# URBAN PATHS FOR A GROWING COMMUNITY

Around the world, the research on active transportation is clear: using our legs to get around is good for people and society. People live longer, healthier lives and they report feeling happier when their commute requires physical effort. With the right infrastructure and policies, it is possible to limit traffic congestion, reduce environmental losses, and increase bottom lines for businesses in cycling and pedestrian-friendly neighbourhoods.

Few know this better than the Dutch. Here are seven key benefits that Dutch society has realized by being bike-friendly, according to the Dutch Cycling Embassy:

**Economic benefits:**

- Riding a bike is 25x more cost effective than driving a car.
- On a per km basis, a bike saves society $0.99 while a car requires a subsidy of $0.54
- Cyclists shop local, spending more and having higher store loyalty than car drivers.

**Environment:**

- Bikes generate just 21g of $CO_2$ per km (food energy), while the average car exhausts 271g per km (fossil fuel).
- Urban air pollution can be dramatically reduced.
- Bikes free up parking space, allowing for more parks, playgrounds, and public spaces.

**Health:**

- Riding a bike just 30 mins per day increases life expectancy.
- Riding reduces illness (40% less cancer, 52% less heart disease, 40% fewer premature deaths.

- It also limits obesity and reduces Type II diabetes.

**Happiness:**

- 59% of cyclists associate the activity with feelings of joy.
- Dutch children are the happiest in the world, likely due to the sense of agency and freedom that cycling provides them.
- Quality of life improves as bikes provide convenience, independence, and flexibility.

**Access:**

- Bikes are 10x less space intensive as a car, on the road and in parking.
- Market service areas are 15X larger for cyclists than pedestrians.
- Cycling can get you closer to the door, saving time and effort.

**Safety:**

- Bike-friendly cities have fewer car-bike casualties. Vancouver has 7x fewer injured cyclists than New York, per 10,000 population.
- Good path separation from cars let to reduced Dutch cycling fatalities, saving 160 lives annually since inception.
- A 50 km/h impact is 75% more deadly than a 30 km/h impact.

**Equity:**

- Bikes are affordable and provide easier access to jobs and recreation for everyone.
- Elderly cyclists benefit from more social contact than non-cyclist elders.
- Cycling encourages more social interaction, less isolation.

Credit: Dutch Cycling Vision, 2023

Download at: https://dutchcycling.nl/wp-content/uploads/2023/07/Dutch-Cycling-Vision-2023.pdf

**The Starting Point.**

In the 1970's the Netherlands, faced a road-fatality crisis that fell heavily on children. In response they began to plan pedestrian and bike infrastructure as whole networks, instead of individual, disconnected pieces. The change was led by cities and the crisis was eventually allayed. It was small, year on year improvements that made the Netherlands the cycling poster child it is today.

In Steinbach we face a similar challenge, but one that has both greater opportunity and a more difficult starting point. Our city is new and small by Dutch standards and together with relatively wide streets it should be easier for us to make space for urban paths. Unlike the Dutch we gave cars priority throughout our urban landscape. In doing so, we created a "car rights" mindset that finds it difficult to share road space or infrastructure dollars with other modes. If change can happen it will need understanding, patience, and creativity.

Strong Towns Steinbach contends that ***a well-designed urban path infrastructure can make life better for everyone.*** Better lives and a better city – our motivation, our starting point.

**Can you get there from here?**

*Consider this Challenge:* From any downtown location (like SCU or City Hall), ride your bike to Kindale Industries on Pioneer Road. What route would you choose? Can you find a safe and direct route, and one that doesn't require you to ride on sidewalks or cross private property?


*The 52W "pinch point" – access by bike, but only for those willing to risk everything.*

Consider taking the most obvious route: Main Street and 52W. To bike this route, you'll need to be alert for car doors and overtaking traffic on Main. After crossing the busy Brandt intersection, you'll reach the corner with Loewen Blvd, where the roadway narrows and begins the long curve

towards Loewen Windows. In this section you may experience feelings of anxiety and vulnerability. It's not uncommon for motor vehicles to reach 70km/h here. Do you ride close to the curb to avoid being hit, or do you position yourself to take the whole right lane? Do drivers realize they are required to overtake safely and allow a full meter of space between their vehicle and you? If you make it to Lund Ave., you're basically in the clear unless … it's shift change at the window factory.

From a city planning perspective, what does it mean when a car is the minimum price of admission? And what does it say to non-car driving citizens about their relative value?

Unfortunately, this challenge can be repeated for several locations in Steinbach, with very similar results.

***Strong Towns Steinbach asks you to consider the following ideas for improving our active transport infrastructure.***

**Good Access is Equality**

- Today, in Steinbach, citizens who do not own or cannot operate a car are severely disadvantaged relative to citizens who can access and drive cars.
- Car-only access is a form of inequity that discriminates against the young, the elderly, the physically challenged and the working poor for whom cars are not an option.
- Poor pedestrian and bike access means citizens are discouraged from making healthy life choices, which in turn drives a host of societal harms and losses.
- Paths should reach all parts of the city, be safe and be practical.

**Connectivity is Critical**

- Paths need to be integrated into a network with good path-to-path and path-to-road connections.
- Thoughtful urban design should allow for all modes of transportation to reach the same destinations that cars can reach within the city.
- Bike paths and parking are not compatible.


*Photo: "Bike Lanes" end where parking begins*

- A path should not simply end. Safe transitions to the street network are essential.


*Image: Creek Path unloads onto a narrow sidewalk, just 5m from McKenzie West, a street with ample room for bike lanes in both directions. This is a perfect opportunity for a path to road transition.*

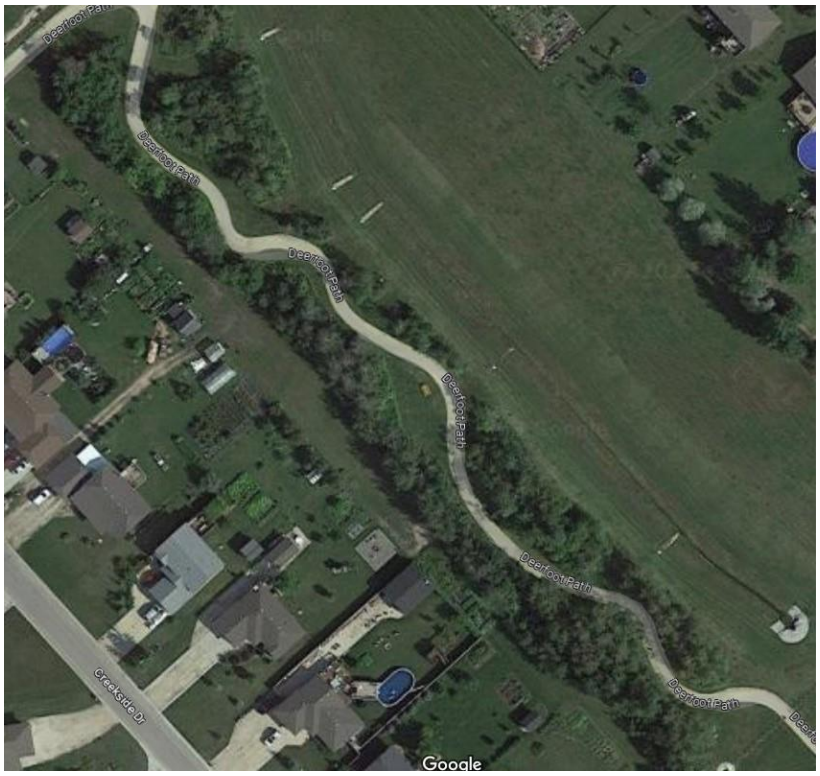
- Future proofing – all new developments must include high quality, 4m wide paths that connect to a city-wide system of paths.

**Good Geometry Makes Lovely Paths**

- Paths should be wide enough to accommodate multiple users, with room to pass in both directions.
- For busy routes, it's beneficial to designate pedestrian and cycling spaces.
- Recommended width: 4m - a standard that cities are adopting for new routes, with 3m for short access paths. This aligns with European design advice for urban paths.

*Love at First Ride: Wide, smooth, well-marked and built to last*

- Steinbach's path running from Mackenzie West to LA Barkman is 2.75m wide.
- Path designs work best when they are efficient and logical to users. Curves are enjoyable when they relate to topographic features but lose their charm when they don't. Mikael Colville-Anderson, principal at Copenhagenize Design, talk of "desire lines" – user-created paths that deviate from a built path when the latter offends the logic of efficient routing.




*Deerfoot Path – curves of delight or annoyance?*

- Path intersections would benefit from larger radius corners than are currently being built. Larger radii allow users to negotiate corners without slowing excessively, leaving the path or risking collision with other path users. In Steinbach, many of the built paths have turn radii that are too tight.

**Surface Quality Matters**

- Asphalt continues to be the preferred path surface as it is easier to repair than concrete and doesn't require seams.
- Asphalt is vulnerable to tree root damage and linear cracking, especially where good base preparation and curbing are missing or inadequate.
- Good base preparation and edge restraints are the first and second determinants of path quality and durability.
- Going forward, city engineers should attend to the details and quality of the base, curbs, and asphalt before bids from paving companies are requested.

- Curbs for bike paths increase service life by constraining the surface and base materials – a common cause of longitudinal cracking in asphalt paths.

**Grades, Driveways and Street Crossings**

- Where walking paths and sidewalks meet streets, the curb ramps should be a minimum 3m wide and provide a smooth transition to the street.
- Cycle paths should be at the same grade as the secondary roads and driveways they cross with highly visible markings to warn motorists.
- Paths that interact with streets and driveways should be easy to recognize by motorists. In the Netherlands all cycle tracks are made with a red pigmented asphalt and have bold white markings to catch motorists' attention.

*The red path: hard for motorists to miss and easy for riders to follow*

- One of Steinbach's "main" paths, parallels the north-bound lane of Hwy 12 from Loewen to Park Road, crosses eleven commercial driveways and two streets with few markings to advise motorists when they are crossing the path. Car-pedestrian and car-bike near-misses are common.
- Paths should be raised above driveways that they cross. This feature signals to drivers that they need to pay attention and yield for pedestrian and bike cross traffic.
- As on roadways, markings showing the centerline help pedestrians and those on wheels to expect two-way and overtaking traffic.

**Path Maintenance = User Safety**

- Cracks wider than 1.2 cm or ½" need to be filled and sealed. In the interim between a crack forming and repair work, cracks should be marked with paint to alert users of the hazard.

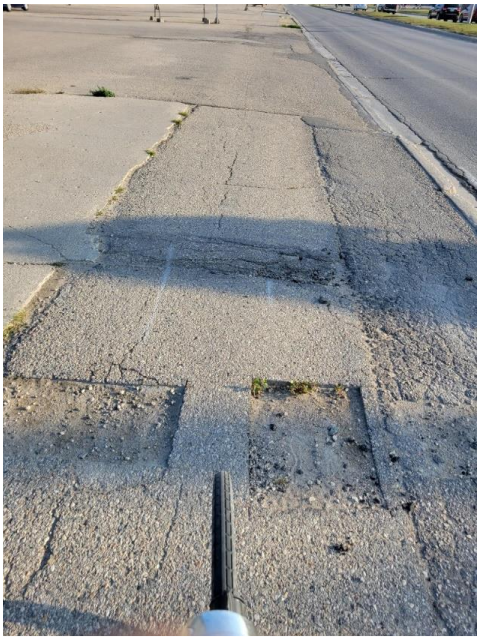


Photo: Hwy 12 Path near Loewen: Rough riding beside heavy traffic. In wet weather it becomes a 250m long "splash park".

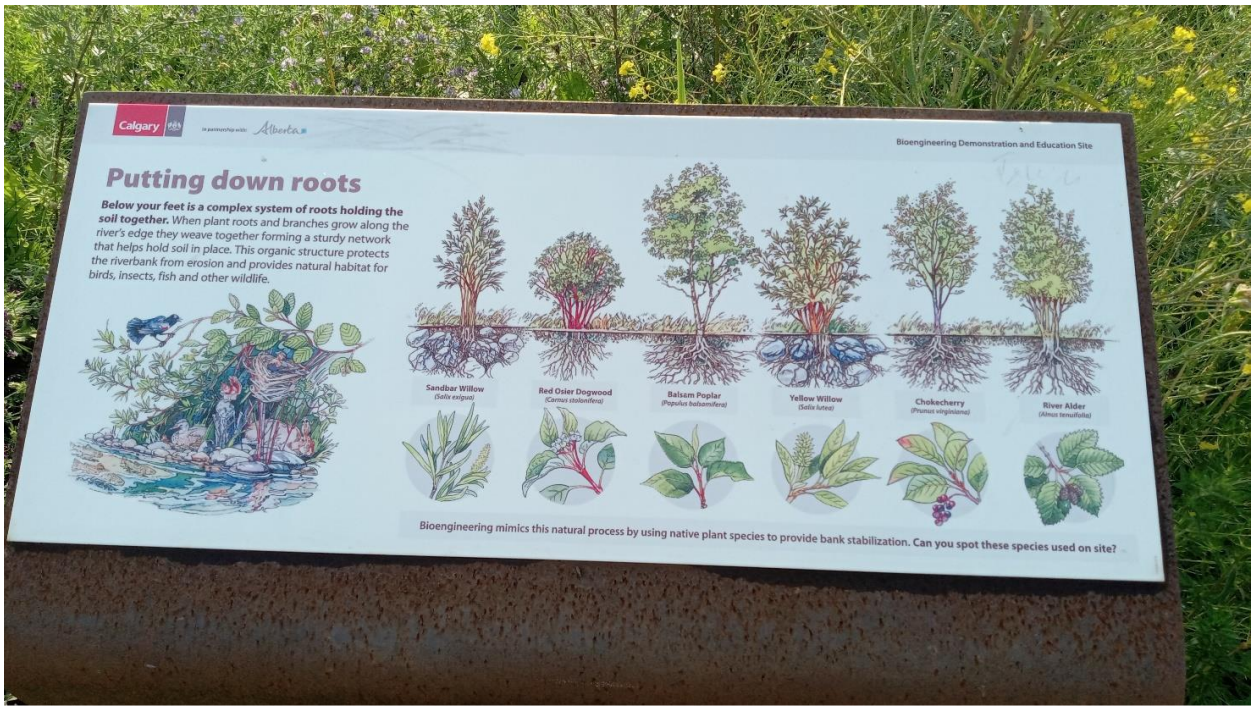
Photo: Linear cracks on the Creek Path. Frost jacking will open these to 30mm or more by late winter.

- The path should be higher than the adjacent landscape grade and the surface lightly pitched to move water off the path. Gaps and excessive edge drops (>2.5cm) require fill and/or re-grading.

**Signage**

- Way-finding sings with distances are now a common feature on urban path systems and assist users in critical decision making on their route. Steinbach has implemented a trail naming and distance system of bollards. While this is a good start, it should be followed with signs that give more context and a sense of place.


- Urban paths are an opportunity for public engagement. Signs and displays can relate local history, explain how a city's infrastructure works or provide information on an area's natural resources.




*Calgary: An example of path signs that inform. Learn about plants along the path that help to hold soil.*

## 2024 / 2025 Priorities

1. **Build rapport between path designers and path users.** Make dialogue with users an early and mandatory part of every new project, whether city or developer initiated.

   Strong Towns Steinbach members can offer real-world insights and are readily available for consultation at no cost or obligation to the city or its consultants.

2. **Create an action plan to reduce "network gaps".** Identify access and connection issues in the city's current path and sidewalk infrastructure. Develop solutions and a plan to implement them.

3. **Establish a design guide for paths.** Review available design guides in use by other cities.

4. **Expedite repairs and upgrades.** Inspect existing paths and determine priorities. Establish a dedicated budget line for repairs and upgrades. Encourage decision makers to walk and ride the full routes. Involve users.

5. **Set a more ambitious timeline** for adding new active transportation routes.

6. **Revise zoning and development agreements** to include paths built to new design standards.