Nelson Next

TRANSPORTATION INITIATIVES

*In Nelson, emissions from passenger vehicles make up **52% of total community greenhouse gas emissions** making them the single largest contributor of emissions in our community. By replacing local car trips with E-Bike trips, we can enjoy an active lifestyle, reduce traffic, improve air quality in our city, and reduce the climate impact of transportation emissions in Nelson and beyond.*

What is an E-Bike?

E-Bikes are bicycles equipped with an electric motor that can also be fitted to have full power on-demand without any pedalling. They are also a fun and low-carbon way to move around the City!

In BC, E-Bikes must have functional pedals, a motor of no more than 500 watts (a measure of power), and must not travel faster than 32 kilometres per hour on level ground without pedalling. When purchasing an E-Bike from outside of Canada be aware that the US has a higher motor power limit of 750 watts.

E-Bike drivers must be at least 16 years old, wear a helmet, and obey all traffic lights and control devices like in a motor vehicle. You are not required to have a drivers license, registration, or insurance to operate an E-Bike.

In the US, E-Bikes are grouped into three different classes. This classification system is not used in Canada but might be helpful to know when you're looking to buy an electric bike.

- **Class 1:** Known as a low-speed pedal-assisted electric bicycle. These are E-Bikes that are pedal-assist only, with no throttle, and have a maximum assisted speed of 20 mph (32 km/h).
- **Class 2:** Known as a low-speed throttle assisted electric bike. These are E-Bikes that are pedal-assist and have a throttle, and have a maximum speed of 20 mph.
- **Class 3:** Known as a speed pedal-assisted electric bicycle. These are E-Bikes that are pedal-assist only, with no throttle, but a maximum assisted speed of 28 mph (45 km/h).

What are the Benefits?

Accessibility and Convenience: E-Bikes can allow you to stay active for longer, to navigate Nelson's steep hills, and to haul groceries, cargo, or young children by bike. E-Bikes can offer as much or as little assistance and exercise as desired and are a great way to get around for adults of all ages.

Cost Savings: E-Bikes are cheaper to purchase and maintain than a vehicle. They can save you money on gas, parking, vehicle maintenance, and even insurance if you decide to get rid of your car.

Climate Action: Using an E-Bike instead of a car not only leads to a reduction in tailpipe emissions but also requires less energy and materials to build and maintain, making them an environmentally-friendly choice.

Technical Specifications

Here are a few terms that may prove useful to know when looking to purchase an E-Bike.

Torque refers to the turning force of the wheels of the E-Bike and allows them to accelerate. For Nelsonites and others that live in hilly areas, torque is a particularly important consideration. Remember that the amount of torque an E-Bike has is dependent on the type of motor used and/or battery size.

Watt Hour (WH) refers to the power rating or energy capacity of a battery. The higher the Watt-Hours, the more powerful the battery. Typical E-Bike batteries range from 300 WH to ~1,000 WH.

Range refers to the distance that an E-Bike will go before it runs out of battery power. E-Bikes tend to have a range of between 40 and 80km per charge depending on things like battery capacity, terrain, and peddling effort.

Suspension refers to the ability of a bike to suspend the rider in a way that helps cushion the effect of bumpy terrain. This is important for mountain bikers and less important for city riders.

Your needs will impact what technical specifications would best suit you. Here are some questions that may help you determine what E-Bike might work best for you:

- *Where do you want to be able to use your E-Bike?* This will impact what suspension you should choose and what accessories (e.g., racks, panniers, extra bright lights, child seats, etc.) you may need.
- *How far do you want to go?* This will impact what type of battery you need and whether to purchase an extra battery.

Available Rebates

Not exclusive to homeowners

- **PST Exemption**
  - As of April 21, 2021, the Provincial Sales Tax is no longer charged on most E-Bikes purchases.

- **Scrap-It Program**
  - British Columbians who scrap a qualifying car or truck can receive a **$750** rebate when they buy a new E-Bike. Visit *scrapit.ca* for more information.

  - Please also be aware that instead of receiving an E-Bike credit, you may be able to get a **$500** credit that can be used with the Kootenay Carshare Co-op.

- **Cargo E-Bike**
  - Business owners in B.C. with a valid business license, non-profit organizations, and public sector organizations can get up to **$1,700** when they buy a cargo E-Bike. Learn more at pluginbc.ca/suvi.

Cost Considerations

Most e-bikes cost somewhere between $2,000 and $4,000. If you're interested in something specialized, it can cost you $10,000+. The most expensive components of an e-bike tend to be the battery and the motor while brake pads, chains, and tires typically require replacement most often.

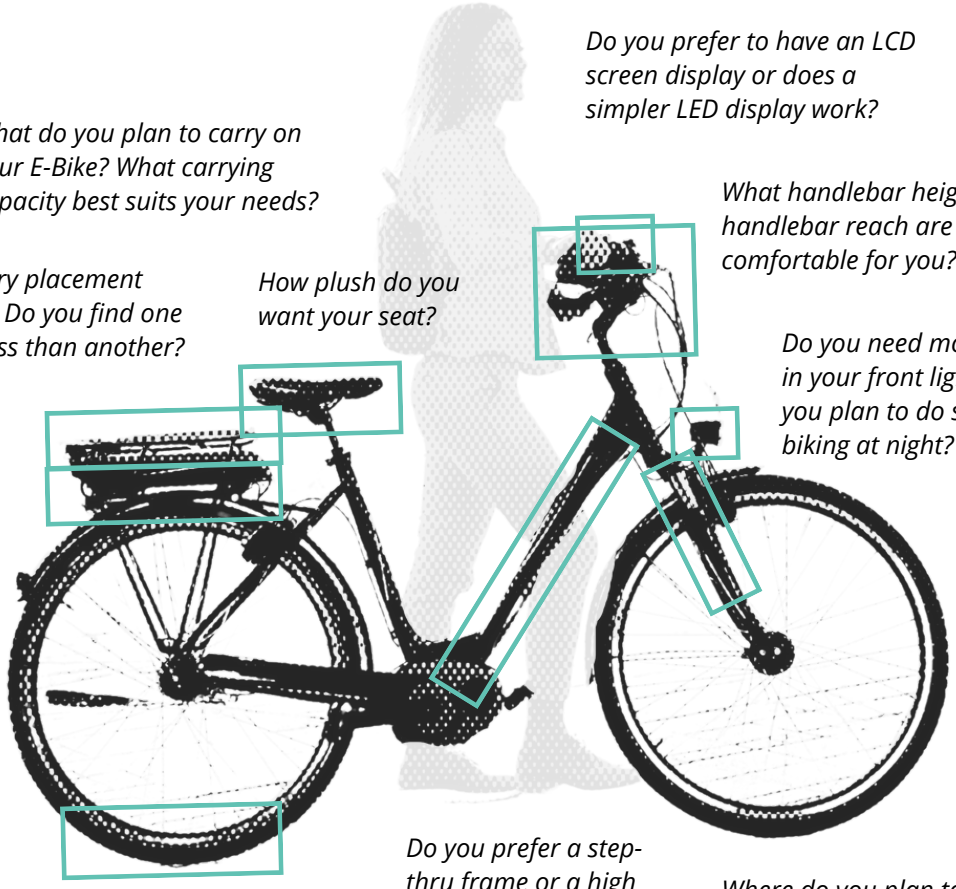
What is an E-Bike Conversion Kit?

If you love your existing bike or are deterred by the price tag of an electric bike, you could consider buying an E-Bike conversion kit (consisting primarily of a motor and a battery). These kits can electrify a standard bike in a few different ways:

- Adding a powered wheel (either front or rear)
- Attaching a motor device to the bottom bracket near your pedals
- Fitting a motor on the rear wheel (i.e., harnessing friction), or
- Adding a concealed motor within the seat post.

Without the cost of labour of a bike mechanic, a safe and good quality E-Bike conversion kit typically range between $350-$950. It is possible to fit your bike on your own but it is generally recommended that you have a local bike shop to check that the E-Bike conversion components are installed correctly.

Questions to ask yourself when you're looking to buy an e-bike:



Do you prefer to have an LCD screen display or does a simpler LED display work?

What do you plan to carry on your E-Bike? What carrying capacity best suits your needs?

What handlebar height and handlebar reach are most comfortable for you?

Does the battery placement matter to you? Do you find one harder to access than another?

How plush do you want your seat?

Do you need more lumens in your front light because you plan to do some biking at night?

Does the portability of your bike matter much to you? How heavy is too heavy?

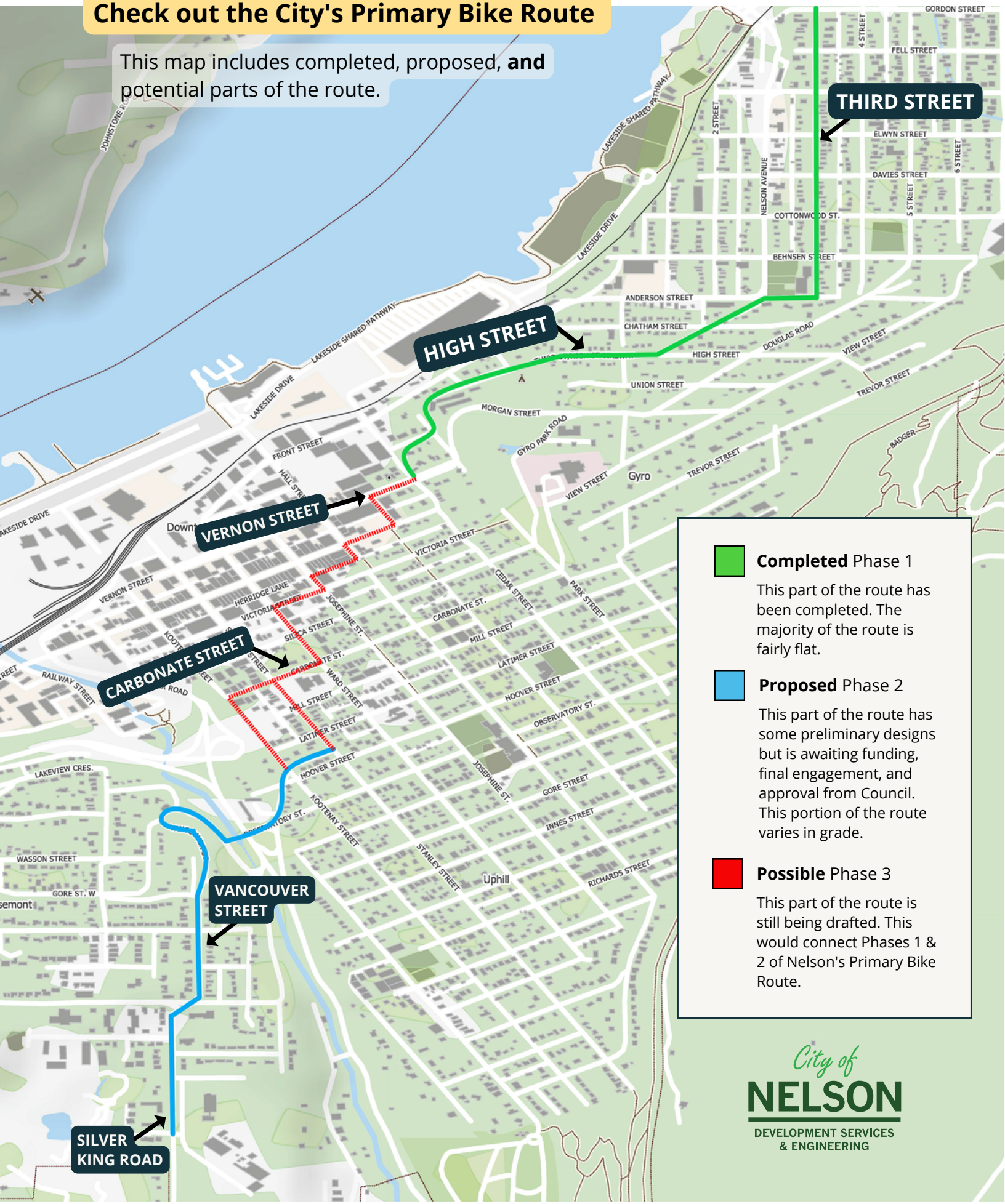
Do you prefer a step-thru frame or a high step frame?

Where do you plan to store it? Are you low on space and would benefit from a foldable bike?

Do you plan to take your E-Bike off road? How important is good suspension to you? How big do you want your tires to be?

Check out the City's Primary Bike Route

This map includes completed, proposed, **and** potential parts of the route.



Completed Phase 1

This part of the route has been completed. The majority of the route is fairly flat.

Proposed Phase 2

This part of the route has some preliminary designs but is awaiting funding, final engagement, and approval from Council. This portion of the route varies in grade.

Possible Phase 3

This part of the route is still being drafted. This would connect Phases 1 & 2 of Nelson's Primary Bike Route.

City of NELSON
DEVELOPMENT SERVICES & ENGINEERING