



Bike Cochrane

Active Transportation Implementation Plan

Nov 2021

Town of Cochrane's Expressed Goals (2017)

- Goal 1: Improve **connectivity for all modes** within Cochrane and between Cochrane and the surrounding region.
- Goal 2: Support healthy living for residents and visitors by **creating a community where walking and cycling are safe and enjoyable**.
- Goal 3: Enhance livability and protect the small town feel of Cochrane by reducing barriers and **investing in local transportation**



Present Town of Cochrane Trail Map

- **‘Nearly 70km of paved pathways’ in 2021**

- E-scooters, E-bikes can’t be deployed throughout Town due to **lack of connectivity** (Sunset, GlenEagles, River Heights, Jumping Pound, Bow Meadows, Cochrane Heights, and Sunterra currently excluded from Roll Program. E-Bikes will likely be able to be deployed at more locations)

- **CONNECTIVITY** is missing in many neighbourhoods of Town



Black is 'paved'



Summary of Capital Budget Comparisons

Town	Population	Amount of Capital budget for roads/recreation (2020/2021)	Spent on pathways/active transportation	% of Roads capital budget allocated to active transportation
Canmore, AB 2019	14,911 (full-time)	\$ 10,564,000.00	\$ 3,400,000.00	32.18%
Okotoks, AB 2020	31,399	\$ 11,580,000.00	\$ 1,900,000.00	16.41%
Grimsby, ON 2020 (Bronze Bike-Friendly Communities)	27,314	\$ 7,725,900.00	\$ 456,000.00	5.90%
Cochrane 2021	29,227	\$ 16,094,000.00	\$ 444,000.00	2.76%
Cochrane 2022	29,227	\$ 9,288,000.00	\$ 100,000.00	1.08%
Cochrane 2023	29,227	\$ 9,975,000.00	\$ -	0.00%



Operating Budget Comparisons (2021 – CFIB)

Table 1

Alberta's 17 Largest Municipalities (ranked best to worst)

Municipality	Rank	2010-2020 Real Operating Spending Growth per Capita (%)	2010-2020 Real Operating Spending Growth (%)	2010-2020 Population Growth (%)	2020 Operating Spending per Capita (\$)
Cochrane	1	-32.0%	41.2%	107.5%	1,452
Lloydminster	2	-15.7%	52.2%	80.4%	1,928
Airdrie	3	-3.8%	83.0%	90.1%	1,585
Okotoks	4	0.1%	36.8%	36.7%	1,530
Spruce Grove	5	-3.4%	52.7%	58.0%	1,886
Calgary	6	-11.7%	12.2%	27.1%	2,317
Grande Prairie	7	-10.1%	24.2%	38.1%	2,272
Edmonton	8	-8.5%	22.4%	33.9%	2,322
Fort Saskatchewan	9	-5.2%	41.3%	49.0%	2,245
St. Albert	10	-0.3%	14.9%	15.3%	2,243
Red Deer	11	-2.1%	15.9%	18.5%	2,340
Leduc	12	1.6%	49.2%	46.9%	2,595
Lethbridge	13	6.0%	24.0%	16.9%	2,527
Rocky View County	14	15.4%	36.5%	18.4%	2,274
Strathcona County	15	11.9%	31.2%	17.2%	3,066
Parkland County	16	48.0%	57.6%	6.5%	2,077
Regional Municipality of Wood Buffalo	17	-9.9%	9.8%	21.9%	4,629
Average	-	-8.4%	19.2%	30.1%	2,383

Source: CFIB calculations, Municipal Affairs, Alberta Government, 2010-2020.¹⁰

Note CFIB ranks communities as 'Best to Worst' in terms of 'Operating Spending per capita'

Bike Cochrane would highlight that this shows Cochrane has not invested in 'Operational Capacity' in decades, even with the highest rate of population growth

We're NOT investing in our Town's capacity to Operate

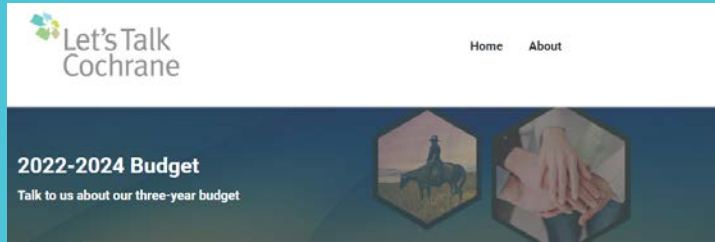


Council Candidate Answers to Bike Cochrane

- “In addition to investing in traffic infrastructure for vehicles, I think it's time for **Cochrane's Town Council to invest more in our pedestrian and bike pathways**. I want Council to set a real goal of ensuring that **every single community in Cochrane has safe and enjoyable bike and pedestrian access in and around town** - then I want to do what it takes to make it happen. Investing in better access to enjoying Cochrane's outdoors is a long term investment in everyone's mental and physical health. **It is an investment in a more positive future for our families and for our community.**” – Morgan Nagel
- “It [Development] has gotten out of control. **We're allowing development to move forward without connectivity**. It's changing the fabric of what this community is and that's one of the things I'm quite passionate about protecting.” – Jeff Genung
- “Since this will become a budgetary line item, we will need to ensure the process is fair, then we need to **establish a dollar amount to move projects forward more quickly than the snail's pace we have**. There is no magical way to get cash unless funded, fundraised, or granted. I believe we have also done a poor job on creating some of our current multi-modal areas, which doesn't help, when advocating for community support.” – Marni Fedeyko
- “**We also need more designated bike paths**. I think we need to put more bike lanes in as roads are developed, have more bike racks to park them safely, ensure that there is education around sharing the road and enforce respect by vehicle drivers.” – Susan Flowers
- “I see the physically barriers we need to work on in **getting Heritage Hills, Fireside and that pathway to the city completed.**” – Alex Reed
- “The biggest barriers to increasing trips taken by foot/bike/scooter is the gaps in **safe access. Identifying these gaps and working to find solutions** has been part of my focus as a Town Councillor.” – Tara McFadden



'Budget 2022' Survey (494 respondents) (April/May 2021)



Slightly less than 50% of respondents would choose a tax increase to pay for services in Cochrane

Top four places residents would choose to spend an additional dollar:

Parks and Open Spaces	Roads	Infrastructure Projects	Community Services
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If you had an additional \$100 to contribute towards a Town service, where would you allocate it?



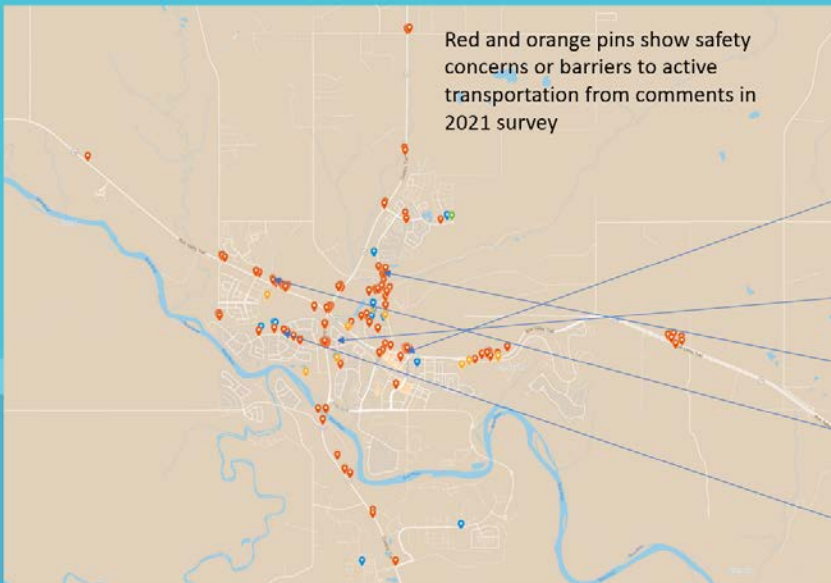
Bike Cochrane 'Bike To School' Survey/Workshop

Conclusions/Thoughts

- **91% of survey respondents WANT to bike to school!**
- 70% of survey respondents are within a 30-minute bike ride to school or less
- The top 3 reasons given for not biking are **safety, too far, and too much uphill/slopes**
 - Bike Parking At Schools Should Be Improved Too
- **Highway 22/1A Intersections Need Better Signage/Crossings!**

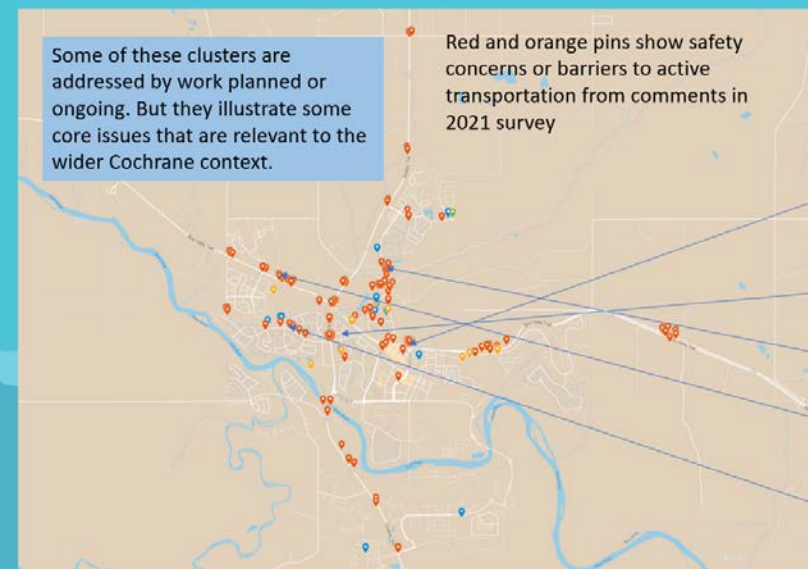


Summary of specific issues that feel unsafe



Clusters of concern

1. Crossing 1A from downtown heading towards tri-schools
2. Crossing HW22 at Quigley
3. Path through Ranche
4. No direct route to town from Heritage Hills and Heartland
5. Quigley Drive



Clusters of concern

- May be remedied by current 1A works
- Requires input from Town and AB transportation
- Path through Ranche
- 1A work includes plans for pathways here. Scheduled for reworking in next few years. Opportunity to re-design.



Traffic interaction

The less confident the rider, the more separation they need from traffic.



Rachel Road Rider



Goals/Objectives

- Rachel bikes to Cochrane to 'get out of the city'
- Often bikes along the highway shoulder (1A and 22)

Why does Cochrane care?

- Brings money into local economy
 - Stop for a latte, ice cream, bike repair
 - Cycling visitors tend to spend more on average per trip than other visitors (\$255/trip vs \$171/trip per Tour by Bike 2017)



People who bike, shop. In Toronto customers walking and cycling reported higher levels of spending compared to people arriving by car or transit and merchants reported more customers per day after the construction of the bike lane (TCAT 2017)



Bike lanes bring customers—a commercial main street in Salt Lake City saw an 8% increase in sales after the construction of a protected bike lane (Salt Lake City 2015)



Gordon Gravel Biker



Goals/Objectives

- Gordon values being able to ride his bike away from cars and truck traffic
- Lives an active lifestyle

Why does Cochrane care?

- Brings money into local economy
 - Stop for a latte, ice cream, bike repair
 - Cycling visitors tend to spend more on average per trip than other visitors (\$255/trip vs \$171/trip per Tour by Bike 2017)



Monty Mountain Biker



Goals/Objectives

- Monty wants to recreate in Town
 - More than **50% of respondents** to Bike Cochrane 2021 survey said **they left Cochrane at least once a week to ride their bikes elsewhere**
- Being able to have a fun **‘lunch time ride’** is a **HUGE** benefit for active employees
 - ‘Knowledge Economy’ employees value this very highly
 - Not having to drive somewhere means you can actually have a quick bike ride during lunch
 - Join other local riders during lunch with similar goals/objectives

Why does Cochrane care?

- In addition to servicing the 30,000 Cochrane residents’ recreation needs, we have ~1.5M residents within a short drive
 - Tourism potential
 - Weekend visit potential
 - Economic benefit
 - Hosting events
- Opportunity for high school MTB team development
- Extension to excellent Cochrane BMX club



Cathy Casual Rider

Goals/Objectives

- Cathy wants to bike to recreation activities at Spray Lakes, pickleball courts, tennis courts
- Might be using an e-bike to help with hills in town
- Would like to try longer rides with future Canmore to Cochrane trail
- Likely a member at Spray Lakes rec center

Why does Cochrane care?

- 34% of Cochrane residents are 50+ (Stats Can 2017 Census) and many choose to live in Cochrane to remain active



Freddy Family Biker



Goals/Objectives

- Freddy rides his bike to take his kids to school
- Cares about safety of all riders, no matter what age
- Wants a protected all-year route to get to schools, Spray Lakes, parks, playgrounds, grocery stores
- May choose to bike for shorter trips to avoid needing a 2nd vehicle
- Wants to improve his fitness level and may join a local club

Why does Cochrane care?

- Quality of life
 - Calgary Avenue 2020 magazine rated best neighborhoods as having a high proportion of park space, good access to pathway system, and a high walk score
 - This brings new residents to Cochrane and encourages present residents to use their bikes for transportation
- Safety of kids in traffic
- Biking to work reduces CO₂ emissions



Rule #1:

Build the types of cycling facilities that feel comfortable for all

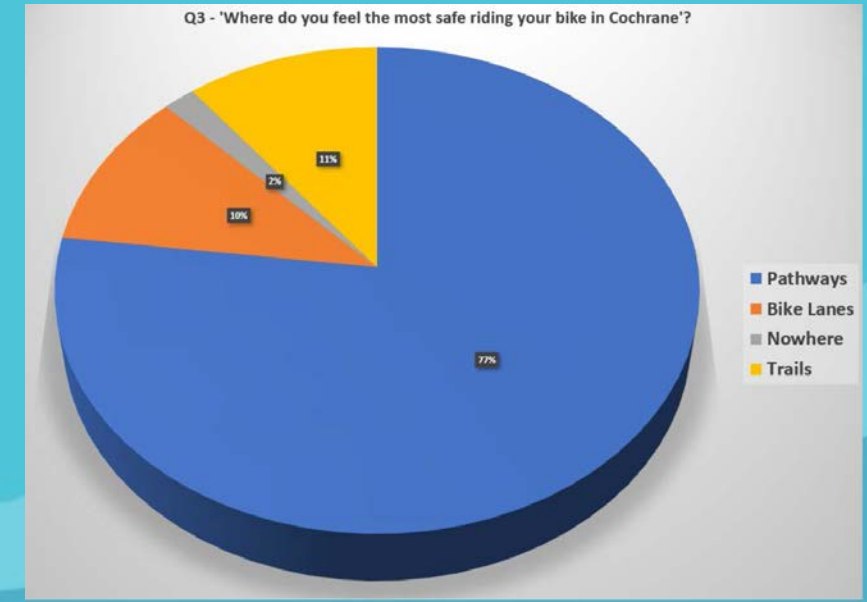


Major Street Shared Use Lane | Painted Bicycle Lane | Paint Buffered Bike Lane | Local Street Bikeway | Protected Bike Lane | Off-Street Pathway

Unsuitable for AAA facility

Suitable for AAA facility

Where are YOU comfortable biking in Cochrane?



Source – Bike Cochrane Dec 2020 Community Survey (120 respondents)



Source – City of Vancouver Design Guidelines for All Ages and Abilities Cycling



Rachel is comfortable here

Gordon is comfortable here

Cathy, Monty, and Freddy are comfortable here
This accounts for 69% of population

Collisions involving cyclists/pedestrians in Cochrane area (from AB Transportation)

- Most recent 5 year period (2013-2017)
 - Total of 33 collisions involving bicyclists
 - 27 injury collisions, 6 property-only
 - Total of 31 collisions involving pedestrians
 - 24 injury collisions, 4 fatal collisions, 3 property damage collisions
- Location data can't be released if less than 5 incidents happened (due to FOIP)
 - No 'reported collision hotspots' per AB Transportation
 - A few locations had multiple collisions
 - Sunset Circle and Sunset Drive (active crosswalk)
 - Glenbow Drive and Glenpatrick Road (active crosswalk and bike lane location)
 - **1st St, Centre Ave, Glenbow Drive, Quigley Drive,** River Heights Drive, Springbank Road

Traffic Safety



Edmonton Vision Zero

WHAT IS VISION ZERO?

Vision Zero Edmonton is the long-term goal of zero traffic fatalities and serious injuries. Vision Zero recognizes that striving towards zero traffic fatalities and serious injuries is the only ethical goal.

Principles that guide Vision Zero are:

- No loss of life is acceptable
- Traffic fatalities and serious injuries are preventable
- We all make mistakes, but these mistakes shouldn't cost our lives
- We are physically vulnerable when involved in motor vehicle collisions
- Eliminating fatalities and serious injuries is a shared responsibility between those who design and maintain our roadways and all road users.

When will we reach Vision Zero?

People make mistakes. Kids run onto the road, people drive too fast for the conditions, and drivers turn corners without checking for pedestrians. Although we may not prevent all collisions, we've made human life a priority. We recognize our choices matter to the lives of others.

Vision Zero is bringing a culture shift to those who design, build and maintain the roads, and to road users. We design our roads and set our speed limits to prevent serious injuries and fatalities. Change is not instant. Change is not easy. To reach our goal will take brave and consistent action. Reaching zero traffic fatalities and serious injuries will take the municipality, industry and all Edmontonians working together. Together, we can do it by:

2032



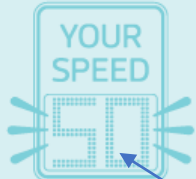
“ULTIMATELY, THE TEST OF A SAFE SYSTEM IS HOW WELL IT WORKS FOR ITS YOUNGEST, OLDEST AND MOST VULNERABLE ROAD USERS.”

—OECD, Zero Road Deaths and Serious Injuries



YEAR TWO HIGHLIGHTS

40 more Driver Feedback Signs



Protected bike lanes



43 Junior high school zones



164 Standalone playground zones



Vision Zero Street Team



Traffic Safety Culture Survey
Data (Insight Community responses) posted in Open Data

School Safety Committee



given away before Halloween

Proclamations:
School Patroller Safety Day in Edmonton

Motorcycle Safety Month

Council Protocols:
Community Traffic Safety Award

Vision Zero Recognition

Reports released:

Traffic Safety Culture Survey

Year one Annual Vision Zero Report

Annual Collision Report

Awards:

International Association of Business Communicators (IABC) Award of Excellence for the 2015 annual collision report—Category: Communication Skills, Publications



6TH ANNUAL Run Walk Ride for Vision Zero

Automated Enforcement locations posted online, then on Open Data



9th International Conference on Urban Traffic Safety

Edmonton Vision Zero

Infrastructure & education



Edmonton Downtown Bike Network



- Separated bike lanes
- Low cost pre-cast concrete barriers
- Vertical poles for visibility
- Green paint at every intersection
- Traffic signals reconfigured

2017 COMPARED TO 2016



275
PEDESTRIAN
INJURIES

-7.4%



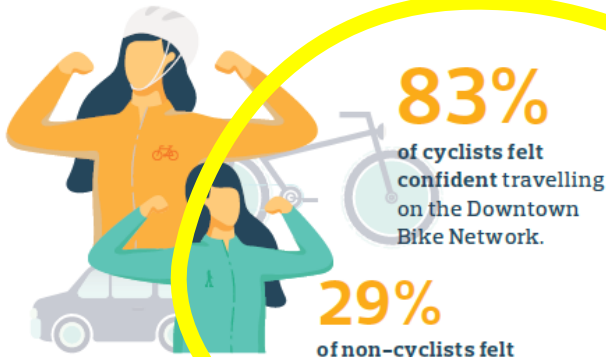
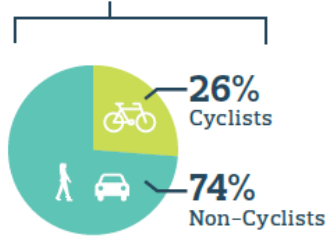
120
CYCLIST
INJURIES

-17.2%



7,002

People Engaged:
by Bike Education
Street Team



44%

of non-cyclists would consider cycling due to the Downtown Bike Network.



79%

of conversations with all users were positive.



The Protected Bike Routes And Snow Clearance Survey

People were surveyed online to understand the use of protected bike routes and snow clearance in winter



80%+

are satisfied with the protected bike routes and snow clearance.



29%

said they would only cycle in the winter on protected bike routes that are cleared of snow/ice.



Edmonton Downtown Bike Network

People feel safe in protected lanes

People **use** infrastructure they feel safe in

Engagement and education with cyclists and motorists

For additional information on the Downtown Bike Network and cycling in Edmonton visit Edmonton.ca/Cycling



Where do we start?



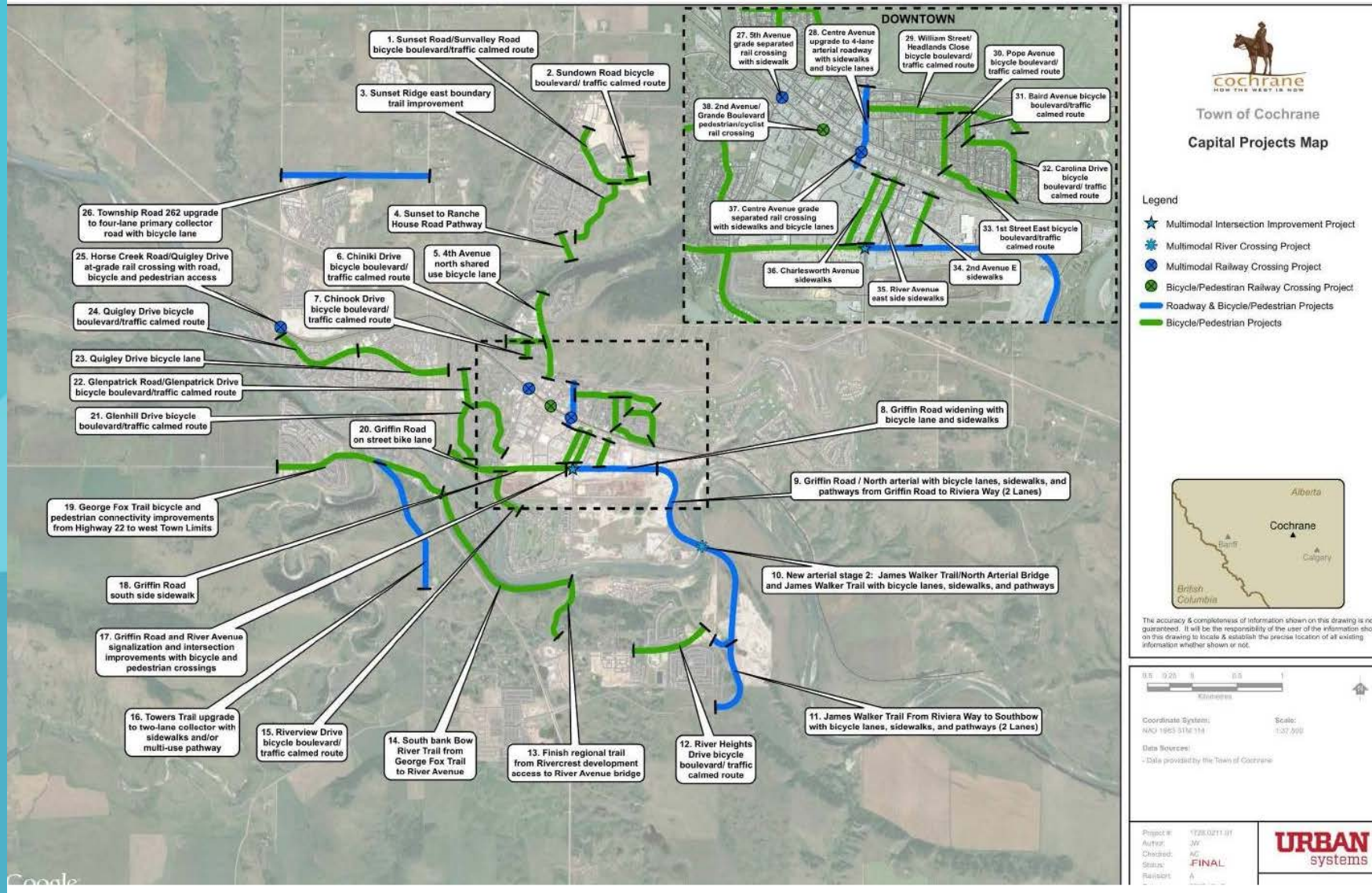
Bicycle Network Plan

Final Report

November 2012



Connecting Cochrane Project Plan



Multi-Use Pathway Projects for Active Transportation

12. Connect Sunset to Future Horse Creek and RVS High School - **\$509K**

4. Connect Sunset to Tri-Schools Area - **\$149K**

2. Pave red shale trail in Ranche Park - **\$250K**

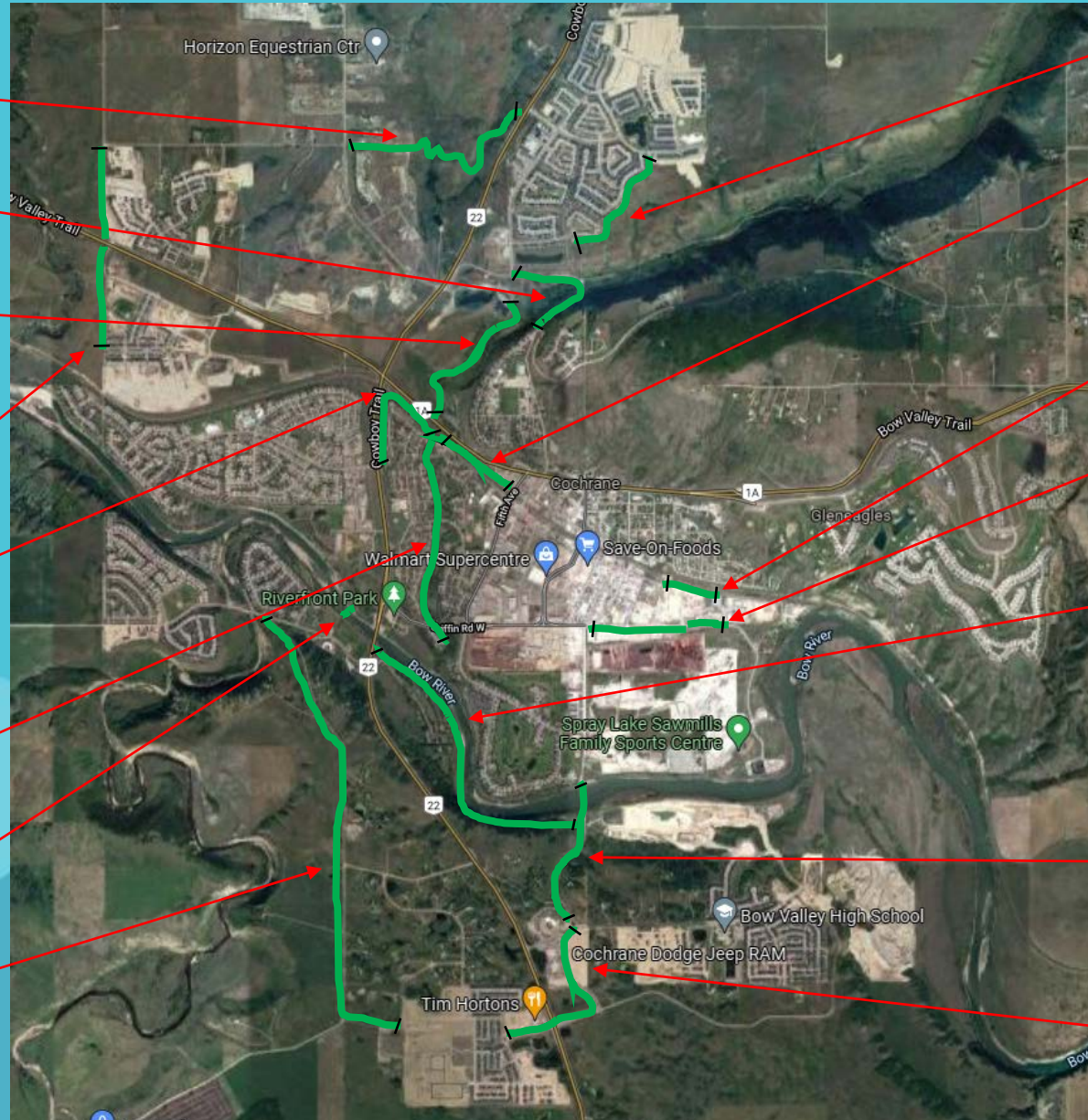
13. Heartland/Heritage Hills Multi-Use Pathway - **\$332K**

3. Pave red shale perimeter trail of Glenbow - **\$150K**

1. Pave remaining red shale in Glenbow Park - **\$232K**

14. Build Bow River Pedestrian/Cycling Bridge - **\$1.566K**

15. Build Towers Trail regional pathway - **\$780K**



10. Complete Sunset Boundary Multi-Use Regional Pathway - **\$239K**

6. North side of Glenbow Multi-Use Pathway to Downtown - **\$180K**

8. East End to Railway St connector **\$85K**

7. Complete Griffin Road Multi-Use Pathway - **\$206K**

11. South Bank of Bow River Multi-Use Pathway - **\$514K**

5. Pave existing gravel and bridge deck on Bow up to River Heights Drive - **\$160K**

9. Widen River Heights and Fireside Drive regional pathway to 3.5m - **\$214K**



Cost assumptions

			Using \$60/m ² for these calculations, but this is adjustable
			Paving is costed at \$37.60/m ² by Ruby Rock Asphalt Works (Airdrie)
# of households	12,000.00		Paving is costed at \$80/m ² by parks dept
Unit Costs			Paving is costed at \$60/m ² by Stantec and others for new BIKE paths
Paving cost 3m	180.00	\$/metre	assumes minor grading
Painting cost bike lane	25.00	\$/metre	
Painting and concrete protected cost	135.00	\$/metre	
Western-themed fencing	40.00	\$/metre	
Underpass under major highway	25,000.00	\$/metre	
Ped bridge overpass costing	3,600.00	\$/m ²	Use 5m width for estimates
Paving and building cost 3m	240.00	\$/metre	assumes extensive grading and gravel/base work to complete this



Staged projects by Type

Pave Existing Pathways

Projects	Length of paving (m)	Appropriate unit cost (\$/m)	Cost (\$)	Population Helped	People helped/\$1000 spent	Cost/household
1 Glenbow Park paving and Rodeo Connection	1291	\$ 180.00	\$ 232,380.00	34,467	148	\$ 19.37
2 Ranche Park paving	1390	180.00	\$ 250,200.00	34,467	138	\$ 20.85
3 Glenbow perimeter trail	831	180.00	\$ 149,580.00	10554	71	\$ 12.47
4 Tri-Schools Connection	830	180.00	\$ 149,400.00	6589	44	\$ 12.45
5 River Heights to River Ave bridge paving	890	180.00	\$ 160,200.00	6907	43	\$ 13.35
		Total	\$ 781,560.00			



Staged projects by Type

Build New Pathways/Connectivity

New Pathways	Length of pathway (m)	Appropriate unit cost (\$/m)	Cost (\$)	Population Helped	People helped/\$1000 spent	Cost/household
6 North side of Glenbow Off-Street Pathway	750	\$ 240.00	\$ 180,000.00	34467	191	\$ 15.00
7 Griffin Road Pathway	860	\$ 240.00	\$ 206,400.00	34467	167	\$ 17.20
8 Connect East End to Railway St	353	\$ 240.00	\$ 84,720.00	3094	37	\$ 7.06
9 River Heights regional connection width expansion	1335	\$ 160.00	\$ 213,600.00	5973	28	\$ 17.80
10 Sunset Boundary Trail Regional Pathway	997	\$ 240.00	\$ 239,280.00	6589	28	\$ 19.94
11 South bank Bow River Trail (Girl Guides)	2140	\$ 240.00	\$ 513,600.00	8624	17	\$ 42.80
12 Sunset to Horse Creek and Future RVS High School	2120	\$ 240.00	\$ 508,800.00	6589	13	\$ 42.40
13 Heartland/Heritage Hills Pathway	1383	\$ 240.00	\$ 331,920.00	3783	11	\$ 27.66
14 Bridge over Bow River	87	\$ 18,000.00	\$ 1,566,000.00	5610	4	\$ 130.50
15 Tower's Trail	3250	\$ 240.00	\$ 780,000.00	2367	3	\$ 65.00
		Total	\$ 4,624,320.00			



Staged project by type

Show People Where to Go and How to Get There

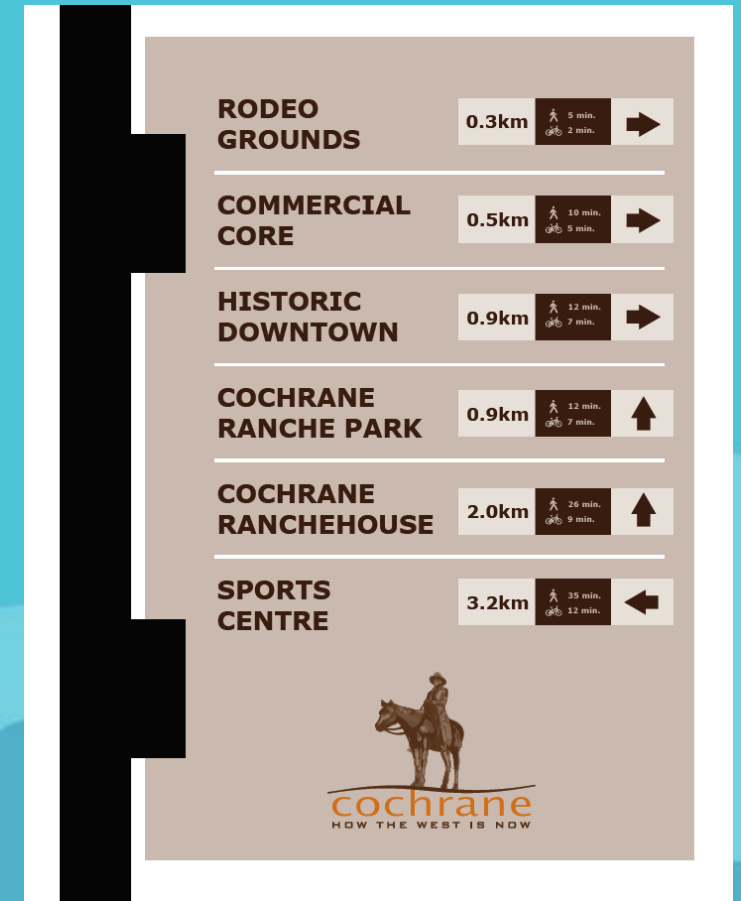
Wayfinding/Maps Signage	Cost per sign	Number of signs	Subtotal
Wayfinding signage at pathway and intersections	\$ 200.00	100	\$ 20,000.00
Map signage at major intersections	\$ 150.00	50	\$ 7,500.00
Installation of signs (assuming concrete)	\$ 250.00	150	\$ 37,500.00
		Total	\$ 65,000.00

Pave old pathways - \$782K

Build new pathways and bridge - \$4.624M

Wayfinding/signage - \$65K

Total - \$5.47 M for Total Implementation Plan



Signage example courtesy of Pink Umbrella Designs



Budget Breakdown (2022-2026) – Option A

- Front-end load the projects to leverage 60% Federal funding (2022-2023 – need to complete in 24 months)

	2022	2023	2024	2025
Red shale and signage	\$ 846,560.00			
All new pathways and Bow bridge		\$ 4,624,320.00		
Town funds	\$ 338,624.00	\$ 1,849,728.00		
Infrastructure Canada portion	\$ 507,936.00	\$ 2,774,592.00		
Total Town cost	\$ 2,188,352.00	40.0 % of total		
Total Fed cost	\$ 3,282,528.00	60.0 % of total		



Budget Breakdown (2022-2026) – Option B

- Even out projects by year

	2022	2023	2024	2025
Red Shale + signage + projects 6,7,8, 9	\$ 1,531,280.00			
Projects 10,11,12,13		\$ 1,593,600.00		
Bow Bridge			\$ 1,566,000.00	
Towers Trail pathway				\$ 780,000.00
Town funds	\$ 612,512.00	\$ 637,440.00	\$ 1,566,000.00	\$ 780,000.00
Infrastructure Canada portion	\$ 918,768.00	\$ 956,160.00		
Total Town cost	\$ 3,595,952.00	65.7% of total		
Total Fed cost	\$ 1,874,928.00	34.2% of total		



Budget Breakdown (2022-2026) – Option C

- Wait until later years to fund larger projects

	2022	2023	2024	2025
Do nothing	\$ -			
Red Shale + signage + 6, 7, 8, 9, 10		\$ 1,770,560.00		
11, 12, 13, 15			\$ 2,134,320.00	
14 Bow Bridge				\$ 1,566,000.00
Town funds	\$ -	\$ 708,224.00	\$ 2,134,320.00	\$ 1,566,000.00
Infrastructure Canada portion	\$ -	\$ 1,062,336.00		
Total Town cost	\$ 4,408,544.00	80.6% of total		
Total Fed cost	\$ 1,062,336.00	19.4% of total		



Impact to Operations and Maintenance

- Presently, Cochrane **has 70 km** of paved pathways that are plowed and maintained
 - Maintenance budget (get a \$ here)
- Following the completion of this implementation plan, Cochrane would have **88.4 km** of paved pathways

Sidewalk / Pathway Snow & Ice Clearing

The Parks and Open Spaces division clears snow from sidewalks and pathways within 48 hours after a snowfall as follows:

- Sidewalks adjacent to Town-owned buildings, properties and Town-maintained parks.
- Sidewalks adjacent to schools, Town-maintained stairway links within communities and bridge walkways across the Bow River and Jumping Pound Creek.
- Asphalt pathways and sidewalks adjacent to roadways allowing pedestrian access to the downtown core.
- Asphalt pathways within parks and environmental reserves
- Asphalt pathway links

Areas not designated to be cleared of snow:

- Residential sidewalks
- Unpaved pathways within parks and environmental reserves.



Implementation Plan – Stage 2

- Town Road Projects

- Quigley Drive
- Railway Street
- Glenbow Drive
- Old Downtown
- Gleneagles Drive

- Alberta Transportation Projects

- Hwy 22/Glenbow Intersection
- Hwy 22/Fireside Intersection
- Hwy 22/Sunset Blvd
- 1A and Horse Creek



Conclusion/Next steps

- Apply Immediately to Infrastructure Canada to **Fund Cochrane Active Transportation Implementation Plan with 60% of capital costs**
 - Bike Cochrane will work with Town Administration to support application process
- Approve a pathway bylaw that mandates an **acceptable safe slope of 8% of less**
 - See City of Calgary, Town of Canmore examples
- Work with Alberta Transportation/Cochrane Roads to find an **acceptable safe intersection solution for Hwy 22/Glenbow Drive**
- Seek all opportunities to improve Cochrane's Active Transportation Network
 - All new roadway work should **focus on separated bike infrastructure not bike lanes**
- Implementing these plans helps a **variety of user groups from the very young in strollers to the seniors on mobility scooters**



References

- 1. Parks Canada Trail Standards for Accessibility: <https://sci-bc.ca/wp-content/uploads/2019/11/parks-canada-design-guidelines-for-accessible-outdoor-recreation-facilities.pdf>
- 2. City of Calgary Parks Development Guidelines and Standards: <https://www.calgary.ca/content/dam/www/pda/pd/documents/urban-development/publications/landscape-2020.pdf>
- 3. Transportation Association of Canada (TAC) Bikeway Traffic Control Guidelines for Canada (2012): <https://www.tac-atc.ca/en/publications/ptm-bikegd2-e> (must be purchased, but this is where standard cycling signage can be found)
- 4. Connecting Cochrane Plan (2017): <https://www.cochrane.ca/DocumentCenter/View/4838/Connecting-Cochrane?bidId=>
- 5. Bicycle Network Plan – not presently available online.
- 6. Bike Cochrane Grant for Glenbow Park – not presently available online
- 7. [Costing for Bike Infrastructure \(2019\)](#)
- 8. [Town of Cochrane 2019 census](#)
- 9. [Bikeway Traffic Control Guidelines \(2012\)](#)
- 10. [Vancouver design guidelines \(2019\)](#)
- 11. [City of Portland Types of Cyclists \(2012\)](#)
- 12. [City of Calgary Development Guidelines \(2020\)](#) (Chapter 6)
- 13. [NACTO – Colored Bike Facilities](#)

