centreline km of new bikeways would be needed to achieve the updated TransformTO goal with the 2030 target.

⁷ <https://www.toronto.ca/services-payments/water-environment/environmentally-friendly-city-initiatives/transformto/transformto-climate-action-strategy/>

⁸ Data from the Transportation Tomorrow Survey 2016, including all trips from home to work and trips from home to school that are less than 5km by walking or cycling. The survey is updated every five years.

Vision Zero Road Safety Plan

The Vision Zero approach to road safety is to eliminate fatalities and serious injuries in our transportation system, because no loss of life is acceptable. A Vision Zero approach is based on the principle that people make mistakes and the transportation system needs to be designed and operated in a way that caters to human error in order to eliminate fatalities and serious injuries. In 2019, City Council adopted Vision Zero 2.0, the first major update to the Vision Zero Road Safety Plan. Vision Zero 2.0 proposed a set of key initiatives and infrastructure improvements, including bikeways, to achieve meaningful reductions in serious injury and fatal collisions in the next five years (2020-2024).

Compared to 2016, the year with a ten-year record high of 78 traffic fatalities, the number of fatalities in 2018 and 2019 appears to be on the decline. However, no loss of life as a result of traffic collisions is acceptable in a Vision Zero approach, and addressing road safety continues to be a priority for residents, elected officials, and staff.

Aligning the Near-Term Program with Vision Zero

The new bikeways proposed will make an impact on the City's safety goals. The Cycling Network Near-Term Program projects are proposed to be designed to support people of all ages and abilities to cycle safely. Transportation Services will utilize the Ontario Traffic Manual's new cycling design guide and the upcoming City of Toronto On-Street Bikeway Design Guide, which reflects best practices in engineering design and provides strong direction for ensuring facility design prioritizes the safety of the most vulnerable road users, with physically separated bikeways (cycle tracks and boulevard multi-use trails) where appropriate.

COVID-19: Impacts and Opportunities Report from Toronto's Office of Recovery and Rebuild

The *COVID-19: Impacts and Opportunities Report* outlines the results of the Toronto's Office of Recovery and Rebuild's (TORR) work and provides recommendations for the City of Toronto and its agencies and corporations to support the recovery and rebuild of our communities, organizations, partners, and businesses.

The report highlights that investments in infrastructure will be critical for Toronto's and Canada's recovery and that any stimulus funding for infrastructure should support Toronto's effort to build back better and prioritize investments that support key priorities, all through an equity and resilience lens.

Further, the report states that in building equitable prosperity, moving the largest number of people safely and efficiently through reliable public transit and supporting active forms of transportation will be essential to recovery. The report cites that bikeways have been demonstrated to be an investment in health with a return of between 1.2 - 3.8 to 1⁽⁹⁾.

⁹ Gotschi T. Costs and Benefits of Bicycling Investments in Portland, Oregon. *J Physical Activity Health* 2011; 8 (suppl) 549-558.

Aligning the Near-Term Program with the TORR

The TORR report recommends accelerating and making permanent the ActiveTO initiatives the City undertook quickly to support crisis response and restart and to build upon those initiatives to make progress toward a modern, green and less car dependent city.

To accompany this 2021 Cycling Network Plan Update report, another report entitled "Cycling Network Plan: 2021 Cycling Infrastructure Installation – Fourth Quarter Update and the Future of the 2020 ActiveTO Cycling Network Projects" is presented for consideration at this Infrastructure and Environment Committee, containing a summary of the initial group of bikeway projects that are proposed to be installed in 2022 and 2023 for which design and consultation have been completed and recommendations on the future of the temporary 2020 ActiveTO Cycling Network Expansion projects.

Enhanced Public Engagement on the 2022 – 2024 Near-Term Implementation Program

Early in the design stages of a bikeway project it is important to ensure that the public engagement process is meaningful and inclusive. Transportation Services has worked with the Public Consultation Unit to deepen existing public consultation practices. Staff have increased the number of stakeholder, one-on-one, and larger public engagement on bikeway projects. In 2020, Transportation Services launched a [new website](#) where all current engagement opportunities for bikeway projects are listed.

Staff recognize the current consultation practices, particularly in equity-deserving neighbourhoods, fall short of desired engagement. Transportation Services is working towards a reconciliation framework intended to inform the capital program in addressing past harms to communities that have been underserved with or otherwise negatively impacted by transportation infrastructure. One of the potential outcomes of the initiative is the development of a community ambassadors program which would help to provide more meaningful and inclusive engagement with equity-deserving communities and to develop long lasting relationships that will better inform the prioritization of capital projects and programs such as the Cycling Network Plan and its implementation.

Council Requests and Specific Project Implementation

A variety of City Council decisions have included requests related to the cycling network, which were evaluated in this Update and addressed in detail in Attachment 7:

- Scarborough Cycling Report ([IE25.20](#))
- Parkside Drive ([MM37.1](#))
- Galloway Road Bike Lane Upgrades ([IE25.19](#))
- Mobility Greenway ([IE15.17](#))
- Allen Road Pedestrian and Cycling Bridge ([MM22.23](#))
- Ward 14: Eastern Avenue and Dundas Street ([CC21.20](#))
- Downsview Loop ([IE12.8](#))
- Ward 10: King Street Underpass and Liberty Village Cycling Safety Improvements ([TE14.80](#))
- 2019 Cycling Network Report Updates including Jane Street, Toronto – Barrie Railway (Ancaster Greene) Pedestrian-Cycle Bridge and School Board Discussions, Bentworth-Baycrest-Yorkdale Pedestrian-Cycle Bridge ([IE6.11](#))

Challenges

There are ongoing challenges with increasing the delivery of new bikeways. For example, with current staffing levels, there is not sufficient capacity to bundle the design and construction of complete streets including bikeways with all programmed road reconstruction work, which was directed by City Council to Transportation Services ([IE6.8](#)).

On average, the City completes 31 to 35 km of major road rehabilitation and 75 to 80 km of local road rehabilitation each year. From a resource perspective (staff and budget), including outsourcing work through consultants, there is currently only capacity for approximately 10 km of bundled bikeway projects per year including major and local road work. Thus a large gap exists between the number of state-of-good-repair projects that can be implemented with bikeways and the number of state-of-good-repair projects. Additional resources will be necessary to close this gap and sustain a high delivery rate of bikeways beyond the 2022-2024 Near-Term Implementation Program.

Other valuable, time-consuming work comes from concerns raised by the community or Councillors after implementation of projects. Addressing concerns requires additional site investigations, counts and traffic analysis, community meetings, or reports to modify the cycling infrastructure that was installed.

Further to this issue, reporting is required to make minor changes to new bikeways based on community input. City Council currently authorizes new bikeways with a City Council report which in turn authorizes the associated by-laws. Any minor changes to the approved by-laws require additional reporting (and may require a re-opening), which can take multiple months and staff capacity to make a minor change, such as reducing one parking space to improve sight lines. This essential work leads to positive changes that are responsive to the community's feedback, but it takes staff time and resources away from the delivery of new projects.

The ActiveTO Cycling Network Expansion program, which made the recent kilometre achievements possible, were delivered through reassignment of existing staff resources while placing normal functions on hold and a large increase in lieu and overtime hours. The Cycling and Pedestrian Projects Unit more than doubled in size to support the design and delivery of ActiveTO Cycling Network Expansion projects. Since the early stages of the COVID-19 pandemic and the restart of many of the normal functions, the reallocation of staff is no longer possible. The workloads of staff dedicated to cycling capital delivery cannot grow further without negative impacts to project schedules, increased lieu and overtime hours, and work life balance.

With a few key exceptions, the ActiveTO Cycling Network Expansion Program was delivered with limited general public consultation and focused on targeted stakeholder engagement. This was deemed necessary due to the urgency of the pandemic, but Transportation Services does not support this approach in perpetuity, particularly in equity-deserving communities and Neighbourhood Improvement Areas. Public consultation is the foundation of more inclusive approaches to transportation capital program delivery. Transportation Services is working to ensure transparency and

flexibility - including meeting communities where they are - in order to build and earn trust with community leaders and undertake open and accessible public consultation processes.

Opportunities

To begin to address these challenges and to effectively deliver the proposed near-term projects, the following changes are recommended:

- Working towards a streamlined reporting process, where new projects would be approved by Council for implementation following community consultation with an appropriate level of detail in order to accommodate minor changes to the projects as may be necessary to address operational and safety issues as they may arise through detailed design and implementation, with submission of the Bills for the associated By-law changes to reflect the constructed project to follow, when appropriate.
- Enhancements to public consultation plans and events, improving the accessibility and quality of engagement opportunities, supported by greater resources and staffing levels. This includes an increased number of one-on-one stakeholder meetings, improved and more accessible materials, narrated videos in multiple languages for priority projects, and increased advertising of public consultation opportunities.
- An annual capital budget of approximately \$20 million, increasing annually as needed in line with delivery targets, in amounts to be confirmed in the annual capital budget process.
- Additional staff to support design, consultation, project management, construction, and monitoring for the delivery of bikeway projects (including Transportation Services, Public Consultation Unit, and Engineering & Construction Services). These would be included in the relevant Divisions annual budget submission for approval through the budget process.

These process improvements and expanded resources will ensure the momentum of expanding the cycling network during the COVID-19 pandemic continues into the future and brings the City closer to meeting the targets and policies outlined in TransformTO, Vision Zero Road Safety Plan, and the Toronto Office of Recovery and Rebuild's COVID-19: Impacts and Opportunities report.

Next Steps

Transportation Services staff will prepare an update on the progress of the Cycling Network Plan in Q4 2024. The update will provide information about completed infrastructure in 2022 to 2024, the status of Major City-Wide Cycling Routes, programming and delivery of 2025 to 2027 projects, as well as updated analyses for the long-term vision and prioritization process.

CONTACT

Ashley Curtis
Director, Transportation Planning and Capital Program

Transportation Services Division
Tel: 416-392-0170
ashley.curtis@toronto.ca

Jacquelyn Hayward
Director, Project Design & Management
Transportation Services Division
Tel: 416-392-5348
jacquelyn.hayward@toronto.ca

SIGNATURE

Barbara Gray
General Manager
Transportation Services Division

ATTACHMENTS

Attachment 1 – Map and Table of Completed Bikeways 2019 – 2021
Attachment 2 – Map and Table of Near-Term Implementation Program 2022 – 2024
Attachment 3 – Map and Table of Major City-Wide Cycling Routes
Attachment 4 – Cycling Network Near-Term Program Prioritization Framework
Attachment 5 – Maps of New and Updated Prioritization Considerations
Attachment 6 – Transportation Equity Lens Tool
Attachment 7 – Project-specific Council Request Responses