



CYCLING STRATEGY RESEARCH

PUBLIC TELEPHONE
SURVEY



JANUARY 2011



**CYCLING STRATEGY
RESEARCH**

**PUBLIC TELEPHONE
SURVEY**

Submitted to

The City of Calgary

By

HarGroup Management Consultants, Inc.

January 2011

Table of Contents

EXECUTIVE SUMMARY	i
1.0 INTRODUCTION.....	1
1.1 Survey Background	1
1.2 Survey Specifications.....	2
1.3 Reporting.....	3
2.0 CYCLING IN CALGARY	4
2.1 Cycling Behaviours	4
2.2 Identifying as a Cyclist	5
2.3 Comfort of Cycling on Various Routes.....	6
2.4 Types of Cyclists.....	7
3.0 BARRIERS TO CYCLING	12
4.0 CYCLING TRIPS.....	15
4.1 Frequency of Cycling	15
4.2 Reasons for Trip Purposes	16
4.3 Barriers to More Cycling for Trip Purposes	16
4.4 Interest in Cycling for Transportation Purposes	18
5.0 INCREASING CYCLING AMONG CALGARIANS.....	20
6.0 CONCLUDING REMARKS.....	25
APPENDICES	

EXECUTIVE SUMMARY

The City of Calgary conducted a telephone survey with a random sample of 750 adult Calgarians to determine factors that impede citizens from cycling as often as they would like. The survey also examined initiatives that might encourage Calgarians to cycle more often. Based on a cyclist typology that has been employed by other municipalities such as Portland, Oregon, survey respondents were categorized into Fearless Cyclists (2%), Confident Cyclists (20%), Interested Cyclists (51%) and Reluctant to Cycle (28%). These categories were used to gain further insights into what The City could do to encourage more cycling among citizens.

HarGroup Management Consultants Inc. was engaged to conduct the survey, which was fielded in September 2010.

KEY FINDINGS

- **Most Calgarians are Interested in Cycling More Often** - The survey results suggest that most Calgarians would like to cycle more often. Indeed, almost six out of ten survey respondents (59%) stated they would generally like to cycle more often. However, when asked specifically about cycling for transportation purposes (e.g. attending social activities, shopping or attending appointments and getting to and from work or school), Fearless and Interested Cyclists expressed greater interest in cycling more often than Confident Cyclists and Reluctant to Cycle respondents. It is worth noting that Interested Cyclists represent approximately half of Calgarians and almost three-quarters of them (72%) indicated they are interested in cycling more often for transportation purposes.
- **Many Calgarians are Concerned about their Personal Safety while Cycling** - There are various kinds of routes that cyclists can use to travel through Calgary. For the most part, Calgarians feel safe cycling on pathways and quiet residential streets, and many feel comfortable on neighbourhood roads designated as bus routes that have specific bike lanes. Levels of comfort decline significantly if these kinds of roads do not have bike lanes; particularly among Interested Cyclists. To further emphasize the point, when respondents were asked to rate specific barriers that might impede Calgarians from cycling more often, the highest rated was concerns about personal safety when cycling in traffic.
- **Other Barriers to Cycling include: Other Priorities, Physical Demands of Cycling, Weather and Distances to Travel** - While concerns about personal safety was ranked highest in terms of being a barrier to cycling, other reasons were common as well. These other factors include other obligations that may prevent them from cycling, cycling being too tiring, the potential of the weather changing when cycling, and distances being too far to travel by bicycle.
- **More Bicycle Lanes, Bike Friendly Pathways, Cycle Tracks and Other Initiatives are Deemed as Encouragements for Calgarians to Cycle More** - The most common suggestions for improvements that might encourage Calgarians to cycle more often include more bicycle lanes and multi-use pathways, and introducing cycle tracks that separate cyclists from both vehicles and pedestrians. Other initiatives that were perceived to encourage cycling among Calgarians include more or better signs and maps that show bike routes and increasing cyclist and motorist knowledge about cycling rules and issues. These kinds of improvements were appealing to all types of cyclists.

1.0 INTRODUCTION

The City of Calgary is developing a comprehensive cycling strategy, which identifies actions The City will take in the short, medium and long term in order to make Calgary a bicycle-friendly city for all; a city where cycling is a great option for transportation and recreation purposes. In developing the strategy, The City conducted a telephone survey of 750 adult Calgarians about barriers to cycling and possible measures that could encourage people to cycle more often. This report presents the findings of the survey.

The City commissioned HarGroup Management Consultants Inc. to design a survey questionnaire, field the survey and report the results.

1.1 Survey Background

There is a long history of planning initiatives that have supported cycling in Calgary. For instance, in 1996, the *Calgary Cycle Plan* was adopted to meet the growing demand for bike programs and facilities, which was followed up by the *Pathways and Bikeways Plan* in 2001. These kinds of initiatives have resulted in more than 707 kilometres of pathways and 260 kilometres of on-street bike routes in Calgary (*Calgary Pathways and Bikeways Map, 2009*). Indeed, Calgary is recognized for its extensive multi-use pathway system, which facilitates cycling through a good part of the city. Nonetheless, many Calgarians have expressed a desire for better on-street cycling facilities.

The *Calgary Transportation Plan*, which was approved by City Council in 2009, supports cycling through various policies such as the introduction of new types of cycling infrastructure or facilities, improved design of future and redeveloped streets and the provision of better connections for cycling throughout the city. As an example, a new Primary Cycling Network¹ is proposed that will connect major destinations throughout the city and ensure that cycling is a convenient, year-round alternative to travel in Calgary for both commuters and recreational users. To identify actions that foster the policies and concepts presented in the *Calgary Transportation Plan*, Council directed Administration to prepare a comprehensive cycling strategy. The strategy will expand the bicycle system to include better on-street and off-street facilities and deliver programs that encourage more people to cycle.

¹ An illustrative presentation of the Primary Cycling Network is available in the *Calgary Transportation Plan, 2009* (Appendix D - Map 1).

To assist with the development of the comprehensive cycling strategy, The City conducted a telephone survey with Calgarians. The survey addressed a variety of issues such as:

- Participation in cycling among Calgarians,
- Reasons for cycling,
- Perceptions of cycling in the city,
- Perceived barriers to cycling within the city,
- Opinions about potential actions The City could take to encourage more cycling in the city.

In addition to understanding the above issues, a requirement of the survey project was to design a typology of cyclists in Calgary. Building upon work done by the Office of Transportation of the City of Portland, Oregon,² respondents were categorized based on answers to questions about existing cycling behaviour, attitudes about cycling and willingness to cycle on various types of streets. The last of these factors emerges from the premise that many people refrain from cycling more often because of concerns about personal safety; particularly when riding on roads with automobiles. For the most part, the survey results presented in this report (see Section 3.0) affirm that this is a salient barrier to cycling among Calgarians. The next section of this report (Section 2.0) presents categories of cyclists for Calgarians, which are used to provide context for analyzing the survey issues presented above.

1.2 Survey Specifications

The survey was conducted by telephone with a random sample of 750 adult Calgarians. Quotas were established for the survey to ensure the sample effectively represented the Calgary population for age and gender.

A sample of 750 respondents provides an estimated margin of error of ± 3.6 within a 95% confidence interval. Expressed differently, if the survey were to be conducted within the same population again, in 19 surveys out of 20 the results would likely remain within $\pm 3.6\%$ of the results presented in this report. The margin of error is computed for the entire sample and analyses based on sample subsets will typically not achieve the same level of confidence.

A questionnaire was designed by HarGroup Management Consultants in conjunction with City representatives. A copy of the questionnaire is presented in Appendix A.

² Four Types of Cyclists, Roger Geller, Bicycle Coordinator, Portland Office of Transportation, 2009.

Demographic data were gathered from respondents and are presented in Appendix B. These data reveal that the survey sample is similar in composition to the demographic profile of Calgary in terms of gender and age. The sample is slightly lower in representation for visible minority respondents.

1.3 Reporting

The remaining sections of the report present the results of the Cycling Strategy Research Telephone Survey. Basic frequencies of survey question results are presented in the report. However, various statistical procedures have also been used within the analyses to assess significance of contrasting responses or perceptions of respondents. These analyses provide additional insight into the data and allow for a greater degree of certainty in statements of inference.

Tables and figures contained within the body of this report are presented with rounded percentages. As such, totals may not sum to 100%.

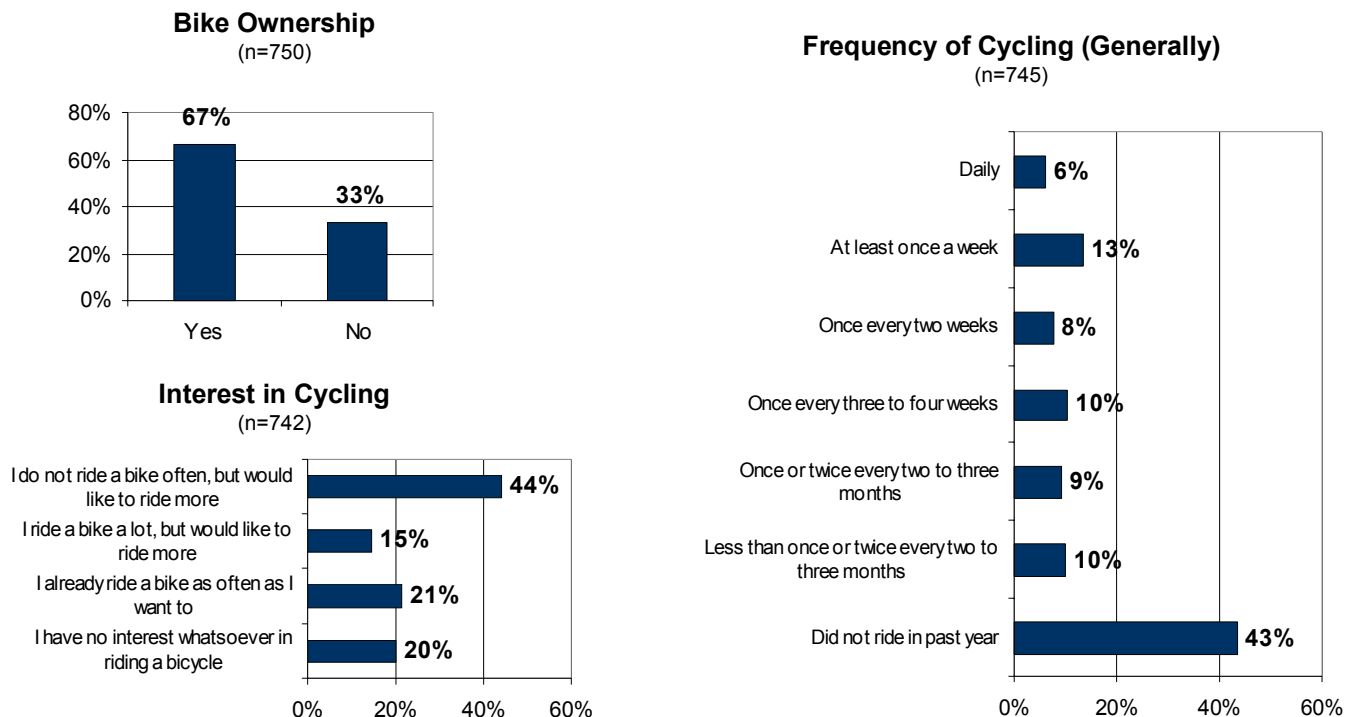
2.0 CYCLING IN CALGARY

Many Calgarians cycle and are interested in cycling more often, as will be demonstrated by the survey results presented within this section of the report. However, categorizing the population into cycling types was an important component of the Cycling Strategy Research Survey. To develop cycling types, a series of questions examined cycling behaviour and characteristics and levels of comfort travelling on various kinds of cycling routes. The cycling types identified in this section are used throughout the report to gain further insight into barriers to cycling and potential improvements that might encourage more cycling among Calgarians.

2.1 Cycling Behaviours

While the survey data suggest that about two-thirds of Calgarians (67%) own a bicycle, just over half (57%) had ridden one in the 12 months preceding the survey (Figure 2.1). About eight out of ten Calgarians who own bikes are likely to have ridden one at least once in the past year (see Appendix C). Nonetheless, the survey data suggest that about one in five Calgarians (19%) ride at least once a week and just over a third (37%) ride at least once a month. The survey data also suggest that many Calgarians would like to ride their bike more often in that respondents stated that they either "do not ride often, but would like to ride more" (44%), or "ride a lot, but would like to ride more" (15%).

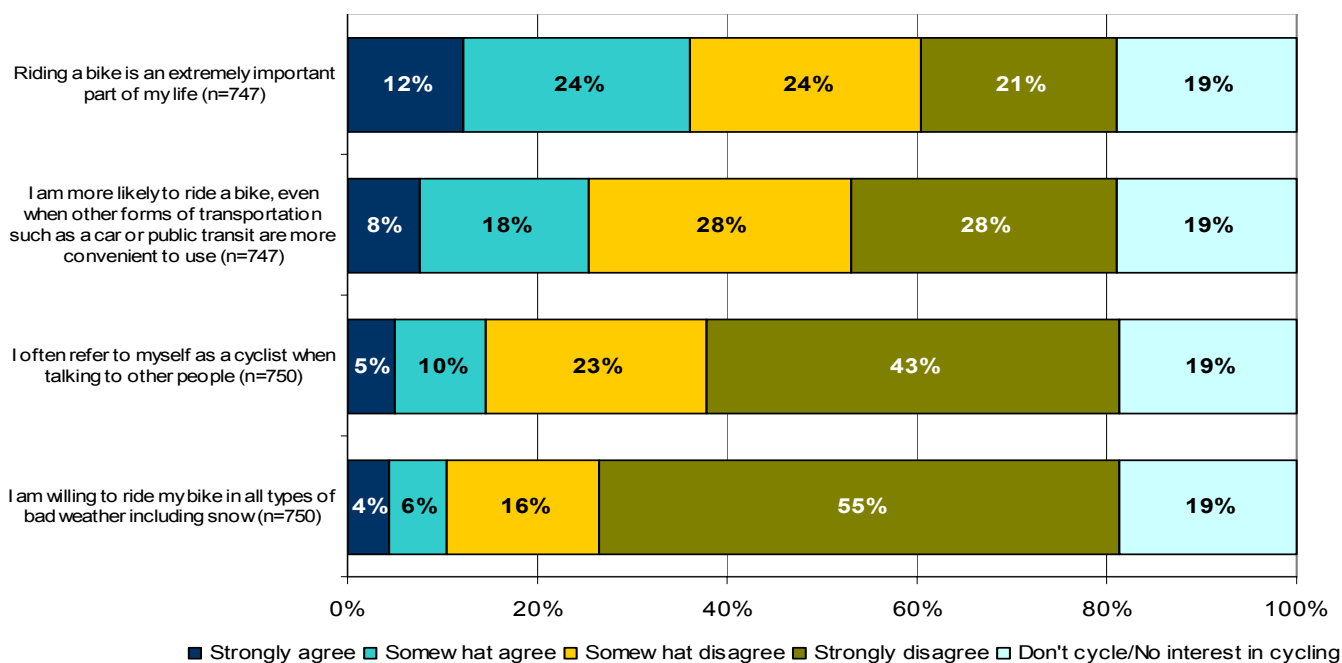
Figure 2.1: Cycling Profile among Calgarians



2.2 Identifying as a Cyclist

Even though most Calgarians have cycled in the past year, not everyone identifies themselves as a cyclist. An important aspect of the categorization of cyclists is to consider the extent to which Calgarians self identify as cyclists. As can be seen in Figure 2.2, only a small proportion of Calgarians identify themselves in this way. For instance, the data reveal that about a third of survey respondents (36%) agreed (strongly or somewhat) that riding is an extremely important part of their lives and approximately a quarter (26%) that they are likely to ride a bike even when other forms of transportation are more convenient to use. Fewer respondents agreed that they often refer to themselves as cyclists (15%) and are willing to ride their bikes in all types of bad weather (10%). It is also worth noting that respondents who agreed to these characteristics were more likely to somewhat rather than strongly agree, possibly suggesting that only a small proportion (e.g. less than 10%) are resolute in their perceptions of being a cyclist.

Figure 2.2: Identity as a Cyclist



Further analysis shows that Calgarians who cycle often are more likely to self identify as cyclists. For instance, approximately four out of ten respondents (39%) who cycle daily strongly agreed that they often refer to themselves as cyclists compared to 1% of those who cycle less than once or twice every two or three months and none of those who did not cycle in the past year (see Appendix C).

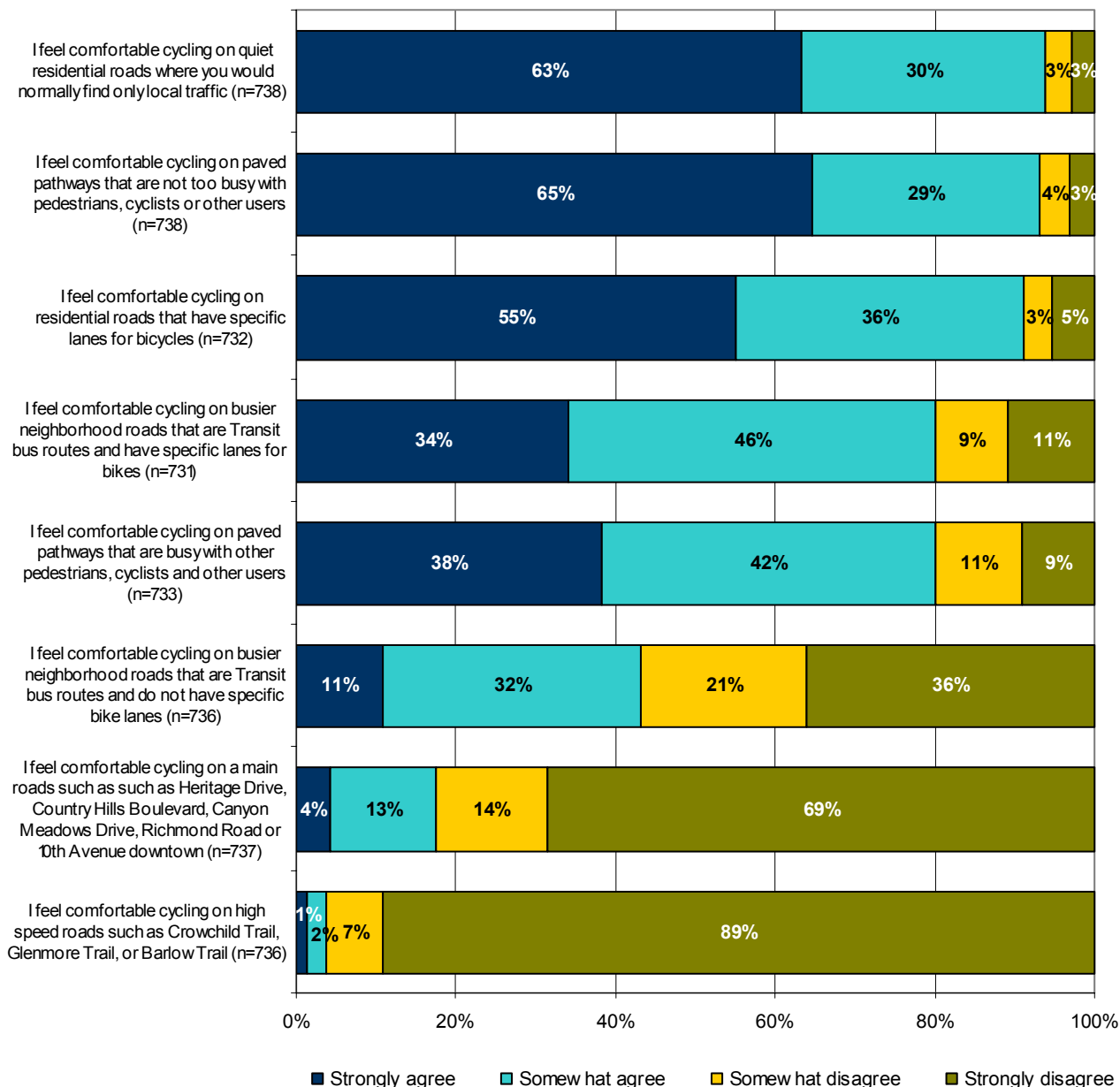
2.3 Comfort of Cycling on Various Routes

Another important factor in categorizing Calgarians into cyclist types is the level of comfort with bicycling on various cycling routes. To develop this factor, survey respondents were presented with descriptions of different kinds of cycling routes and asked about their comfort levels cycling on these routes. As presented in Figure 2.3, most survey respondents stated that they feel comfortable cycling some of the routes tested in the survey, but not others. Indeed, there appears to be a notable distinction among many respondents with riding bikes on busier neighbourhood roads that have bus routes. Most respondents (80%) agreed that they are comfortable cycling on these types of roads if they have specific bike lanes, while less than half (43%) are comfortable on these roads if specific bike lanes are not present. These data suggest that biking infrastructure is necessary for many respondents to feel safe traveling on these roads with a bicycle. As such, this distinction is used as a salient factor to categorize respondents into types of cyclists.³

There are also a few other notable observations from the data in Figure 2.3. First, there does not seem to be much distinction for comfort levels between cycling on residential streets where there is normally only local traffic and on paved pathways that are not too busy with pedestrians, cyclists or other users. The vast majority of respondents (approximately 94% for both) agreed that they felt comfortable using these routes for cycling and the extents of agreement (e.g. very compared to somewhat agree) are almost identical. Second, there appears to be a substantial difference in comfort levels between pathways that are not too busy and those that are busy with other pedestrians, cyclists and other users. For example, almost two-thirds of respondents (65%) strongly agreed they are comfortable on not too busy pathways compared to almost four out of ten (38%) on busy pathways. Finally, few respondents (4%) strongly agreed they were comfortable on main roads (e.g. Heritage Drive, Country Hills Boulevard, Canyon Meadows Drive, etc.) and even fewer on high speed roads like Crowchild Trail, Glenmore Trail and Barlow Trail.

³ This factor was used to differentiate between respondents who are classified as Fearless Cyclists/Confident Cyclists and Interested Cyclists in the categories presented later in this report.

Figure 2.3: Level of Comfort among Types of Routes



2.4 Types of Cyclists

Using the data presented above, respondents were grouped into four categories of cyclists. The four categories and general descriptions of each are presented below. Depending on respondents' answers to questions about frequency of cycling, identifying as a cyclist and comfort cycling on various routes, respondents were classified into different types of cyclists. For example, respondents who indicated that they cycled at least once a week and agreed (strongly or somewhat) that they are "comfortable riding on a busier

neighbourhood road that has Transit bus routes without specific bike lanes”, “riding was an extremely important part of their life” and “likely to ride a bike, even when other forms of transportation are more convenient to use” were classified as Fearless Cyclists. Other factors were used to group respondents into the other three categories, which are presented in Appendix D.

Characteristics of Main Categories

- ***Fearless Cyclists:*** Cycling is a strong part of their identity and they are generally undeterred by motor vehicles. They will consider cycling even in the absence of any visible bike facility.
- ***Confident Cyclists:*** Cycling is a part of their identity. They are slightly or moderately comfortable sharing the road with motor vehicles. They will consider cycling only if there is a route available which mostly consists of visible bike facilities.
- ***Interested Cyclists:*** These respondents are curious about bicycling. They do not identify as a cyclist, but enjoy riding a bicycle.
- ***Reluctant to Cycle:*** These respondents are not interested in cycling and are not likely to ride a bike, even during seasons when weather is most accommodating to cycling.

The above categories are similar to types of cyclists identified in other similar research (i.e. Office of Transportation of the City of Portland, Oregon).⁴ However, detailed analysis of the survey data reveals that further distinctions may be worth considering in categorizing cyclists. For instance, a factor that distinguishes Fearless Cyclists from Confident Cyclists is that Confident Cyclists usually do not agree with all of the items that are used to characterize cycling as being part of their identity such as riding being extremely important to them, referring to themselves as cyclists, being willing to ride in bad weather and riding a bike when other forms of transportation are more convenient to use. Nonetheless, some Confident Cyclists are more likely to agree with these items than others, which allows this category to be segmented further into Enthusiastic Cyclists (more likely to agree with items) and Assured Regular Cyclists (less likely to agree with items). In addition, some of the Interested Cyclists had cycled in the previous 12 months, while others had not, and some of these were comfortable using neighbourhood roads that had bicycling infrastructure and others were not. As such, the Interested Cyclists could be segmented into four additional categories such as Comfortable with Infrastructure Cyclist, Concerned Cyclist, Comfortable with Infrastructure Non-Cyclist, and Concerned Non-Cyclist. These additional sets of refined categories enable deeper insight into Calgarians' perceptions about barriers and possible infrastructure improvements to increase cycling among citizens. For the most part, the analysis presented in the body of

⁴ The Statement of Requirement for the Cycling Strategy Research had prescribed four categories of cyclists, including Fearless Cyclists, Confident Cyclists, Novice or Interested but Concerned Cyclists and Not Interested in Cycling.

this report highlights similarities and differences among the main categories of cyclists, while further distinctions about refined categories of cyclists are presented in appendices.

Characteristics of Refined Categories

- ***Fearless Cyclists***: Cycling is a strong part of their identity and they are generally undeterred by motor vehicles. They typically cycle every day and will consider cycling even in the absence of any visible bike facility.
- ***Enthusiastic Cyclists***: They are enthusiastic about cycling and consider it to be part of their identity; although they may only cycle once every two weeks. They are slightly or moderately comfortable sharing the road with motor vehicles, but are more likely to consider cycling if there is a route available which mostly consists of visible bike facilities.
- ***Assured Regular Cyclists***: They cycle regularly and are slightly or moderately comfortable sharing the road with motor vehicles. Still, they are more likely to consider cycling if there is a route available that consists of visible bike facilities.
- ***Comfortable with Infrastructure Cyclists***: These cyclists are willing to bike on busier neighbourhood roads as long as there is specific cycling infrastructure available. They generally cycle once, or possibly twice, a month, but do not identify themselves as cyclists.
- ***Concerned Cyclists***: These respondents cycle occasionally; however, they are not likely to cycle on busier neighbourhood roads even when cycling infrastructure is present.
- ***Comfortable with Infrastructure Non-Cyclists***: Indicate a willingness to cycle on busier neighbourhood roads as long as there is cycling infrastructure available; however, they currently do not cycle.
- ***Concerned Non-Cyclists***: These respondents are interested in cycling, but currently do not. They are not likely to cycle on busier neighbourhood roads even when cycling infrastructure is present.
- ***Reluctant to Cycle***: These respondents are not interested in cycling and are not likely to ride a bike, even during seasons when weather is most accommodating to cycling.

Figure 2.4 provides distributions of respondents who are identified with each of the main and refined cyclist categories. These data show that few respondents (2%) fit into the Fearless Cyclist category, while approximately one out of five (19%) into the Confident Cyclist category. The Interested Cyclist category is comprised of the majority of respondents (51%) and the Reluctant to Cycle category is made up of just over a quarter of respondents (28%).

Figure 2.4: Cycling Types among Calgarians

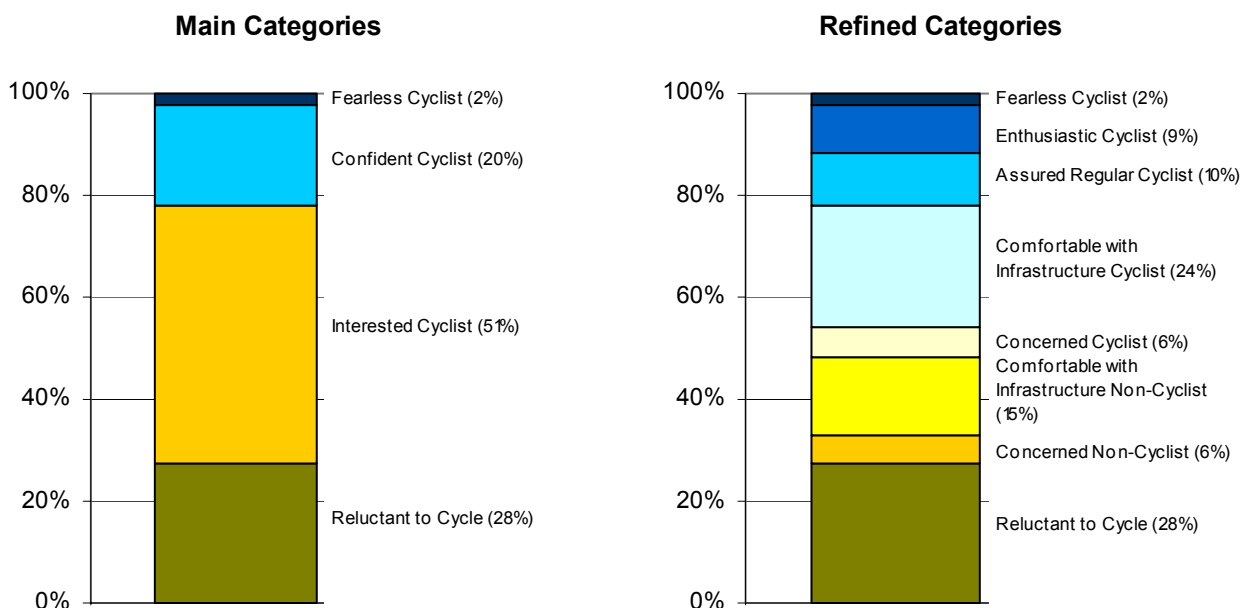


Table 2.1 presents prevalent demographic characteristics of respondents who comprise the various categories. Some of the more notable characteristics suggest that Fearless and Confident Cyclists are more likely to be male, between 35 and 54 years old and reside in households with higher incomes. Reluctant to Cycle respondents are more likely to be female, over 55 years old and living in households with lower income. They are also more likely to have a physical disability or mental condition that inhibits them from cycling.

Table 2.1: Respondent Characteristics of Cycling Categories

Category	Prevalent Characteristics	Refined Categories	Prevalent Characteristics
Fearless Cyclist	<ul style="list-style-type: none"> ▪ Male ▪ Aged 35 to 44 ▪ Does not have a disability or medical condition that inhibits cycling ▪ Couple with children living at home ▪ Household income of at least \$140,000 	Fearless Cyclist	<ul style="list-style-type: none"> ▪ Male ▪ Aged 35 to 44 ▪ Does not have a disability or medical condition that inhibits cycling ▪ Couple with children living at home ▪ Household income of at least \$140,000
Confident Cyclist	<ul style="list-style-type: none"> ▪ Male ▪ Aged 45 to 54 ▪ Household income of \$85,000 to <\$140,000 	Enthusiastic Cyclist	<ul style="list-style-type: none"> ▪ Male ▪ Aged 45 to 54 ▪ Resides in northwest Calgary
		Assured Regular Cyclist	<ul style="list-style-type: none"> ▪ Male ▪ Resides in southwest Calgary
Interested Cyclist	<ul style="list-style-type: none"> ▪ Couple with children living at home 	Comfortable with Infrastructure Cyclist	<ul style="list-style-type: none"> ▪ Aged 35 to 44 ▪ Resides in southwest Calgary ▪ Couple with children living at home
		Concerned Cyclist	<ul style="list-style-type: none"> ▪ Female ▪ Aged 45 to 54 ▪ Resides in southeast Calgary
		Comfortable with Infrastructure Non-Cyclist	<ul style="list-style-type: none"> ▪ Female ▪ Aged 25 to 44 ▪ Resides in northwest Calgary
		Concerned Non-Cyclist	<ul style="list-style-type: none"> ▪ Female ▪ Aged 45+ ▪ Resides in southeast Calgary ▪ Has a disability or medical condition that inhibits cycling
Reluctant to Cycle	<ul style="list-style-type: none"> ▪ Female ▪ Aged 55+ ▪ Has a disability or medical condition that inhibits cycling ▪ Couple without children living at home ▪ Household income of less than \$85,000 	Reluctant to Cycle	<ul style="list-style-type: none"> ▪ Female ▪ Aged 55+ ▪ Has a disability or medical condition that inhibits cycling ▪ Couple without children living at home ▪ Household income of less than \$85,000
<p>Note: See Appendix C for data tables. Reader should use caution when observing the information in this table due to low numbers of respondents for categories (e.g. the low number of respondents for Fearless Cyclists could affect the information presented above).</p>			

3.0 BARRIERS TO CYCLING

There are various reasons why Calgarians do not cycle or do not cycle as often as they would like. To learn about these issues, survey respondents were asked to consider a prescribed set of possible barriers and indicate the extent to which these might impede them from cycling.

Figure 3.1 reveals that the most commonly agreed upon barrier by respondents was not feeling safe when cycling in traffic. Actually, about eight out of ten respondents (80%) concurred that they feel unsafe cycling in traffic and most of these (41%) strongly agreed this assertion.

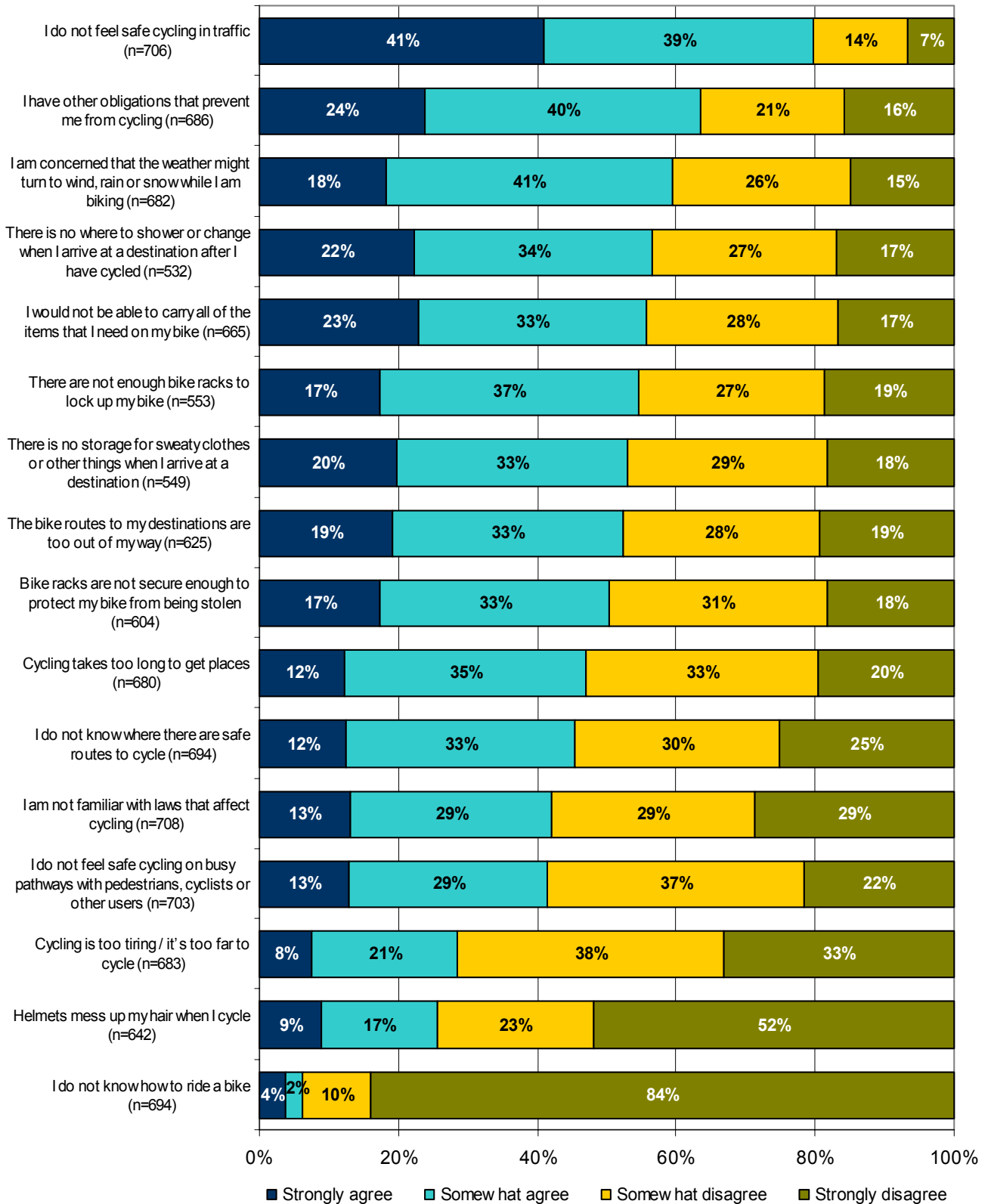
The next set of barriers, which is agreed upon by about six out of ten respondents, included having other obligations that prevent cycling (64%), concern about weather (59%), lack of change facilities at destinations (56%) and not being able to carry items when biking (55%). While there may be initiatives that could deal with the first barrier identified (e.g. bicycling infrastructure to make cycling more safe), the others may be more difficult to address; particularly the one that suggests respondents have other priorities that affect why they do not cycle.

About half of respondents agreed that there are not enough bike racks to lock up bikes (54%), there is a lack of storage spaces at destinations (53%), bike routes to destinations are out of the way (52%), bike racks are not secure enough (50%), cycling takes too long to get to places (47%) and they do not know where there are safe routes to cycle (45%).

Fewer respondents concurred that they are not familiar with cycling laws (42%), they do not feel safe cycling on busy pathways (42%), cycling is too tiring or its too far to cycle (29%) and helmets mess up cyclists hair (26%).

Few respondents (6%) agreed that they did not know how to ride a bike.

Figure 3.1: Barriers to Cycling
(Informed responses - Don't know is not included)



Further analysis reveals that there are significant differences observed among the categories of cyclists for levels of agreement to possible barriers (see Appendix C). Still, when taken as a whole, the effects of barriers on cycling apply fairly consistently to all of the categories of cyclists. For instance, Table 3.1 shows that safety is the barrier identified most for all categories of cyclists. Also, other barriers tested with respondents rank in similar order among the various categories of cyclists with only a few differences (e.g. not enough bike racks and bike racks not being secure enough to protect bikes from being stolen rank fairly high for Fearless Cyclists). Nonetheless, it is worth noting that the barriers examined in the survey tend to affect Fearless Cyclists the least, Confident Cyclists the second least, Interested Cyclists the second most, and the Reluctant to Cycle the most.

Table 3.1: Barriers to Cycling (Strongly and Somewhat Agree Responses Combined)					
Barriers	% of Respondents				
	All Respondents	Fearless Cyclists	Confident Cyclists	Interested Cyclists	Reluctant to Cycle
I do not feel safe cycling in traffic	80	59	69	82	85
I have other obligations that prevent me from cycling	63	41	50	68	67
I am concerned that the weather might turn to wind, rain or snow while I am biking	60	35	43	63	70
There is no where to shower or change when I arrive at a destination after I have cycled	57	35	50	58	63
I would not be able to carry all of the items that I need on my bike	56	24	42	60	63
There are not enough bike racks to lock up my bike	55	56	46	57	59
There is no storage for sweaty clothes or other things when I arrive at a destination	53	44	48	54	57
The bike routes to my destinations are too out of my way	52	39	40	55	60
Bike racks are not secure enough to protect my bike from being stolen	50	50	45	49	60
Cycling takes too long to get places	47	22	28	51	57
I do not know where there are safe routes to cycle	45	24	28	47	59
I am not familiar with laws that affect cycling	42	6	27	42	58
I do not feel safe cycling on busy pathways with pedestrians, cyclists or other users	42	18	32	39	59
Cycling is too tiring/it's too far to cycle	29	0	16	25	50
Helmets mess up my hair when I cycle	26	11	22	23	36
I do not know how to ride a bike	6	0	2	3	16

Some differences exist among refined categories of cyclists, which are presented in Appendix C. One of the more notable observations is that Interested Cyclists who are concerned about their safety (both existing cyclists and non-cyclists) were much more likely to agree that they do not feel safe cycling in traffic and much less likely to agree that there are other obligations that impede them from cycling.

4.0 CYCLING TRIPS

The survey also examined the types or purpose of trips taken by cyclists in Calgary such as for recreation, social, shopping or appointments and work or school purposes. Respondents were asked why they cycled for these trips, to identify barriers to cycling more often for each trip type and what might be done to increase the likelihood of them cycling. Questions about barriers and improvements were only asked for non-recreational trips.

4.1 Frequency of Cycling

Table 4.1 shows the frequency of which respondents cycled for various trip purposes in the past twelve months. Respondents were most likely to cycle for recreation purposes, followed by social purposes and for shopping or appointments. Cycling for work or school was least likely to be reported by respondents.

Frequency	Generally (n=745)	Recreation (n=748)	Social Purposes (n=732)	Shopping/ appointments (n=729)	Work/ School (n=746)
Daily	6	2	1	1	3
At least once a week	13	13	4	3	3
Once every two weeks	8	9	4	3	1
Once every three to four weeks	10	8	5	4	1
Once or twice every two to three months	9	9	6	6	1
Less than once or twice every two to three months	10	7	11	9	3
Did not ride in past year*	43	52	70	74	88
Total	100	100	100	100	100

*Represents respondents who either didn't ride their bicycle at all in the past year (generally or for a specific purpose) or those who didn't take that type of trip (e.g. don't have a job or attend a school program they need to commute to and from)

Further analysis shows that Fearless Cyclists are much more likely than Confident and Interested Cyclists to cycle for all trip purposes (see Appendix C). The same observation is apparent for the refined categories of cyclists.

4.2 Reasons for Trip Purposes

Table 4.2 reveals reasons for choosing to cycle for the various types of trips. The most commonly cited reasons for cycling were “exercise” and “fun and enjoyable”. These two reasons were most mentioned for all trip purposes. Other reasons cited by respondents included being more convenient than other forms of transportation, to spend time with family or friends, being nice to be outdoors, and being less expensive and harmful to the environment than other forms of transportation or activities.

Reason	Recreation (n=362)	Social Purposes (n=215)	Shopping/ Appointments (n=184)	Work/ School (n=85)
For exercise	41	36	33	48
Fun and enjoyable	33	42	28	15
To spend time with friends or family	14	6	11	6
Nice to be out in nature	7	1	3	2
Less expensive than other types of transportation/activities	1	4	4	6
Less harmful to the environment than other types of transportation/activities	1	4	9	8
More convenient than other forms of transportation	0	11	19	13
More convenient - general	0	1	0	1
No car available	0	1	3	0
Other	2	2	6	8
Don't know/refused	0	0	1	6
Total	100	100	100	100

Detailed analysis of the data revealed that the reasons for choosing to cycle did not significantly differ across the cyclist categories for all trip purposes.

4.3 Barriers to More Cycling for Trip Purposes

Respondents were also asked about potential barriers to cycling more often for social purposes, shopping or appointments, and work or school. In these cases, there were similarities and differences observed among the top reasons for not cycling more often (Table 4.3). For social purposes, the top three reasons were cycling is too tiring, there are other obligations that prevent cycling, and bike routes are too far out of the way. In contrast, the three most common reasons for shopping or appointments were concerns about carrying items on a bike, having other obligations and not feeling safe. The three most common barriers to not cycling to work or school included cycling is too tiring, destinations are too far, and not feeling safe cycling in traffic. Interestingly, many of these issues were

prominent in the barriers identified earlier, although it should be noted that respondents were asked to consider these in their responses.

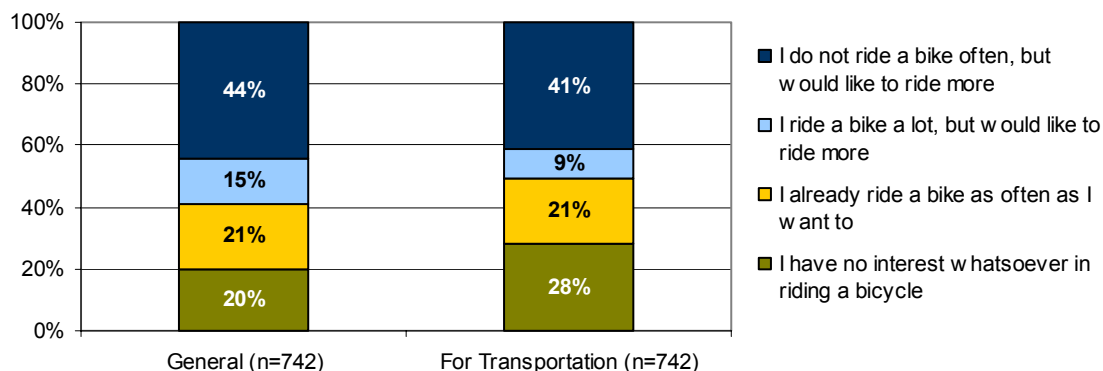
Table 4.3: Barriers to Cycling by Trip Purpose			
Barriers	% of Respondents		
	Social Purposes (n=442)	Shopping/ Appointments (n=709)	Work/ School (n=305)
Cycling is too tiring	21	13	29
I have other obligations that prevent me from cycling	17	15	9
The bike route to my destinations are too out of my way	14	12	21
I do not feel safe cycling in traffic	12	14	18
Cycling takes too long to get places	10	11	17
I'm too old/health issues	9	10	3
Prefer to walk/drive/etc/not to cycle	9	8	4
Concern that the weather may turn to wind/rain/snow while cycling	6	4	13
Don't have a bike/other required equipment	6	6	0
There is nowhere to shower/change at my destination after cycling	4	1	8
I would not be able to carry all of the items that I need	3	31	7
No storage for sweaty clothes/other things at my destination	2	2	3
Don't like cycling at night	2	0	0
I do not know of safe routes to bike between my home and destination	2	2	4
Like to dress up to go out	2	0	0
I do not feel safe cycling on busy paths with people/bike	2	1	3
I do not know how to cycle	1	1	0
Bike racks are not secure enough to protect my bike from	1	2	2
Just lazy	1	2	3
There are not enough bike racks to lock up my bike	1	2	2
Helmets mess up my hair when I cycle	1	0	1
Other	3	2	4
Number of Responses	665	943	857

The only barriers that are common among all cyclist types are cycling being too tiring, destinations being too far and concerns about safety of cycling in traffic (see Appendix C). Some of these, such as cycling being too tiring and destinations being too far may be difficult to address other than through multi-modal enhancements that allow Calgarians to use several modes in one trip (e.g. driving with your bicycle, park, and then ride the bicycle the rest of the way or riding a bicycle to a transit station and then using transit). Still, not feeling safe may be addressed through biking infrastructure and education that emphasizes safety for cyclists and motor vehicle operators alike.

4.4 Interest in Cycling for Transportation Purposes

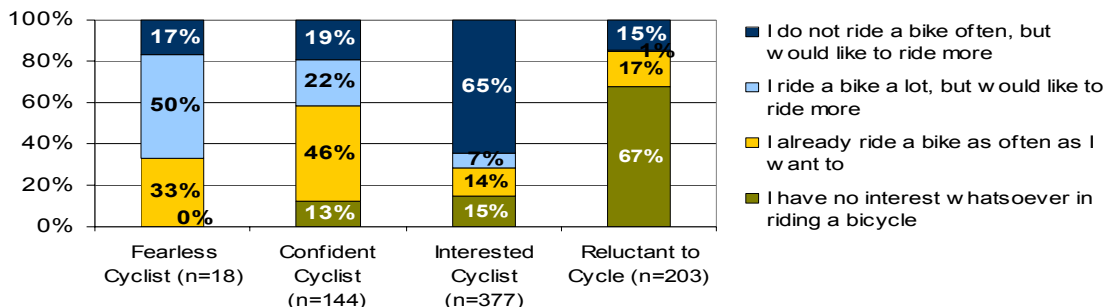
Respondents were also asked about their interest in cycling more often for transportation purposes such as for social purposes, shopping or appointments, or work or school. About half of respondents (50%) indicated that they would like to cycle more often. This proportion is only slightly lower than the results showing respondents who would like to cycle more often generally.

Figure 4.1: Interest in Cycling⁵



Further analysis suggests that Fearless and Interested Cyclists are more likely to be interested in cycling more for transportation purposes than Confident Cyclists and Reluctant to Cycle. Still, it is worth noting that Fearless Cyclists represent fewer Calgarians than Interested Cyclists. Actually, Interested Cyclists represent approximately half of Calgarians (see Table 2.1) and almost three-quarters of these (72%) indicated they are interested in cycling more for transportation purposes.

Figure 4.2: Interest in Cycling for Transportation Purposes By Categories of Cyclists



⁵ Transportation represents cycling for social purposes, shopping or appointments, or work or school.

Taking into account the refined categories (see Appendix C), Comfortable with Infrastructure Cyclists and Non-Cyclists (e.g. those who are comfortable riding on neighbourhood roads with bike lanes) are more likely to be interested in cycling more for transportation purposes than Concerned Cyclists and Non-Cyclists. This suggests that it might be easier to encourage the Comfortable with Infrastructure (both Cyclists and Non-Cyclists) group than the Concerned group.

5.0 INCREASING CYCLING AMONG CALGARIANS

Respondents were given an opportunity to provide suggestions for what improvements might encourage them to cycle more often. Table 5.1 shows that the top two suggestions when unaided were more bicycle lanes and multi-use pathways. Other prevalent suggestions from respondents included separate pathways for cyclists and pedestrians, wider vehicle lanes, cycle tracks, more paths or interconnected paths and more or better bicycle parking. Interestingly, these suggestions were common for all categories of cyclists.

Improvements	% of Respondents				
	All Respondents (n=750)	Fearless Cyclists (n=18)	Confident Cyclists (n=146)	Interested Cyclists (n=379)	Reluctant to Cycle (n=207)
More bicycle lanes	28	56	34	28	24
More multi-use pathways	24	39	26	26	18
Separate pathways for cyclists and pedestrians	9	22	13	9	5
Wider vehicle lanes	6	0	9	3	10
Introduce cycle tracks, which are physically separated from roads/sidewalks	5	6	6	5	5
More paths/interconnected paths	5	0	7	6	2
More or better bicycle parking	5	6	4	6	3
More or better signage and maps	4	0	4	5	2
More quiet roads with reduced vehicle access and speeds	4	0	5	3	3
Increase motorist education about cyclists	3	11	4	3	3
Improve pathway snow clearing	3	6	5	3	2
Better integration of bikes and transit	3	0	5	3	1
More available rules of the roads for cyclists	3	0	3	3	2
More shower and locker facilities	2	0	3	3	0
Improve on-street snow clearing	2	6	2	1	2
Better policing of rules	2	0	1	2	1
Make bikes more accessible	1	0	0	2	1
Provide incentives	1	0	1	1	0
Lanes on major roads	1	0	2	1	0
Improve gravel clearing on cycle routes	1	0	1	1	0
Better pathways - general	1	0	2	0	1
Better lane markings	1	6	1	1	0
Safer routes - general	1	0	1	1	0
Wider paths/lanes	1	0	1	0	1
Better path maintenance	0	0	1	1	0
Promote cycling	0	0	1	1	0
Other	4	6	4	5	3
Don't know	1	0	0	1	1
Nothing	33	11	23	29	49
Number of Responses	1,155	31	24	580	297

It is worth noting that about a third of respondents (33%) stated that there is nothing that could be done to encourage them to cycle more often; however, many of these were Reluctant to Cycle.

Further analysis involving refined categories is presented in Appendix C.

Respondents were then provided with a list of possible improvements to gain measurements of opinion about what might encourage more cycling. At the top of the list were cycle tracks (bike only lanes alongside a road physically separated from both cars and pedestrians), separate pathways for cyclists and pedestrians, more bicycle only lanes on roads, and more or better signs or maps that show bike routes. Overall, there were eight suggestions which at least eight out of ten respondents agreed (strongly/somewhat) would encourage them to cycle more often generally. When considering those respondents who indicated that they strongly agreed with the initiatives, cycle tracks and separate pathways for cyclists and pedestrians were most prevalent.

Figure 5.1: Improvements to Encourage More Cycling
(Aided, Informed Responses- Don't know is not included)

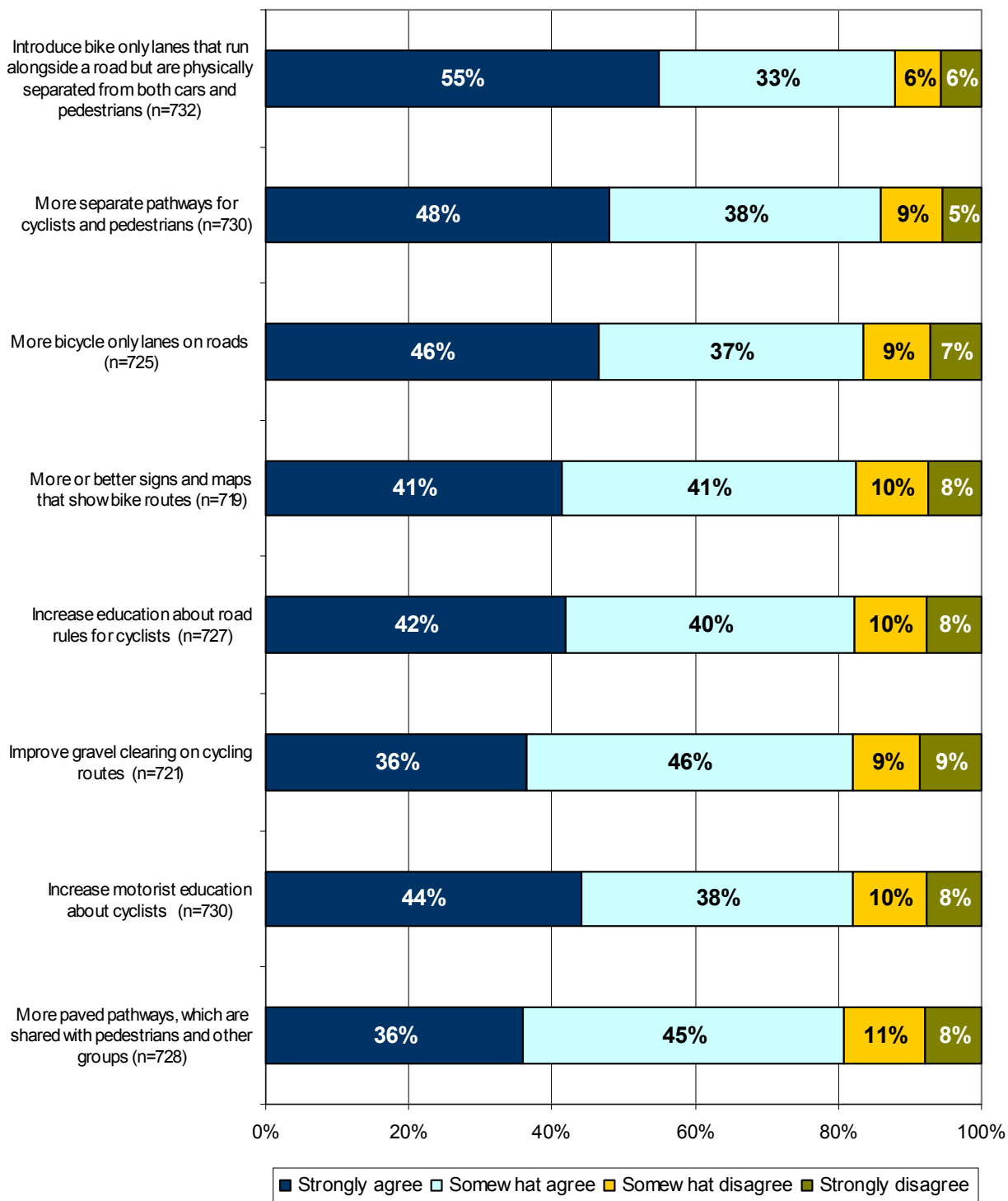


Figure 5.1: Improvements to Encourage More Cycling (Continued)
(Aided, Informed Responses- Don't know is not included)

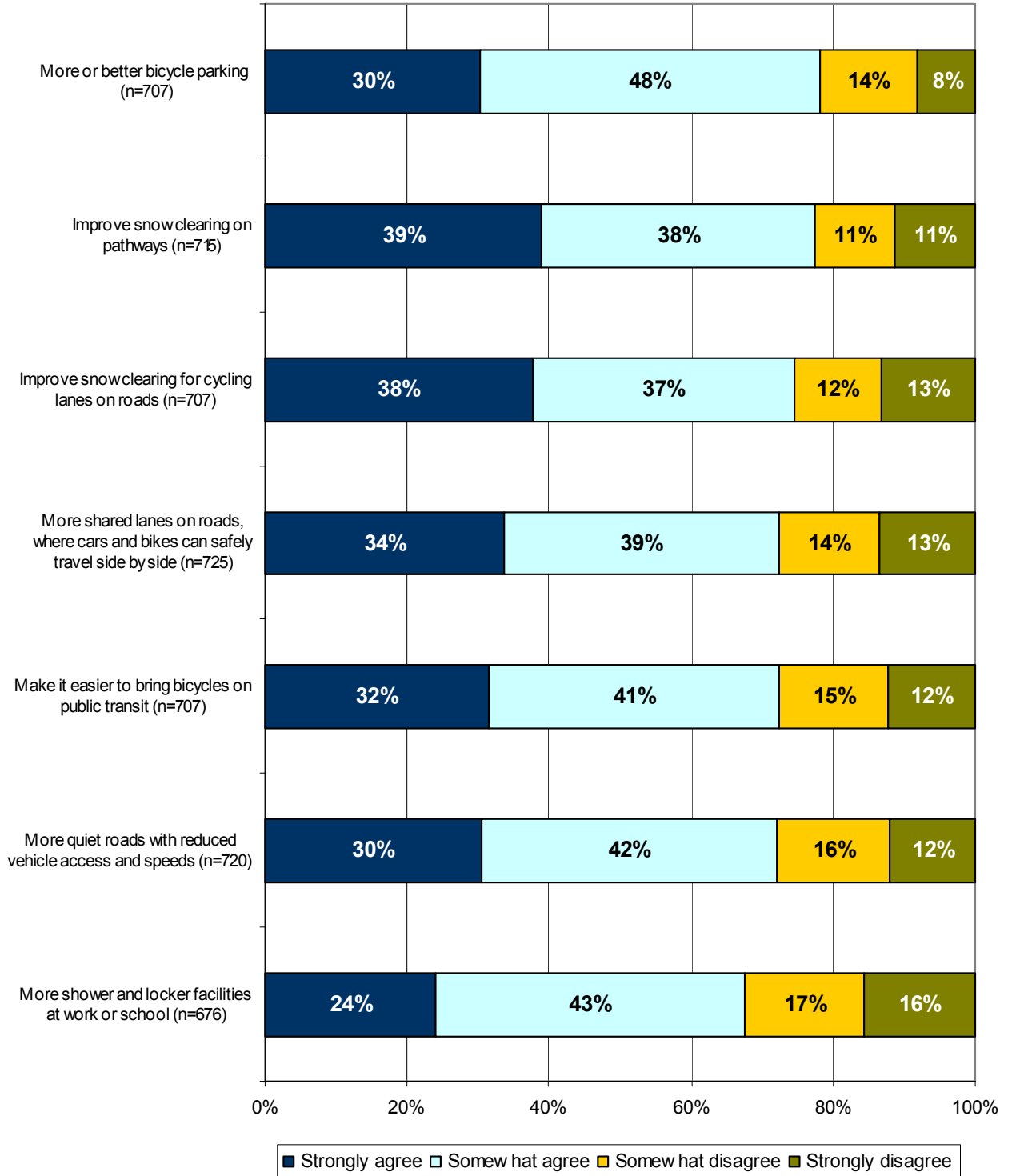


Table 5.2 shows distinctions among cyclist categories to the proposed initiatives tested in the survey. For the most part, the findings for various cyclist categories are generally similar to the overall findings; although, there are higher levels of agreement for the initiatives among Fearless Cyclists than other categories.

Table 5.2: Improvements to Encourage More Cycling (Aided) (Strongly and Somewhat Agree Responses Combined)					
Improvements	% of Respondents				
	All Respondents	Fearless Cyclists	Confident Cyclists	Interested Cyclists	Reluctant to Cycle
Introduce bike only lanes that run alongside a road but are physically separated from both cars and pedestrians.	88	89	88	89	86
More separate pathways for cyclists and pedestrians	86	83	88	88	81
More bicycle only lanes on roads	84	89	88	86	75
More or better signs and maps that show bike routes.	82	89	79	85	79
Increase education about road rules for cyclists	82	78	78	83	84
Improve gravel clearing on cycling routes	82	94	83	84	75
Increase motorist education about cyclists	82	100	80	84	77
More paved pathways, which are shared with pedestrians and other groups.	81	94	79	86	71
More or better bicycle parking	78	89	76	80	74
Improve snow clearing on pathways	77	94	74	82	71
Improve snow clearing for cycling lanes on roads	75	100	73	77	68
More shared lanes on roads, where cars and bikes can safely travel side by side.	72	82	76	75	64
Make it easier to bring bicycles on public transit	72	94	75	75	63
More quiet roads with reduced vehicle access and speeds	72	78	72	75	66
More shower and locker facilities at work or school	67	71	70	69	63

6.0 CONCLUDING REMARKS

The City conducted a telephone survey of Calgarians to determine what might impede citizens from cycling and what could be done to encourage citizens to cycle more often.

The survey results suggest that many different factors impede Calgarians from cycling. The most prominent among these are concerns about personal safety, other obligations or priorities that make it difficult to cycle, cycling being physically challenging and distances to destinations being too long to cycle. Still, the survey findings indicate that Calgarians who cycle perceive benefits to the activity such as getting exercise and it being a fun and enjoyable thing to do. Further, most Calgarians would like to cycle more often generally, and about half would like to cycle more often for social purposes (visiting friends and relatives), shopping and appointments and to get to and from work or school. These opinions are particularly common among Interested Cyclists who cycle occasionally and are concerned about travelling on neighbourhood roads that are bus routes, but do not have bike lanes.

The kinds of initiatives that Calgarians feel would encourage them to cycle more often include more bike lanes, multi-use pathways and cycle tracks that separate cyclists from vehicles and pedestrians. There is also evidence in the survey data to suggest that some Calgarians would consider cycling more often if more or better signs and maps that show bike routes and increased education for both cyclists and motorists about cycling in the city were available.

APPENDIX A - Survey Questionnaire

NOTE TO THE READER:

- Comments to survey sponsors based on HarGroup consultants' review of questions are **presented in blue**.
 - Instructions to interviewers are presented as **(words presented in red)** and are not read to respondents
 - For CATI software programming, instructions are presented as **(words that are presented in green)** and are not provided to the interviewers or respondents.
-

Introduction

Hello. My name is _____. I am calling from HarGroup Research on behalf of The City of Calgary. Today we are conducting an important survey among all Calgarians about outdoor bicycling within the city.

I am NOT trying to sell you anything. Do you have approximately 10 -15 minutes to help us with this important survey?

IF YES → CONTINUE
IN NO → THANK AND DISCONTINUE

A. Are you 18 years of age or older?

YES, CONTINUE
NO - ASK: CAN I SPEAK TO THE PERSON IN YOUR HOUSEHOLD WHO IS 18 YEARS OF AGE OR OVER?
IF YES, REINTRODUCE THE SURVEY TO THE RESPONDENT
IF NO ONE IS AVAILABLE, ASK FOR A SUITABLE TIME TO CALL BACK
IF NO, THANK AND DISCONTINUE

B. Are you a permanent resident of the city of Calgary?

IF YES, CONTINUE
NO - ASK: CAN I SPEAK TO A PERSON IN THIS HOUSEHOLD WHO IS A PERMANENT RESIDENT OF CALGARY AND 18 YEARS OF AGE OR OVER?
IF YES, REINTRODUCE THE SURVEY TO THE RESPONDENT
IF NO ONE IS AVAILABLE, ASK FOR A SUITABLE TIME TO CALL BACK
IF NO, THANK AND DISCONTINUE

Before we begin, I must read to you the following statement:

The personal information collected in this survey complies with the Freedom of Information and Protection of Privacy Act of Alberta and is used solely for the purposes of customer research. I will not be recording any information that will identify your household or you personally with the answers you give.

Inquiries:

IF RESPONDENT INQUIRES ABOUT THE SURVEY, SUGGEST TO THEM THAT THEY CALL MR. JON HARTENBERGER OF HARGROUP 261-7999. INFORM THEM TO CALL BETWEEN 9:00 AM AND 5:00 PM, MONDAY THROUGH FRIDAY.

Cyclist Categorization

G1.a Do you own a bicycle?

1. Yes (Go to C1)
2. No

G1.b Even though you may not have a bicycle, I am going to ask you questions that will help us understand your views on cycling. We are asking these questions of all Calgarians, even those who may not own a bicycle, to better understand if there is anything that might encourage Calgarians to cycle more often.

The next question asks about cycling over the past year. Even though you may not own a bicycle, I will be asking you this question as you may have ridden a bicycle.

C1. Which of the following best describes how often you have cycled, on average, in Calgary in the past 12 months? (READ-SELECT ONE RESPONSE)

1. Daily
2. At least once a week
3. Once every two weeks
4. Once every three or four weeks
5. Once or twice every two or three months
6. Less than once or twice every two or three months
7. Did not ride a bicycle in the past year
8. (DO NOT READ) Unsure/Don't know

C2. And, which of these statements best describe your interest in cycling? (READ)

1. I have no interest whatsoever in riding a bicycle
2. I already ride a bike as often as I want to (Skip to C3)
3. I ride a bike a lot, but would like to ride more (Skip to C3)
4. I do not ride a bike often, but would like to ride more (Skip to C3)
5. (DO NOT READ) Unsure/Don't know (Skip to C3)

NW. If C1=7 and C2=1: Even though you have not cycled recently and you have indicated that you are not interested in doing so, we still have some questions that we are interested in asking you, as your answers may help us better understand why some Calgarians do not cycle. (Skip to C4)

C3. Please tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statements about being a cyclist?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't know (Do not read)
a. Riding a bike is an extremely important part of my life	1	2	3	4	5
b. I often refer to myself as a cyclist when talking to other people	1	2	3	4	5
c. I am more likely to ride a bike, even when other forms of transportation such as a car or public transit are more convenient to use	1	2	3	4	5
d. I am willing to ride my bike in all types of bad weather including snow	1	2	3	4	5

C4. For the next question, when I say pathway, I do not mean sidewalks. Rather paved, usually asphalt, pathways that may run throughout green spaces, or alongside a road to connect green spaces.

Please indicate the extent you agree or disagree with the following statements about riding bikes on pathways and roads: **(READ)**

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't know (Do not read)
a. I feel comfortable cycling on high speed roads such as Crowchild Trail, Glenmore Trail, or Barlow Trail	1	2	3	4	5
b. I feel comfortable cycling on a main roads such as such as Heritage Drive, Country Hills Boulevard, Canyon Meadows Drive, Richmond Road or 10 th Avenue downtown	1	2	3	4	5
c. I feel comfortable cycling on busier neighborhood roads that are Transit bus routes and do not have specific bike lanes	1	2	3	4	5
d. I feel comfortable cycling on busier neighborhood roads that are Transit bus routes and have specific lanes for bikes	1	2	3	4	5
e. I feel comfortable cycling on residential roads that have specific lanes for bicycles	1	2	3	4	5
f. I feel comfortable cycling on paved pathways that are busy with other pedestrians, cyclists and other users	1	2	3	4	5
g. I feel comfortable cycling on quiet residential roads where you would normally find only local traffic	1	2	3	4	5
h. I feel comfortable cycling on paved pathways that are not too busy with pedestrians, cyclists or other users	1	2	3	4	5

Barriers to Cycling

B1. There are many different types of cycling trips. Some people cycle as a form of transportation to get to and from work or school, go shopping and to appointments, and going to see friends or to get a meal. Some people also cycle for recreation purposes such as taking a leisurely bike ride, getting some exercise, riding with friends or relatives, etc. For the next question, I want you to think of all kinds of cycling trips.

There are many different reasons for why people do not cycle, or do not cycle more often. I am going to read you a list of statements. Please tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree with these statements. If you feel a statement is not applicable to your situation, just say so (Rotate) (Read):

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Not Applicable	Don't know (Do not read)	Refused (Do not read)
a. I do not know how to ride a bike	1	2	3	4	5	6	7
b. I do not feel safe cycling in traffic	1	2	3	4	5	6	7
c. I do not know where there are safe routes to cycle	1	2	3	4	5	6	7
d. I do not feel safe cycling on busy pathways with pedestrians, cyclists or other users	1	2	3	4	5	6	7
e. There are not enough bike racks to lock up my bike	1	2	3	4	5	6	7
f. Bike racks are not secure enough to protect my bike from being stolen	1	2	3	4	5	6	7
g. There is no where to shower or change when I arrive at a destination after I have cycled	1	2	3	4	5	6	7
h. There is no storage for sweaty clothes or other things when I arrive at a destination	1	2	3	4	5	6	7
i. The bike routes to my destinations are too out of my way	1	2	3	4	5	6	7
j. I would not be able to carry all of the items that I need on my bike	1	2	3	4	5	6	7
k. Cycling takes too long to get places	1	2	3	4	5	6	7
l. I am concerned that the weather might turn to wind, rain or snow while I am biking	1	2	3	4	5	6	7
m. Helmets mess up my hair when I cycle	1	2	3	4	5	6	7
n. I have other obligations that prevent me from cycling	1	2	3	4	5	6	7
o. Cycling is too tiring / it's too far to cycle	1	2	3	4	5	6	7
p. I am not familiar with laws that affect cycling	1	2	3	4	5	6	7

Trip Purpose

Earlier, I had indicated that there are many different kinds of cycling. Now, I would like to ask you about specific types of trips that you take when you cycle.

(Skip to P2i if C1=7)P1i. The first kind of trip relates to recreational cycling, such as taking a leisurely bike ride, getting some exercise, athletic training, riding with friends or relatives, enjoying nature etc.

Do you ride your bike on trips that are primarily for recreational purposes?

1. Yes
2. No (skip to P2i)
3. Don't know (skip to P2i)
4. Refused (skip to P2i)

P1ii. Which of the following best describes how often you have cycled in Calgary in the past 12 months primarily for recreational purposes? (READ-SELECT ONE RESPONSE)

1. Daily
2. At least once a week
3. Once every two weeks
4. Once every three or four weeks
5. Once or twice every two or three months
6. Less than once or twice every two or three months
7. Did not bicycle in the past 12 months
8. (DO NOT READ) Unsure/Don't know

P1iii. Of the following, which is the main reason you bicycle for recreational purposes? Would you say it is: (READ-SELECT ONE RESPONSE)

1. For exercise
2. Fun and enjoyable
3. Less expensive than other types of recreation
4. Less harmful to the environment than other types of recreation
5. Nice to be out in nature
6. To spend time with friends or family
7. Other _____ (please specify)
8. Don't know/refused

P2i. . Do you have a job or attend a school program that requires you to either commute to and from school or work, or as a part of work or your school program?

1. Yes
2. No (skip to P3i)
3. Don't know /Refused (skip to P3i)

(Skip to P2iv if C1=7) P2ii. Which of the following best describes how often you have cycled in Calgary in the past 12 months primarily to travel to and from school or work, or as a part of work or school?

(READ-SELECT ONE RESPONSE)

1. Daily
2. At least once a week
3. Once every two weeks
4. Once every three or four weeks
5. Once or twice every two or three months
6. Less than once or twice every two or three months
7. Did not ride a bicycle in the past year (Go to (skip to P2iv))
8. (DO NOT READ) Unsure/Don't know (Go to P2iv)

P2iii. What is the primary reason you cycle to and from work or school, or for work or school purposes? Would you say it is: (READ-SELECT ONE RESPONSE)

1. For exercise
2. Fun and enjoyable
3. Less expensive than other types of transportation
4. Less harmful to the environment than other types of transportation
5. Less stressful than other types of transportation
6. More convenient than car
7. More convenient than public transit
8. It is a job requirement
9. Other _____ (please specify)
10. Don't know/refused

P2iv. : Earlier, we asked you reasons for why you do not cycle or do not cycle more often. Thinking about some of the reasons we discussed, what are the different reasons for why you do not cycle to and from work or school (more often)? (DO NOT READ, SELECT ALL THAT APPLY)

1. I do not know how to ride a bike
2. I do not feel safe cycling in traffic
3. I do not know of safe routes to bike between my home and work
4. I do not feel safe cycling on busy pathways with pedestrians, cyclists or other users
5. There are not enough bike racks to lock up my bike
6. Bike racks are not secure enough to protect my bike from being stolen
7. There is no where to shower or change when I arrive at a destination after I have cycled
8. There is no storage for sweaty clothes or other things when I arrive at a destination
9. The bike route to my destinations are too out of my way
10. I would not be able to carry all of the items that I need on my bike
11. Cycling takes too long to get places
12. I am concerned that the weather might turn to wind, rain or snow while I am cycling
13. Helmets mess up my hair when I cycle
14. I have other obligations that prevent me from cycling
15. Cycling is too tiring/ it's too far to cycle
16. I am not familiar with laws that affect cycling
17. I'm too old/health issues
18. Other (specify) _____
19. Don't know/Refused (DO NOT READ)

(Skip to P3iii if C1=7) P4i. Which of the following best describes how often you have cycled in Calgary in the past 12 months primarily to travel to go shopping or to appointments? (READ-SELECT ONE RESPONSE)

1. Daily
2. At least once a week
3. Once every two weeks
4. Once every three or four weeks
5. Once or twice every two or three months
6. Less than once or twice every two or three months
7. Did not ride a bicycle in the past year (Go to (skip to P3iii))
8. (DO NOT READ) Unsure/Don't know (Go to P3iii)

P3ii. What is the primary reason you cycle to go shopping or to appointments? Would you say it is: (READ-SELECT ONE RESPONSE)

1. For exercise
2. fun and enjoyable
3. less expensive than other types of transportation
4. less harmful to the environment than other types of transportation
5. less stressful than other types of transportation
6. more convenient than car
7. more convenient than public transit
8. Other _____ (please specify)
9. Don't know/refused

P3iii. Earlier, we asked you reasons for why you do not cycle or do not cycle more often? Thinking about some of the reasons we discussed, what are the different reasons for why you do not cycle to go shopping or to appointments? (DO NOT READ, SELECT ALL THAT APPLY)

1. I do not know how to cycle
2. I do not feel safe cycle in traffic
3. I do not know of safe routes to cycle between my home and destination
4. I do not feel safe riding on busy pathways with pedestrians, cyclists or other users
5. There are not enough bike racks to lock up my bike
6. Bike racks are not secure enough to protect my bike from being stolen
7. There is no where to shower or change when I arrive at a destination after I have cycled
8. There is no storage for sweaty clothes or other things when I arrive at a destination
9. The bike route to my destinations are too out of my way
10. I would not be able to carry all of the items that I need on my bike
11. Cycling takes too long to get places
12. I am concerned that the weather might turn to wind, rain or snow while I am cycling
13. Helmets mess up my hair when I cycle
14. I have other obligations that prevent me from cycling
15. Cycling is too tiring/ it's too far to cycle
16. I am not familiar with laws that affect cycling
17. I'm too old/poor health
18. Other (specify) _____
19. Don't know/refused (DO NOT READ)

(Skip to P4iii if C1=7) P4i. Which of the following best describes how often you have cycled in Calgary in the past 12 months primarily to travel for social purposes, such as travelling to visit with friends and family or eating out? (Do not read). Would you say?

1. Daily
2. At least once a week
3. Once every two weeks
4. Once every three or four weeks
5. Once or twice every two or three months
6. Less than once or twice every two or three months
7. Did not ride a bicycle in the past year (Go to (skip to P4iii))
8. (DO NOT READ) Unsure/Don't know (Go to P4iii)

P4ii. What is the primary reason you cycle to travel for social purposes, such as visiting friends and family or eating out? Would you say it is: (READ-SELECT ONE RESPONSE)

1. For exercise
2. fun and enjoyable
3. less expensive than other types of transportation
4. less harmful to the environment than other types of transportation
5. less stressful than other types of transportation
6. more convenient than car
7. more convenient than public transit
8. Other _____ (please specify)
9. Don't know/refused

P4iii. Earlier, we asked you reasons for why you do not cycle or do not cycle more often? Thinking about some of the reasons we discussed, what are the different reasons for why you do not cycle to travel for social purposes, such as visiting friends and family and to eating out (more often)? (DO NOT READ, SELECT ALL THAT APPLY)

1. I do not know how to cycle
2. I do not feel safe cycling in traffic
3. I do not know of safe routes to cycle between my home and destination
4. I do not feel safe riding on busy pathways with pedestrians, cyclists or other users
5. There are not enough bike racks to lock up my bike
6. Bike racks are not secure enough to protect my bike from being stolen
7. There is no where to shower or change when I arrive at a destination after I have cycled
8. There is no storage for sweaty clothes or other things when I arrive at a destination
9. The bike route to my destinations are too out of my way
10. I would not be able to carry all of the items that I need on my bike
11. Cycling takes too long to get places
12. I am concerned that the weather might turn to wind, rain or snow while I am cycling
13. Helmets mess up my hair when I cycle
14. I have other obligations that prevent me from cycling
15. Cycling is too tiring/ it's too far to cycle
16. I am not familiar with laws that affect cycling
17. Other (specify) _____

P5i. Now thinking of using your bicycle for transportation purposes, such as commuting to work or school, going shopping or cycling to visit a friend, which of these statements best describe your interest in cycling for transportation purposes? (READ)

1. I have no interest whatsoever in riding a bicycle
2. I already ride a bike as often as I want to
3. I ride a bike a lot, but would like to ride more
4. I do not ride a bike often, but would like to ride more
5. (DO NOT READ) Unsure/Don't know

Improvements

11. In your opinion, what, if anything, could The City of Calgary do that would encourage you to cycle more? (DO NOT READ - SELECT ALL THAT APPLY)

1. More bicycle lanes
2. More wide vehicle lanes
3. More multi-use pathways
4. More quiet roads with reduced vehicle access and speeds
5. Introduce cycle tracks, which are physically separated bike lanes
6. More or better bicycle parking
7. More shower and locker facilities
8. Separate pathways for cyclists and pedestrians
9. Better integration of bikes and transit
10. Improve on-street snow clearing
11. Improve pathway snow clearing
12. Improve gravel clearing on cycling routes
13. Increase motorist education about cyclists
14. More available rules of the roads for cyclists
15. More or better signage and maps
16. Nothing
17. Other (specify) _____

12. To what extent do you agree or disagree that the following initiatives would encourage you to cycle more often as a form of transportation to getting to and from work or school, going shopping and to appointments, and going to see friends and family or to eat out. (Rotate)

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't know (Do not read)	Refused (Do not read)
a. More bicycle only lanes on roads	1	2	3	4	5	6
b. More shared lanes on roads, where cars and bikes can safely travel side by side.	1	2	3	4	5	6
c. More paved pathways, which are shared with pedestrians and other groups.	1	2	3	4	5	6
d. More quiet roads with reduced vehicle access and speeds	1	2	3	4	5	6
e. Introduce bike only lanes that run alongside a road but are physically separated from both cars and pedestrians.	1	2	3	4	5	6
f. More or better bicycle parking	1	2	3	4	5	6
g. More shower and locker facilities at work or school	1	2	3	4	5	6
h. More separate pathways for cyclists and pedestrians	1	2	3	4	5	6
i. Make it easier to bring bicycles on public transit	1	2	3	4	5	6
j. Improve snow clearing for cycling lanes on roads	1	2	3	4	5	6
k. Improve snow clearing on pathways	1	2	3	4	5	6
l. Improve gravel clearing on cycling routes	1	2	3	4	5	6
m. Increase motorist education about cyclists	1	2	3	4	5	6
n. Increase education about road rules for cyclists	1	2	3	4	5	6
o. More or better signs and maps that show bike routes.	1	2	3	4	5	6

Demographic Questions

My last few questions are being asked so that we can group your answers with others provided in the survey. All responses will be held in strict confidence and will not be attributed to any individual.

D1. In which quadrant of the city do you reside? (Read)

1__Northwest 2__Northeast 3__Southwest 4__Southeast 5__Refused - do not read

D2. In which community (neighborhood) do you reside?

D3. Which of the following most closely describes your household? (READ)

1. Couple with children living at home
2. Couple without children living at home
3. Single Parent household
4. Living alone
5. Living with roommate(s)
6. Living with extended family
7. (DO NOT READ) Other
8. (DO NOT READ) Refused

D4. Do you consider yourself to be a member of a visible minority? (Read)

1 YES 2 NO 3 DON'T KNOW (Do not read)

D5. Do you have a disability or medical condition that would inhibit your ability to ride a bicycle? (Read)

1 YES 2 NO 3 DON'T KNOW (Do not read)

D6. In what year were you born? 19__

D7. And which of the following income groups includes your annual household income, before taxes, in 2009? [READ LIST]

1 <input type="checkbox"/> Less than \$15,000	7 <input type="checkbox"/> \$65,000 to less than \$75,000
2 <input type="checkbox"/> \$15,000 to less than 25,000	8 <input type="checkbox"/> \$75,000 to less than \$85,000
3 <input type="checkbox"/> \$25,000 to less than 35,000	9 <input type="checkbox"/> \$85,000 to less than \$100,000
4 <input type="checkbox"/> \$35,000 to less than 45,000	10 <input type="checkbox"/> \$100,000 to less than \$120,000
5 <input type="checkbox"/> \$45,000 to less than 55,000	11 <input type="checkbox"/> \$120,000 to less than \$140,000
6 <input type="checkbox"/> \$55,000 to less than \$65,000	12 <input type="checkbox"/> \$140,000 or more
	13 <input type="checkbox"/> Refused/Don't know (Do not read)

That is all of the questions that I have for you today. May I have your first name in case my supervisor would like to confirm this interview? _____

Thank you for taking part in this survey today. Have a nice evening/afternoon.

D8. Gender

1__Male 2__Female

APPENDIX B -Respondent Profile

Characteristic	Descriptor	% of Survey Respondents	% of Calgarians
Gender	Male	50	50
	Female	50	50
	Total	100	100
Age	18-24	12	13
	25-34	22	22
	35-44	22	22
	45-54	21	20
	55-64	12	12
	65+	11	13
	Total	100	100*
Visible Minority (n=719)	Visible minority	18	24
	Non-visible minority	82	76
	Total	100	100**
Disability or Medical Condition that Inhibits Cycling (n=739)	Yes	12	n/a
	No	88	
	Total	100	
Quadrant (n=741)	Northwest	33	n/a
	Northeast	15	
	Southwest	28	
	Southeast	23	
	Total	100	
Household Composition (n=737)	Couple with children living at home	49	n/a
	Couple without children living at home	26	
	Single parent household	4	
	Living alone	12	
	Living with roommate(s)	3	
	Living with extended family	5	
	Other	<1	
	Total	100	
Income (n=572)	Less than \$15,000	3	n/a
	\$15,000 to less than \$25,000	3	
	\$25,000 to less than \$35,000	6	
	\$35,000 to less than \$45,000	6	
	\$45,000 to less than \$55,000	8	
	\$55,000 to less than \$65,000	11	
	\$65,000 to less than \$75,000	7	
	\$75,000 to less than \$85,000	9	
	\$85,000 to less than \$100,000	9	
	\$100,000 to less than \$120,000	12	
	\$120,000 to less than \$140,000	6	
	\$140,000 or more	20	
	Total	100	
*Comparative data from the 2009 City of Calgary Census			
**Comparative data from the 2006 Federal Census			

APPENDIX C - Additional Data

Data Associated with Figure 2.1:

How often you have cycled, generally

		Do you own a bicycle?		Total
		Yes	No	
Daily	Count	46		46
	%	9.2%		6.2%
At least once a week	Count	95	4	99
	%	19.0%	1.6%	13.3%
Once every two weeks	Count	53	5	58
	%	10.6%	2.0%	7.8%
Once every three or four weeks	Count	72	4	76
	%	14.4%	1.6%	10.2%
Once or twice every two or three months	Count	67	2	69
	%	13.4%	.8%	9.3%
Less than once or twice every two or three months	Count	64	10	74
	%	12.8%	4.1%	9.9%
Did not ride a bicycle in the past year	Count	104	219	323
	%	20.8%	89.8%	43.4%
Total	Count	501	244	745
	%	100.0%	100.0%	100.0%

Statistically significant differences ($p < .05$)

Data Associated with Figure 2.2:

			how often you have cycled, generally						Total	
			Daily	At least once a week	Once every two weeks	Once every three or four weeks	Once or twice every two or three months	Less than once or twice every two or three months		Did not ride a bicycle in the past year
I often refer to myself as a cyclist when talking to other people	Strongly agree	Count	18	10	1	5	3	1		38
		%	39.1%	10.1%	1.7%	6.6%	4.3%	1.4%		6.3%
	Somewhat agree	Count	10	35	8	12	4	3		72
		%	21.7%	35.4%	13.8%	15.8%	5.8%	4.1%		11.9%
	Somewhat disagree	Count	12	29	22	32	16	23	38	172
		%	26.1%	29.3%	37.9%	42.1%	23.2%	31.1%	20.9%	28.5%
	Strongly disagree	Count	6	25	27	27	46	47	144	322
		%	13.0%	25.3%	46.6%	35.5%	66.7%	63.5%	79.1%	53.3%
Total	Count	46	99	58	76	69	74	182	604	
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Statistically significant differences (p<.05)

Data Associated with Table 2.2:

Which of the following most closely describes your household?

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Couple with children living at home	Count	10	75	207	69	361
	%	55.6%	52.4%	55.5%	34.0%	49.0%
Couple without children living at home	Count	1	34	90	67	192
	%	5.6%	23.8%	24.1%	33.0%	26.1%
Single parent household	Count	2	8	17	6	33
	%	11.1%	5.6%	4.6%	3.0%	4.5%
Living alone	Count	1	15	27	44	87
	%	5.6%	10.5%	7.2%	21.7%	11.8%
Living with roommates	Count	2	4	10	8	24
	%	11.1%	2.8%	2.7%	3.9%	3.3%
Living with extended family	Count	2	7	22	9	40
	%	11.1%	4.9%	5.9%	4.4%	5.4%
Total	Count	18	143	373	203	737
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Do you have a disability or medical condition that would inhibit your ability to ride a bicycle?

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Yes	Count		5	35	48	88
	%		3.5%	9.4%	23.5%	11.9%
No	Count	18	139	338	156	651
	%	100.0%	96.5%	90.6%	76.5%	88.1%
Total	Count	18	144	373	204	739
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Gender:

			Main Cyclist Categories				Total
			Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Gender: Male	Count	18	90	178	91	377	
	%	100.0%	61.6%	47.0%	44.0%	50.3%	
Female	Count		56	201	116	373	
	%		38.4%	53.0%	56.0%	49.7%	
Total	Count	18	146	379	207	750	
	%	100.0%	100.0%	100.0%	100.0%	100.0%	

Statistically significant differences (p<.05)

Age

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
18-24	Count	2	18	46	22	88
	%	11.1%	12.4%	12.5%	11.0%	12.1%
25-34	Count	4	35	89	35	163
	%	22.2%	24.1%	24.3%	17.5%	22.3%
35-44	Count	6	33	94	26	159
	%	33.3%	22.8%	25.6%	13.0%	21.8%
45-54	Count	4	39	73	34	150
	%	22.2%	26.9%	19.9%	17.0%	20.5%
55-64	Count	2	12	36	37	87
	%	11.1%	8.3%	9.8%	18.5%	11.9%
65+	Count		8	29	46	83
	%		5.5%	7.9%	23.0%	11.4%
Total	Count	18	145	367	200	730
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Income

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
<\$45,000	Count	1	19	48	39	107
	%	8.3%	15.6%	16.6%	26.4%	18.7%
\$45,000 to <\$85,000	Count	3	34	101	62	200
	%	25.0%	27.9%	34.8%	41.9%	35.0%
\$85,000 to <\$140,000	Count	3	43	80	27	153
	%	25.0%	35.2%	27.6%	18.2%	26.7%
\$140,000+	Count	5	26	61	20	112
	%	41.7%	21.3%	21.0%	13.5%	19.6%
Total	Count	12	122	290	148	572
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

In which quadrant of the city do you reside?

		Refined Cyclist Categories								Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist	Reluctant to Cycle	
Northwest	Count	6	30	28	52	12	47	11	62	248
	%	33.3%	44.1%	36.4%	28.9%	29.3%	41.2%	27.5%	30.5%	33.5%
Northeast	Count	2	7	8	25	2	21	6	39	110
	%	11.1%	10.3%	10.4%	13.9%	4.9%	18.4%	15.0%	19.2%	14.8%
Southwest	Count	8	13	25	64	12	19	11	58	210
	%	44.4%	19.1%	32.5%	35.6%	29.3%	16.7%	27.5%	28.6%	28.3%
Southeast	Count	2	18	16	39	15	27	12	44	173
	%	11.1%	26.5%	20.8%	21.7%	36.6%	23.7%	30.0%	21.7%	23.3%
Total	Count	18	68	77	180	41	114	40	203	741
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences ($p < .05$)

Which of the following most closely describes your household?

		Refined Cyclist Categories								Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist	Reluctant to Cycle	
Couple with children living at home	Count	10	35	40	110	22	58	17	69	361
	%	55.6%	52.2%	52.6%	61.5%	53.7%	50.9%	43.6%	34.0%	49.0%
Couple without children living at home	Count	1	18	16	32	12	36	10	67	192
	%	5.6%	26.9%	21.1%	17.9%	29.3%	31.6%	25.6%	33.0%	26.1%
Single parent household	Count	2	4	4	8	2	6	1	6	33
	%	11.1%	6.0%	5.3%	4.5%	4.9%	5.3%	2.6%	3.0%	4.5%
Living alone	Count	1	5	10	12	2	8	5	44	87
	%	5.6%	7.5%	13.2%	6.7%	4.9%	7.0%	12.8%	21.7%	11.8%
Living with roommates	Count	2	2	2	5	1	2	2	8	24
	%	11.1%	3.0%	2.6%	2.8%	2.4%	1.8%	5.1%	3.9%	3.3%
Living with extended family	Count	2	3	4	12	2	4	4	9	40
	%	11.1%	4.5%	5.3%	6.7%	4.9%	3.5%	10.3%	4.4%	5.4%
Total	Count	18	67	76	179	41	114	39	203	737
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences ($p < .05$)

Do you have a disability or medical condition that would inhibit your ability to ride a bicycle?

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Yes	Count		2	3	14	3	10	8	48	88
	%		2.9%	3.9%	7.8%	7.3%	8.8%	20.5%	23.5%	11.9%
No	Count	18	66	73	165	38	104	31	156	651
	%	100.0%	97.1%	96.1%	92.2%	92.7%	91.2%	79.5%	76.5%	88.1%
Total	Count	18	68	76	179	41	114	39	204	739
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Gender:

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Male	Count	18	43	47	94	17	49	18	91	377
	%	100.0%	62.3%	61.0%	51.9%	40.5%	42.6%	43.9%	44.0%	50.3%
Female	Count		26	30	87	25	66	23	116	373
	%		37.7%	39.0%	48.1%	59.5%	57.4%	56.1%	56.0%	49.7%
Total	Count	18	69	77	181	42	115	41	207	750
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Age

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
18-24	Count	2	9	9	25	5	14	2	22	88
	%	11.1%	13.2%	11.7%	14.0%	12.8%	12.5%	5.3%	11.0%	12.1%
25-34	Count	4	18	17	41	9	33	6	35	163
	%	22.2%	26.5%	22.1%	23.0%	23.1%	29.5%	15.8%	17.5%	22.3%
35-44	Count	6	13	20	51	9	29	5	26	159
	%	33.3%	19.1%	26.0%	28.7%	23.1%	25.9%	13.2%	13.0%	21.8%
45-54	Count	4	21	18	38	10	15	10	34	150
	%	22.2%	30.9%	23.4%	21.3%	25.6%	13.4%	26.3%	17.0%	20.5%
55-64	Count	2	5	7	19	2	9	6	37	87
	%	11.1%	7.4%	9.1%	10.7%	5.1%	8.0%	15.8%	18.5%	11.9%
65+	Count		2	6	4	4	12	9	46	83
	%		2.9%	7.8%	2.2%	10.3%	10.7%	23.7%	23.0%	11.4%
Total	Count	18	68	77	178	39	112	38	200	730
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Data Associated with Table 3.1:

Differences in Barriers among Cyclist Categories							
Barrier	Cyclist Category	% of Respondents					Total
		Strongly/ Somewhat Agree	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	
I do not feel safe cycling in traffic	Fearless Cyclist (n=17)	59	12	47	12	29	100
	Confident Cyclist (n=144)	70	32	38	22	8	100
	Interested (Novice) (n=373)	82	43	39	12	6	100
	Reluctant to Cycle (n=172)	85	46	39	10	5	100
I have other obligations that prevent me from cycling	Fearless Cyclist (n=17)	41	0	41	29	29	100
	Confident Cyclist (n=139)	50	15	35	24	25	100
	Interested (Novice) (n=357)	67	26	41	19	13	100
	Reluctant to Cycle (n=173)	67	28	39	20	13	100
I am concerned that the weather might turn to wind, rain or snow while I am biking	Fearless Cyclist (n=17)	35	6	29	24	41	100
	Confident Cyclist (n=140)	42	11	31	35	22	100
	Interested (Novice) (n=360)	62	19	43	25	13	100
	Reluctant to Cycle (n=165)	70	23	47	19	12	100
I would not be able to carry all of the items that I need on my bike	Fearless Cyclist (n=17)	24	6	18	41	35	100
	Confident Cyclist (n=139)	42	13	29	36	22	100
	Interested (Novice) (n=354)	60	26	34	24	16	100
	Reluctant to Cycle (n=155)	62	27	35	26	11	100
There are not enough bike racks to lock up my bike	Fearless Cyclist (n=18)	56	28	28	17	28	100
	Confident Cyclist (n=127)	47	13	34	25	28	100
	Interested (Novice) (n=292)	57	17	40	27	16	100
	Reluctant to Cycle (n=116)	58	22	36	29	12	100
The bike routes to my destinations are too out of my way	Fearless Cyclist (n=18)	39	6	33	22	39	100
	Confident Cyclist (n=135)	40	13	27	30	30	100
	Interested (Novice) (n=331)	55	21	34	29	17	100
	Reluctant to Cycle (n=141)	61	23	38	27	13	100
Bike racks are not secure enough to protect my bike from being stolen	Fearless Cyclist (n=18)	50	0	50	28	22	100
	Confident Cyclist (n=132)	45	14	31	30	26	100
	Interested (Novice) (n=319)	49	18	31	33	19	100
	Reluctant to Cycle (n=135)	60	22	38	31	9	100
Cycling takes too long to get places	Fearless Cyclist (n=18)	22	0	22	28	50	100
	Confident Cyclist (n=138)	27	5	22	43	29	100
	Interested (Novice) (n=363)	51	12	39	31	18	100
	Reluctant to Cycle (n=161)	57	20	37	30	13	100
I do not know where there are safe routes to cycle	Fearless Cyclist (n=17)	24	6	18	12	65	100
	Confident Cyclist (n=140)	28	9	19	30	42	100
	Interested (Novice) (n=367)	47	13	34	33	21	100
	Reluctant to Cycle (n=170)	60	15	45	24	16	100
I am not familiar with laws that affect cycling	Fearless Cyclist (n=18)	6	0	6	11	83	100
	Confident Cyclist (n=144)	27	7	20	30	43	100
	Interested (Novice) (n=369)	42	14	28	31	27	100
	Reluctant to Cycle (n=177)	59	19	40	27	15	100
I do not feel safe cycling on busy pathways with pedestrians, cyclists or other users	Fearless Cyclist (n=17)	18	6	12	47	35	100
	Confident Cyclist (n=146)	32	9	23	38	31	100
	Interested (Novice) (n=372)	39	12	27	40	22	100
	Reluctant to Cycle (n=168)	59	19	40	29	12	100
Cycling is too tiring / it's too far to cycle	Fearless Cyclist (n=18)	0	0	0	17	83	100
	Confident Cyclist (n=140)	15	1	14	33	51	100
	Interested (Novice) (n=365)	26	7	19	43	31	100
	Reluctant to Cycle (n=160)	50	16	34	34	16	100
Helmets mess up my hair when I cycle	Fearless Cyclist (n=18)	11	0	11	17	72	100
	Confident Cyclist (n=134)	21	7	14	17	61	100
	Interested (Novice) (n=349)	23	8	15	25	52	100
	Reluctant to Cycle (n=141)	36	13	23	23	40	100
I do not know how to ride a bike	Fearless Cyclist (n=18)	0	0	0	6	94	100
	Confident Cyclist (n=137)	2	1	1	4	93	100
	Interested (Novice) (n=362)	3	2	1	6	91	100
	Reluctant to Cycle (n=177)	16	11	5	23	61	100

Note: Statistically significant differences (p<.05)

I do not feel safe cycling in traffic

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	2	19	27	58	23	56	25	79	289
	%	11.8%	27.5%	36.0%	32.2%	56.1%	49.6%	64.1%	45.9%	40.9%
Somewhat agree	Count	8	26	28	78	16	41	10	67	274
	%	47.1%	37.7%	37.3%	43.3%	39.0%	36.3%	25.6%	39.0%	38.8%
Somewhat disagree	Count	2	16	16	29	1	11	3	18	96
	%	11.8%	23.2%	21.3%	16.1%	2.4%	9.7%	7.7%	10.5%	13.6%
Strongly disagree	Count	5	8	4	15	1	5	1	8	47
	%	29.4%	11.6%	5.3%	8.3%	2.4%	4.4%	2.6%	4.7%	6.7%
Total	Count	17	69	75	180	41	113	39	172	706
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

I have other obligations that prevent me from cycling

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count		8	13	45	3	36	10	49	164
	%		11.9%	18.1%	26.2%	7.5%	32.4%	29.4%	28.3%	23.9%
Somewhat agree	Count	7	20	29	77	17	39	15	67	271
	%	41.2%	29.9%	40.3%	44.8%	42.5%	35.1%	44.1%	38.7%	39.5%
Somewhat disagree	Count	5	18	16	35	13	16	5	35	143
	%	29.4%	26.9%	22.2%	20.3%	32.5%	14.4%	14.7%	20.2%	20.8%
Strongly disagree	Count	5	21	14	15	7	20	4	22	108
	%	29.4%	31.3%	19.4%	8.7%	17.5%	18.0%	11.8%	12.7%	15.7%
Total	Count	17	67	72	172	40	111	34	173	686
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

I would not be able to carry all of the items that I need on my bike

		Refined Cyclist Categories								Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist	Reluctant to Cycle	
Strongly agree	Count	1	2	16	34	8	39	10	42	152
	%	5.9%	3.0%	21.9%	19.9%	19.5%	36.1%	29.4%	27.1%	22.9%
Somewhat agree	Count	3	20	20	57	17	35	11	55	218
	%	17.6%	30.3%	27.4%	33.3%	41.5%	32.4%	32.4%	35.5%	32.8%
Somewhat disagree	Count	7	28	22	50	9	18	9	41	184
	%	41.2%	42.4%	30.1%	29.2%	22.0%	16.7%	26.5%	26.5%	27.7%
Strongly disagree	Count	6	16	15	30	7	16	4	17	111
	%	35.3%	24.2%	20.5%	17.5%	17.1%	14.8%	11.8%	11.0%	16.7%
Total	Count	17	66	73	171	41	108	34	155	665
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Cycling takes too long to get places

		Refined Cyclist Categories								Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist	Reluctant to Cycle	
Strongly agree	Count		2	5	14	2	19	9	32	83
	%		3.0%	7.0%	8.0%	5.0%	17.0%	25.7%	19.9%	12.2%
Somewhat agree	Count	4	10	21	71	15	44	11	60	236
	%	22.2%	14.9%	29.6%	40.3%	37.5%	39.3%	31.4%	37.3%	34.7%
Somewhat disagree	Count	5	30	30	57	15	35	7	48	227
	%	27.8%	44.8%	42.3%	32.4%	37.5%	31.3%	20.0%	29.8%	33.4%
Strongly disagree	Count	9	25	15	34	8	14	8	21	134
	%	50.0%	37.3%	21.1%	19.3%	20.0%	12.5%	22.9%	13.0%	19.7%
Total	Count	18	67	71	176	40	112	35	161	680
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Cycling is too tiring / it's too far to cycle

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiastic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count			2	7	1	12	4	26	52
	%			2.7%	4.0%	2.4%	10.5%	11.1%	16.3%	7.6%
Somewhat agree	Count		11	9	37	6	19	7	54	143
	%		16.7%	12.2%	21.3%	14.6%	16.7%	19.4%	33.8%	20.9%
Somewhat disagree	Count	3	13	33	68	23	54	13	54	261
	%	16.7%	19.7%	44.6%	39.1%	56.1%	47.4%	36.1%	33.8%	38.2%
Strongly disagree	Count	15	42	30	62	11	29	12	26	227
	%	83.3%	63.6%	40.5%	35.6%	26.8%	25.4%	33.3%	16.3%	33.2%
Total	Count	18	66	74	174	41	114	36	160	683
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Data Associated with Table 4.1:

How often, recreational cycling

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Daily	Count	3	8	1		12
	%	21.4%	6.7%	.5%		3.3%
At least once a week	Count	9	71	18	2	100
	%	64.3%	59.2%	9.3%	5.9%	27.7%
Once every two weeks	Count	1	32	35	1	69
	%	7.1%	26.7%	18.1%	2.9%	19.1%
Once every three or four weeks	Count	1	4	52	1	58
	%	7.1%	3.3%	26.9%	2.9%	16.1%
Once or twice every two or three months	Count		1	56	12	69
	%		.8%	29.0%	35.3%	19.1%
Less than once or twice every two or three months	Count		3	29	18	50
	%		2.5%	15.0%	52.9%	13.9%
Did not bicycle in the past 12 months	Count		1	2		3
	%		.8%	1.0%		.8%
Total	Count	14	120	193	34	361
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences ($p < .05$)

How often, recreational cycling

		Refined Cyclist Categories						Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Reluctant to Cycle	
Daily	Count	3	7	1	1			12
	%	21.4%	13.7%	1.4%	.6%			3.3%
At least once a week	Count	9	29	42	7	11	2	100
	%	64.3%	56.9%	60.9%	4.4%	31.4%	5.9%	27.7%
Once every two weeks	Count	1	13	19	28	7	1	69
	%	7.1%	25.5%	27.5%	17.7%	20.0%	2.9%	19.1%
Once every three or four weeks	Count	1	2	2	42	10	1	58
	%	7.1%	3.9%	2.9%	26.6%	28.6%	2.9%	16.1%
Once or twice every two or three months	Count			1	53	3	12	69
	%			1.4%	33.5%	8.6%	35.3%	19.1%
Less than once or twice every two or three months	Count			3	25	4	18	50
	%			4.3%	15.8%	11.4%	52.9%	13.9%
Did not bicycle in the past 12 months	Count			1	2			3
	%			1.4%	1.3%			.8%
Total	Count	14	51	69	158	35	34	361
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

How often school or work

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Daily	Count	7	12			19
	%	58.3%	19.4%			10.4%
At least once a week	Count	3	15	2		20
	%	25.0%	24.2%	2.1%		11.0%
Once every two weeks	Count		6	1	1	8
	%		9.7%	1.1%	7.1%	4.4%
Once every three or four weeks	Count		3	4	1	8
	%		4.8%	4.3%	7.1%	4.4%
Once or twice every two or three months	Count		1	9		10
	%		1.6%	9.6%		5.5%
Less than once or twice every two or three months	Count	1	5	10	4	20
	%	8.3%	8.1%	10.6%	28.6%	11.0%
Did not ride a bicycle in the past year	Count	1	20	68	8	97
	%	8.3%	32.3%	72.3%	57.1%	53.3%
Total	Count	12	62	94	14	182
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences ($p < .05$)

How often school or work

		Refined Cyclist Categories					Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	
Daily	Count	7	9	3			19
	%	58.3%	27.3%	10.3%			10.4%
At least once a week	Count	3	11	4	1	1	20
	%	25.0%	33.3%	13.8%	1.3%	7.1%	11.0%
Once every two weeks	Count		4	2	1		8
	%		12.1%	6.9%	1.3%		4.4%
Once every three or four weeks	Count		1	2	3	1	8
	%		3.0%	6.9%	3.8%	7.1%	4.4%
Once or twice every two or three months	Count			1	8	1	10
	%			3.4%	10.0%	7.1%	5.5%
Less than once or twice every two or three months	Count	1	2	3	7	3	20
	%	8.3%	6.1%	10.3%	8.8%	21.4%	11.0%
Did not ride a bicycle in the past year	Count	1	6	14	60	8	97
	%	8.3%	18.2%	48.3%	75.0%	57.1%	53.3%
Total	Count	12	33	29	80	14	182
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

How often for shopping or appointments

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Daily	Count	2	2			4
	%	11.1%	1.4%			1.0%
At least once a week	Count	2	16	6	1	25
	%	11.1%	11.6%	2.9%	2.6%	6.3%
Once every two weeks	Count	3	15	4		22
	%	16.7%	10.9%	2.0%		5.5%
Once every three or four weeks	Count	5	10	14		29
	%	27.8%	7.2%	6.9%		7.3%
Once or twice every two or three months	Count	2	17	23	3	45
	%	11.1%	12.3%	11.3%	7.9%	11.3%
Less than once or twice every two or three months	Count	2	15	38	7	62
	%	11.1%	10.9%	18.6%	18.4%	15.6%
Did not ride a bicycle in the past year	Count	2	63	119	27	211
	%	11.1%	45.7%	58.3%	71.1%	53.0%
Total	Count	18	138	204	38	398
	%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

How often for shopping or appointments

		Refined Cyclist Categories					Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist		Reluctant to Cycle
Daily	Count	2	1	1				4
	%	11.1%	1.5%	1.4%				1.0%
At least once a week	Count	2	11	5	4	2	1	25
	%	11.1%	16.9%	6.8%	2.4%	5.3%	2.6%	6.3%
Once every two weeks	Count	3	6	9	2	2		22
	%	16.7%	9.2%	12.3%	1.2%	5.3%		5.5%
Once every three or four weeks	Count	5	7	3	11	3		29
	%	27.8%	10.8%	4.1%	6.6%	7.9%		7.3%
Once or twice every two or three months	Count	2	11	6	19	4	3	45
	%	11.1%	16.9%	8.2%	11.4%	10.5%	7.9%	11.3%
Less than once or twice every two or three months	Count	2	7	8	33	5	7	62
	%	11.1%	10.8%	11.0%	19.9%	13.2%	18.4%	15.6%
Did not ride a bicycle in the past year	Count	2	22	41	97	22	27	211
	%	11.1%	33.8%	56.2%	58.4%	57.9%	71.1%	53.0%
Total	Count	18	65	73	166	38	38	398
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

How often for social purposes cycling

		Main Cyclist Categories				Total
		Fearless Cyclist	Confident Cyclist	Interested Cyclist	Reluctant to Cycle	
Daily	Count	3	2			5
	% within Main Cyclist Categories	16.7%	1.4%			1.2%
At least once a week	Count	3	20	3		26
	% within Main Cyclist Categories	16.7%	14.4%	1.5%		6.5%
Once every two weeks	Count	3	13	10		26
	% within Main Cyclist Categories	16.7%	9.4%	4.9%		6.5%
Once every three or four weeks	Count	2	16	14	2	34
	% within Main Cyclist Categories	11.1%	11.5%	6.8%	5.1%	8.5%
Once or twice every two or three months	Count	4	15	20	3	42
	% within Main Cyclist Categories	22.2%	10.8%	9.8%	7.7%	10.5%
Less than once or twice every two or three months	Count	2	18	48	16	84
	% within Main Cyclist Categories	11.1%	12.9%	23.4%	41.0%	20.9%
Did not ride a bicycle in the past year	Count	1	55	110	18	184
	% within Main Cyclist Categories	5.6%	39.6%	53.7%	46.2%	45.9%
Total	Count	18	139	205	39	401
	% within Main Cyclist Categories	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

How often for social purposes cycling

		Refined Cyclist Categories					Total
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	
Daily	Count	3	1	1			5
	%	16.7%	1.5%	1.4%			1.2%
At least once a week	Count	3	15	5	2	1	26
	%	16.7%	22.4%	6.9%	1.2%	2.6%	6.5%
Once every two weeks	Count	3	4	9	5	5	26
	%	16.7%	6.0%	12.5%	3.0%	13.2%	6.5%
Once every three or four weeks	Count	2	9	7	14		34
	%	11.1%	13.4%	9.7%	8.4%	5.1%	8.5%
Once or twice every two or three months	Count	4	8	7	16	4	42
	%	22.2%	11.9%	9.7%	9.6%	10.5%	10.5%
Less than once or twice every two or three months	Count	2	10	8	39	9	84
	%	11.1%	14.9%	11.1%	23.4%	23.7%	20.9%
Did not ride a bicycle in the past year	Count	1	20	35	91	19	184
	%	5.6%	29.9%	48.6%	54.5%	50.0%	45.9%
Total	Count	18	67	72	167	38	401
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Data Associated with Table 4.3:

		Main Cyclist Categories								Total	
		Fearless Cyclist		Confident Cyclist		Interested Cyclist		Reluctant to Cycle		Cases	Col Response %
		Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Barriers - Social	Cycling is too tiring/it's too far to cycle	3	21.4%	30	23.3%	82	24.0%	27	15.0%	142	21.4%
	I have other obligations that prevent me from cycling	1	7.1%	24	18.6%	60	17.5%	27	15.0%	112	16.8%
	The bike route to my destinations are too out of my way	3	21.4%	22	17.1%	56	16.4%	15	8.3%	96	14.4%
	I do not feel safe cycling in traffic	4	28.6%	11	8.5%	43	12.6%	25	13.9%	83	12.5%
	Cycling takes too long to get places	2	14.3%	15	11.6%	40	11.7%	11	6.1%	68	10.2%
	I'm too old/health issues			2	1.6%	19	5.6%	41	22.8%	62	9.3%
	Prefer to walk/drive/etc/not to cycle	1	7.1%	14	10.9%	21	6.1%	22	12.2%	58	8.7%
	Concern that the weather may turn to wind/rain/snow whil	3	21.4%	11	8.5%	17	5.0%	11	6.1%	42	6.3%
	Don't have a bike/other required equipment					23	6.7%	17	9.4%	40	6.0%
	There is nowhere to shower/change at my destination after	1	7.1%	7	5.4%	18	5.3%	2	1.1%	28	4.2%
	I would not be able to carry all of the items that I nee	1	7.1%	4	3.1%	13	3.8%	3	1.7%	21	3.2%
	Other			5	3.9%	8	2.3%	5	2.8%	18	2.7%
	No storage for sweaty clothes/other things at my destinat			2	1.6%	13	3.8%	1	.6%	16	2.4%
	Don't like cycling at night	1	7.1%	2	1.6%	9	2.6%	2	1.1%	14	2.1%
	I do not know of safe routes to bike between my home and			1	.8%	8	2.3%	3	1.7%	12	1.8%
	Like to dress up to go out			3	2.3%	5	1.5%	4	2.2%	12	1.8%
	I do not feel safe cycling on busy paths with people/bike	1	7.1%	1	.8%	5	1.5%	3	1.7%	10	1.5%
	I do not know how to cycle					1	.3%	6	3.3%	7	1.1%
	Bike racks are not secure enough to protect my bike from	1	7.1%	1	.8%	2	.6%	3	1.7%	7	1.1%
	Just lazy					7	2.0%			7	1.1%
	There are not enough bike racks to lock up my bike			2	1.6%	3	.9%	1	.6%	6	.9%
	Helmets mess up my hair when I cycle			2	1.6%	2	.6%			4	.6%
	I am not familiar with laws that affect cycling					1	.3%			1	.2%
Total		14	157.1%	129	123.3%	342	133.3%	180	127.2%	665	130.2%

		Refined Cyclist Categories																Total	
		Fearless Cyclist		Enthusiastic Cyclist		Assured Regular Cyclist		Comfortable with Infrastructure Cyclist		Concerned Cyclist		Comfortable with Infrastructure Non-Cyclist		Concerned Non-Cyclist		Reluctant to Cycle		Cases	Col Response %
		Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Barriers - Social	Cycling is too tiring/it's too far to cycle	3	21.4%	14	23.3%	16	23.2%	38	23.3%	13	34.2%	26	25.0%	5	13.5%	27	15.0%	142	21.4%
	I have other obligations that prevent me from cycling	1	7.1%	10	16.7%	14	20.3%	29	17.8%	4	10.5%	24	23.1%	3	8.1%	27	15.0%	112	16.8%
	The bike route to my destinations are too out of my way	3	21.4%	9	15.0%	13	18.8%	30	18.4%	9	23.7%	11	10.6%	6	16.2%	15	8.3%	96	14.4%
	I do not feel safe cycling in traffic	4	28.6%	8	13.3%	3	4.3%	28	17.2%	2	5.3%	7	6.7%	6	16.2%	25	13.9%	83	12.5%
	Cycling takes too long to get places	2	14.3%	8	13.3%	7	10.1%	22	13.5%	2	5.3%	10	9.6%	6	16.2%	11	6.1%	68	10.2%
	I'm too old/health issues			1	1.7%	1	1.4%	5	3.1%			6	5.8%	8	21.6%	41	22.8%	62	9.3%
	Prefer to walk/drive/etc/not to cycle	1	7.1%	3	5.0%	11	15.9%	11	6.7%	2	5.3%	6	5.8%	2	5.4%	22	12.2%	58	8.7%
	Concern that the weather may turn to wind/rain/snow/whil	3	21.4%	5	8.3%	6	8.7%	7	4.3%	4	10.5%	5	4.8%	1	2.7%	11	6.1%	42	6.3%
	Don't have a bike/other required equipment							5	3.1%			15	14.4%	3	8.1%	17	9.4%	40	6.0%
	There is nowhere to shower/change at my destination after	1	7.1%	4	6.7%	3	4.3%	9	5.5%	2	5.3%	5	4.8%	2	5.4%	2	1.1%	28	4.2%
	I would not be able to carry all of the items that I nee	1	7.1%	2	3.3%	2	2.9%	4	2.5%			7	6.7%	2	5.4%	3	1.7%	21	3.2%
	Other			2	3.3%	3	4.3%	4	2.5%	1	2.6%	2	1.9%	1	2.7%	5	2.8%	18	2.7%
	No storage for sweaty clothes/other things at my destinat			2	3.3%			10	6.1%			3	2.9%			1	.6%	16	2.4%
	Don't like cycling at night	1	7.1%	2	3.3%			2	1.2%	2	5.3%	5	4.8%			2	1.1%	14	2.1%
	I do not know of safe routes to bike between my home and					1	1.4%	5	3.1%			3	2.9%			3	1.7%	12	1.8%
	Like to dress up to go out			2	3.3%	1	1.4%	2	1.2%			3	2.9%			4	2.2%	12	1.8%
	I do not feel safe cycling on busy paths with people/bike	1	7.1%	1	1.7%			1	.6%			2	1.9%	2	5.4%	3	1.7%	10	1.5%
	I do not know how to cycle													1	2.7%	6	3.3%	7	1.1%
	Bike racks are not secure enough to protect my bike from	1	7.1%			1	1.4%	2	1.2%							3	1.7%	7	1.1%
	Just lazy							3	1.8%	2	5.3%	1	1.0%	1	2.7%			7	1.1%
	There are not enough bike racks to lock up my bike			2	3.3%			2	1.2%			1	1.0%			1	.6%	6	.9%
	Helmets mess up my hair when I cycle			1	1.7%	1	1.4%	2	1.2%									4	.6%
	I am not familiar with laws that affect cycling							1	.6%									1	.2%
Total		14	157.1%	60	126.7%	69	120.3%	163	136.2%	38	113.2%	104	136.5%	37	132.4%	180	127.2%	665	130.2%

		Main Cyclist Categories								Total	
		Fearless Cyclist		Confident Cyclist		Interested Cyclist		Reluctant to Cycle		Cases	Col Response %
		Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Barriers - Shopping/Appointments	I would not be able to carry all of the items that I need	7	46.7%	47	35.6%	124	34.6%	40	20.9%	218	31.3%
	I have other obligations that prevent me from cycling	2	13.3%	18	13.6%	49	13.7%	32	16.8%	101	14.5%
	I do not feel safe cycling in traffic	2	13.3%	19	14.4%	50	14.0%	24	12.6%	95	13.6%
	Cycling is too tiring/it's too far to cycle	2	13.3%	15	11.4%	52	14.5%	19	9.9%	88	12.6%
	The bike route to my destinations are too out of my way	1	6.7%	22	16.7%	47	13.1%	13	6.8%	83	11.9%
	Cycling takes too long to get places	3	20.0%	20	15.2%	43	12.0%	11	5.8%	77	11.1%
	I'm too old/health issues			5	3.8%	21	5.9%	42	22.0%	68	9.8%
	Prefer to walk/drive/etc (prefer not to cycle)	1	6.7%	11	8.3%	26	7.3%	21	11.0%	59	8.5%
	Don't have a bike (or other required equipment)					25	7.0%	17	8.9%	42	6.0%
	Concern that the weather may turn to wind/rain/snow while	2	13.3%	9	6.8%	14	3.9%	4	2.1%	29	4.2%
	There are not enough bike racks to lock up my bike	1	6.7%	4	3.0%	7	2.0%	2	1.0%	14	2.0%
	I do not know of safe routes to bike between my home and	2	13.3%			9	2.5%	2	1.0%	13	1.9%
	Bike racks are not secure enough to protect my bike from	1	6.7%	2	1.5%	7	2.0%	3	1.6%	13	1.9%
	No storage for sweaty clothes/other things at my destination	1	6.7%	2	1.5%	7	2.0%	2	1.0%	12	1.7%
	Just lazy			1	.8%	10	2.8%	1	.5%	12	1.7%
	There is nowhere to shower/change at my destination after	1	6.7%	3	2.3%	6	1.7%			10	1.4%
	I do not know how to cycle					1	.3%	6	3.1%	7	1.0%
	I do not feel safe cycling on busy paths with people/bike			1	.8%	3	.8%	3	1.6%	7	1.0%
	Other			2	1.5%	2	.6%	3	1.6%	7	1.0%
	I am not familiar with laws that affect cycling			1	.8%	4	1.1%			5	.7%
	Helmets mess up my hair when I cycle			1	.8%					1	.1%
Total		15	173.3%	132	138.6%	358	141.6%	191	128.3%	696	138.1%

	Refined Cyclist Categories																Total	
	Fearless Cyclist		Enthusiatic Cyclist		Assured Regular Cyclist		Comfortable with Infrastructure Cyclist		Concerned Cyclist		Comfortable with Infrastructure Non-Cyclist		Concerned Non-Cyclist		Reluctant to Cycle		Cases	Col Response %
	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %				
Barriers - Shopping/Appointments	7	46.7%	20	32.3%	27	38.6%	63	35.8%	11	28.9%	39	36.8%	11	28.9%	40	20.9%	218	31.3%
I would not be able to carry all of the items that I need	7	46.7%	20	32.3%	27	38.6%	63	35.8%	11	28.9%	39	36.8%	11	28.9%	40	20.9%	218	31.3%
I have other obligations that prevent me from cycling	2	13.3%	8	12.9%	10	14.3%	20	11.4%	7	18.4%	20	18.9%	2	5.3%	32	16.8%	101	14.5%
I do not feel safe cycling in traffic	2	13.3%	10	16.1%	9	12.9%	25	14.2%	6	15.8%	11	10.4%	8	21.1%	24	12.6%	95	13.6%
Cycling is too tiring/it's too far to cycle	2	13.3%	5	8.1%	10	14.3%	21	11.9%	7	18.4%	21	19.8%	3	7.9%	19	9.9%	88	12.6%
The bike route to my destinations are too out of my way	1	6.7%	15	24.2%	7	10.0%	19	10.8%	8	21.1%	14	13.2%	6	15.8%	13	6.8%	83	11.9%
Cycling takes too long to get places	3	20.0%	6	9.7%	14	20.0%	28	15.9%	5	13.2%	7	6.6%	3	7.9%	11	5.8%	77	11.1%
I'm too old/health issues			2	3.2%	3	4.3%	5	2.8%			10	9.4%	6	15.8%	42	22.0%	68	9.8%
Prefer to walk/drive/etc (prefer not to cycle)	1	6.7%	4	6.5%	7	10.0%	19	10.8%	1	2.6%	4	3.8%	2	5.3%	21	11.0%	59	8.5%
Don't have a bike (or not required equipment)							5	2.8%			18	17.0%	2	5.3%	17	8.9%	42	6.0%
Concern that the weather may turn to wind/rain/snow while cycling	2	13.3%	2	3.2%	7	10.0%	7	4.0%	3	7.9%	1	2.6%	3	7.9%	4	2.1%	29	4.2%
There are not enough bike racks to lock up my bike	1	6.7%	2	3.2%	2	2.9%	4	2.3%			2	1.9%	1	2.6%	2	1.0%	14	2.0%
I do not know of safe routes to bike between home and work	2	13.3%					4	2.3%			4	3.8%	1	2.6%	2	1.0%	13	1.9%
Bike racks are not secure enough to protect my bike from theft	1	6.7%	1	1.6%	1	1.4%	4	2.3%			2	1.9%	1	2.6%	3	1.6%	13	1.9%
No storage for sweaty clothes/other things at my destination	1	6.7%	1	1.6%	1	1.4%	5	2.8%			1	2.6%	1	2.6%	2	1.0%	12	1.7%
Just lazy					1	1.4%	5	2.8%			3	2.8%	2	5.3%	1	2.6%	12	1.7%
There is nowhere to shower/change at my destination after cycling	1	6.7%	3	4.8%			5	2.8%	1	2.6%							10	1.4%
I do not know how to cycle													1	2.6%	6	3.1%	7	1.0%
I do not feel safe cycling on busy paths with people/bike					1	1.4%	2	1.1%	1	2.6%					3	1.6%	7	1.0%
Other			2	3.2%							2	1.9%			3	1.6%	7	1.0%
I am not familiar with laws that affect cycling			1	1.6%			2	1.1%			2	1.9%					5	0.7%
Helmets mess up my hair when I cycle			1	1.6%													1	0.1%
Total	15	173.3%	62	133.9%	70	142.9%	176	138.1%	38	131.6%	106	151.9%	38	139.5%	191	128.3%	696	138.1%

		Main Cyclist Categories								Total	
		Fearless Cyclist		Confident Cyclist		Interested Cyclist		Reluctant to Cycle		Cases	Col Response %
		Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Barriers - School/Work	Cycling is too tiring/it's too far to cycle			14	26.9%	56	32.0%	15	26.8%	85	29.4%
	The bike route to my destinations are too out of my way			11	21.2%	43	24.6%	8	14.3%	62	21.5%
	I do not feel safe cycling in traffic	2	33.3%	8	15.4%	28	16.0%	14	25.0%	52	18.0%
	Cycling takes too long to get places			12	23.1%	31	17.7%	7	12.5%	50	17.3%
	Concern that the weather may turn to wind/rain/snow while I have other obligations that prevent me from cycling	3	50.0%	10	19.2%	16	9.1%	8	14.3%	37	12.8%
	There is nowhere to shower/change at my destination after	1	16.7%	4	7.7%	19	10.9%	2	3.6%	26	9.0%
	I would not be able to carry all of the items that I need	2	33.3%	2	3.8%	13	7.4%	5	8.9%	22	7.6%
	I do not know of safe routes to bike between my home and	1	16.7%	3	5.8%	15	8.6%	1	1.8%	19	6.6%
	Prefer to walk/drive/etc (prefer not to cycle)					10	5.7%	2	3.6%	13	4.5%
	Need vehicle for job			3	5.8%	6	3.4%	5	8.9%	12	4.2%
	No storage for sweaty clothes/other things at my destination					2	3.4%	2	3.6%	11	3.8%
	I'm too old/health issues					8	4.6%	2	3.6%	10	3.5%
	Don't have a bike			1	1.9%	3	1.7%	5	8.9%	9	3.1%
	Just lazy					7	4.0%	2	3.6%	9	3.1%
	I do not feel safe cycling on busy paths with people/bike			1	1.9%	4	2.3%	3	5.4%	8	2.8%
	There are not enough bike racks to lock up my bike	1	16.7%			2	2.9%			7	2.4%
	Bike racks are not secure enough to protect my bike from			2	3.8%	3	1.7%	3	5.4%	7	2.4%
	Other					2	1.1%	2	3.6%	6	2.1%
	Helmets mess up my hair when I cycle			1	1.9%	3	1.7%	1	1.8%	5	1.7%
	I do not know how to ride a bike					2	1.1%			2	.7%
	I am not familiar with laws that affect cycling							1	1.8%	1	.3%
Total		6	166.7%	52	142.3%	175	160.6%	56	158.9%	289	157.1%

	Refined Cyclist Categories																Total	
	Fearless Cyclist		Enthusiastic Cyclist		Assured Regular Cyclist		Comfortable with Infrastructure Cyclist		Concerned Cyclist		Comfortable with Infrastructure Non-Cyclist		Concerned Non-Cyclist		Reluctant to Cycle		Cases	Col Response %
	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Barriers - Cycling is too tiring/it's too far to cycle			5	20.0%	9	33.3%	26	31.7%	3	18.8%	24	38.1%	3	21.4%	15	26.8%	85	29.4%
School/Work The bike route to my destinations are too out of my way			3	12.0%	8	29.6%	19	23.2%	5	31.3%	12	19.0%	7	50.0%	8	14.3%	62	21.5%
I do not feel safe cycling in traffic	2	33.3%	5	20.0%	3	11.1%	14	17.1%	4	25.0%	8	12.7%	2	14.3%	14	25.0%	52	18.0%
Cycling takes too long to get places			6	24.0%	6	22.2%	15	18.3%	1	6.3%	12	19.0%	3	21.4%	7	12.5%	50	17.3%
Concern that the weather may turn to wind/rain/snow while I have other obligations that prevent me from cycling	3	50.0%	7	28.0%	3	11.1%	7	8.5%	2	12.5%	5	7.9%	2	14.3%	8	14.3%	37	12.8%
There is nowhere to shower/change at my destination after	1	16.7%	2	8.0%	2	7.4%	9	11.0%	3	18.8%	7	11.1%			2	3.6%	26	9.0%
I would not be able to carry all of the items that I need	2	33.3%	1	4.0%	1	3.7%	4	4.9%	1	6.3%	7	11.1%	1	7.1%	5	8.9%	22	7.6%
I do not know of safe routes to bike between my home and			1	4.0%	2	7.4%	5	6.1%	1	6.3%	8	12.7%	1	7.1%	1	1.8%	19	6.6%
Prefer to walk/drive/etc (prefer not to cycle)	1	16.7%					4	4.9%			6	9.5%			2	3.6%	13	4.5%
Need vehicle for job					3	11.1%	4	4.9%	1	6.3%	2	3.2%	3	21.4%	5	8.9%	12	4.2%
No storage for sweaty clothes/other things at my destination							4	4.9%	1	6.3%	1	1.6%			2	3.6%	11	3.8%
I'm too old/health issue			1	4.0%			3	3.7%	1	6.3%	4	6.3%			2	3.6%	10	3.5%
Don't have a bike							2	2.4%			1	1.6%			5	8.9%	9	3.1%
Just lazy					1	3.7%	2	2.4%			7	11.1%			2	3.6%	9	3.1%
I do not feel safe cycling on busy paths with people/bike			2	8.0%			2	2.4%			2	3.2%			3	5.4%	8	2.8%
There are not enough bike racks to lock up my bike	1	16.7%					3	3.7%			2	3.2%					7	2.4%
Bike racks are not secure enough to protect my bike from			1	4.0%	1	3.7%	1	1.2%			1	1.6%	1	7.1%	3	5.4%	7	2.4%
Other					1	3.7%	1	1.2%	1	6.3%			1	7.1%	2	3.6%	6	2.1%
Helmets mess up my hair when I cycle							1	1.2%			2	3.2%			1	1.8%	5	1.7%
I do not know how to ride a bike							1	1.2%			1	1.6%					2	.7%
I am not familiar with laws that affect cycling															1	1.8%	1	.3%
Total	6	166.7%	25	136.0%	27	148.1%	82	147.6%	16	150.0%	63	177.8%	14	171.4%	56	158.9%	289	157.1%

Data Associated with Figure 4.2:

Cycling interest for transportation purposes * Cyclist Categories Crosstabulation

			Cyclist Categories							Total	
			Fearless Cyclist	Confident (Enthusiatic) Cyclist	Confident (Assured Regular) Cyclist	Interested (comfortable Occasional Cyclist)	Interested (concerned cyclist)	Interested (comfortable non-cyclist)	Interested (concerned non-cyclist)		No Way, No How
Cycling interest for transportation purposes	I have no interest whatsoever in riding a bicycle	Count %		2 2.9%	16 21.1%	14 7.7%	8 19.0%	19 16.7%	14 35.0%	137 67.5%	210 28.3%
	I already ride a bike as often as I want to	Count %	6 33.3%	34 50.0%	32 42.1%	30 16.6%	11 26.2%	8 7.0%	2 5.0%	34 16.7%	157 21.2%
	I ride a bike a lot, but would like to ride more	Count %	9 50.0%	21 30.9%	11 14.5%	17 9.4%	6 14.3%	2 1.8%	2 5.0%	2 1.0%	70 9.4%
	I do not ride a bike often, but would like to	Count %	3 16.7%	11 16.2%	17 22.4%	120 66.3%	17 40.5%	85 74.6%	22 55.0%	30 14.8%	305 41.1%
Total	Count %	18 100.0%	68 100.0%	76 100.0%	181 100.0%	42 100.0%	114 100.0%	40 100.0%	203 100.0%	742 100.0%	

Statistically significant differences ($p < .05$)

Data Associated with Table 5.1:

	Refined Cyclist Categories																Total	
	Fearless Cyclist		Enthusiatic Cyclist		Assured Regular Cyclist		Comfortable with Infrastructure Cyclist		Concerned Cyclist		Comfortable with Infrastructure Non-Cyclist		Concerned Non-Cyclist		Reluctant to Cycle		Cases	Col Response %
	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %	Cases	Col Response %		
Nothing	2	11.1%	13	18.8%	20	26.0%	51	28.2%	11	26.2%	31	27.0%	17	41.5%	102	49.3%	247	32.9%
More bicycle lanes	10	55.6%	25	36.2%	24	31.2%	59	32.6%	12	28.6%	26	22.6%	8	19.5%	49	23.7%	213	28.4%
more multi-use pathways	7	38.9%	19	27.5%	19	24.7%	50	27.6%	12	28.6%	32	27.8%	6	14.6%	38	18.4%	183	24.4%
Separate pathways for cyclists and pedestrians	4	22.2%	12	17.4%	7	9.1%	11	6.1%	4	9.5%	14	12.2%	4	9.8%	11	5.3%	67	8.9%
More wide vehicle lanes			4	5.8%	9	11.7%	4	2.2%	2	4.8%	6	5.2%			20	9.7%	45	6.0%
Introduce cycle tracks, which are physically separated bi	1	5.6%	5	7.2%	4	5.2%	8	4.4%	3	7.1%	7	6.1%	1	2.4%	10	4.8%	39	5.2%
More paths/interconnected paths			8	11.6%	2	2.6%	11	6.1%	4	9.5%	7	6.1%	2	4.9%	5	2.4%	39	5.2%
More or better bicycle parking	1	5.6%	5	7.2%	1	1.3%	9	5.0%	5	11.9%	4	3.5%	3	7.3%	7	3.4%	35	4.7%
Other	1	5.6%	1	1.4%	4	5.2%	4	2.2%	1	2.4%	9	7.8%	2	4.9%	7	3.4%	29	3.9%
More or better signage and maps			4	5.8%	2	2.6%	9	5.0%	2	4.8%	6	5.2%	1	2.4%	4	1.9%	28	3.7%
More quiet roads with reduced vehicle access and speeds			2	2.9%	6	7.8%	5	2.8%	2	4.8%	5	4.3%	1	2.4%	6	2.9%	27	3.6%
Increase motorist education about cyclists	2	11.1%	4	5.8%	2	2.6%	4	2.2%			6	5.2%	2	4.9%	6	2.9%	26	3.5%
Improve pathway snow clearing	1	5.6%	4	5.8%	3	3.9%	6	3.3%	2	4.8%	4	3.5%			4	1.9%	24	3.2%
Better integration of bikes and transit			3	4.3%	5	6.5%	6	3.3%	2	4.8%	1	.9%	2	4.9%	2	1.0%	21	2.8%
More available rules of the roads for cyclists			3	4.3%	1	1.3%	6	3.3%	1	2.4%	3	2.6%	2	4.9%	4	1.9%	20	2.7%
More shower and locker facilities			4	5.8%			5	2.8%	2	4.8%	3	2.6%	1	2.4%	1	.5%	16	2.1%
Improve on-street snow clearing	1	5.6%	2	2.9%	1	1.3%	1	.6%			4	3.5%			4	1.9%	13	1.7%
Better policing of rules			1	1.4%	1	1.3%	3	1.7%	2	4.8%	2	1.7%	1	2.4%	3	1.4%	13	1.7%
Make bikes more accessible							3	1.7%			3	2.6%	2	4.9%	3	1.4%	11	1.5%
Provide incentives			1	1.4%	1	1.3%	1	.6%			3	2.6%	1	2.4%			7	.9%
Lanes on major roads			2	2.9%	1	1.3%	2	1.1%			1	.9%			1	.5%	7	.9%
Improve gravel clearing on cycle routes			2	2.9%			2	1.1%			1	.9%			1	.5%	6	.8%
Better pathways - general			1	1.4%	2	2.6%					1	.9%			2	1.0%	6	.8%
Better lane markings	1	5.6%	1	1.4%			1	.6%	1	2.4%					1	.5%	5	.7%
Safer routes - general			1	1.4%	1	1.3%	1	.6%	1	2.4%					1	.5%	5	.7%
Don't know							1	.6%			2	1.7%			2	1.0%	5	.7%
Wider paths/lanes					1	1.3%									3	1.4%	4	.5%
Better path maintenance			1	1.4%			2	1.1%									3	.4%
Promote cycling			1	1.4%			1	.6%			1	.9%					3	.4%
Better lighting on paths							1	.6%	1	2.4%	1	.9%					3	.4%
Allow cycling on sidewalks							1	.6%			1	.9%	1	2.4%			3	.4%
More/better pavement					1	1.3%	1	.6%									2	.3%
Total	18	172.2%	69	187.0%	77	153.2%	181	148.6%	42	166.7%	115	160.0%	41	139.0%	207	143.5%	750	154.0%

Data Associated with Figure 5.1:

Introduce bike only lanes that run alongside a road but are physically separated from both cars and pedestrians.

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	12	44	40	108	23	68	24	83	402
	%	66.7%	63.8%	52.6%	59.7%	56.1%	59.6%	60.0%	43.0%	54.9%
Somewhat agree	Count	4	19	25	53	14	36	8	83	242
	%	22.2%	27.5%	32.9%	29.3%	34.1%	31.6%	20.0%	43.0%	33.1%
Somewhat disagree	Count	2	3	7	14	3	6	2	10	47
	%	11.1%	4.3%	9.2%	7.7%	7.3%	5.3%	5.0%	5.2%	6.4%
Strongly disagree	Count		3	4	6	1	4	6	17	41
	%		4.3%	5.3%	3.3%	2.4%	3.5%	15.0%	8.8%	5.6%
Total	Count	18	69	76	181	41	114	40	193	732
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More separate pathways for cyclists and pedestrians

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	11	37	35	102	22	66	20	57	350
	%	61.1%	54.4%	46.1%	56.4%	53.7%	57.4%	50.0%	29.8%	47.9%
Somewhat agree	Count	4	22	33	60	14	35	12	97	277
	%	22.2%	32.4%	43.4%	33.1%	34.1%	30.4%	30.0%	50.8%	37.9%
Somewhat disagree	Count	3	6	6	15	4	10	5	14	63
	%	16.7%	8.8%	7.9%	8.3%	9.8%	8.7%	12.5%	7.3%	8.6%
Strongly disagree	Count		3	2	4	1	4	3	23	40
	%		4.4%	2.6%	2.2%	2.4%	3.5%	7.5%	12.0%	5.5%
Total	Count	18	68	76	181	41	115	40	191	730
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More bicycle only lanes on roads

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	13	43	33	96	19	51	23	59	337
	%	72.2%	63.2%	44.0%	53.3%	48.7%	45.1%	59.0%	30.6%	46.5%
Somewhat agree	Count	3	19	31	67	12	43	9	85	269
	%	16.7%	27.9%	41.3%	37.2%	30.8%	38.1%	23.1%	44.0%	37.1%
Somewhat disagree	Count	2	3	6	11	5	11	2	27	67
	%	11.1%	4.4%	8.0%	6.1%	12.8%	9.7%	5.1%	14.0%	9.2%
Strongly disagree	Count		3	5	6	3	8	5	22	52
	%		4.4%	6.7%	3.3%	7.7%	7.1%	12.8%	11.4%	7.2%
Total	Count	18	68	75	180	39	113	39	193	725
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More or better signs and maps that show bike routes.

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	7	36	24	82	17	54	22	55	297
	%	38.9%	54.5%	32.0%	45.3%	41.5%	47.4%	56.4%	29.7%	41.3%
Somewhat agree	Count	9	18	34	69	19	48	7	92	296
	%	50.0%	27.3%	45.3%	38.1%	46.3%	42.1%	17.9%	49.7%	41.2%
Somewhat disagree	Count	2	5	11	25	2	7	7	13	72
	%	11.1%	7.6%	14.7%	13.8%	4.9%	6.1%	17.9%	7.0%	10.0%
Strongly disagree	Count		7	6	5	3	5	3	25	54
	%		10.6%	8.0%	2.8%	7.3%	4.4%	7.7%	13.5%	7.5%
Total	Count	18	66	75	181	41	114	39	185	719
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Increase education about road rules for cyclists

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	4	26	22	82	15	60	19	76	304
	%	22.2%	39.4%	29.3%	45.8%	36.6%	52.2%	47.5%	39.4%	41.8%
Somewhat agree	Count	10	24	38	67	17	42	10	86	294
	%	55.6%	36.4%	50.7%	37.4%	41.5%	36.5%	25.0%	44.6%	40.4%
Somewhat disagree	Count	3	10	7	21	5	9	5	14	74
	%	16.7%	15.2%	9.3%	11.7%	12.2%	7.8%	12.5%	7.3%	10.2%
Strongly disagree	Count	1	6	8	9	4	4	6	17	55
	%	5.6%	9.1%	10.7%	5.0%	9.8%	3.5%	15.0%	8.8%	7.6%
Total	Count	18	66	75	179	41	115	40	193	727
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Improve gravel clearing on cycling routes

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	11	33	26	63	12	47	19	52	263
	%	64.7%	47.8%	34.7%	35.4%	29.3%	41.2%	47.5%	27.8%	36.5%
Somewhat agree	Count	5	21	40	88	20	51	15	89	329
	%	29.4%	30.4%	53.3%	49.4%	48.8%	44.7%	37.5%	47.6%	45.6%
Somewhat disagree	Count	1	7	3	18	6	9	3	20	67
	%	5.9%	10.1%	4.0%	10.1%	14.6%	7.9%	7.5%	10.7%	9.3%
Strongly disagree	Count		8	6	9	3	7	3	26	62
	%		11.6%	8.0%	5.1%	7.3%	6.1%	7.5%	13.9%	8.6%
Total	Count	17	69	75	178	41	114	40	187	721
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Increase motorist education about cyclists

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	13	37	30	90	15	59	18	59	321
	%	72.2%	55.2%	40.0%	50.0%	36.6%	51.3%	43.9%	30.6%	44.0%
Somewhat agree	Count	5	17	29	64	18	39	15	90	277
	%	27.8%	25.4%	38.7%	35.6%	43.9%	33.9%	36.6%	46.6%	37.9%
Somewhat disagree	Count		7	10	21	6	8	4	20	76
	%		10.4%	13.3%	11.7%	14.6%	7.0%	9.8%	10.4%	10.4%
Strongly disagree	Count		6	6	5	2	9	4	24	56
	%		9.0%	8.0%	2.8%	4.9%	7.8%	9.8%	12.4%	7.7%
Total	Count	18	67	75	180	41	115	41	193	730
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More paved pathways, which are shared with pedestrians and other groups.

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	9	30	26	80	17	46	14	40	262
	%	50.0%	44.1%	34.2%	44.2%	40.5%	40.0%	35.0%	21.3%	36.0%
Somewhat agree	Count	8	26	32	78	19	51	19	93	326
	%	44.4%	38.2%	42.1%	43.1%	45.2%	44.3%	47.5%	49.5%	44.8%
Somewhat disagree	Count	1	5	16	17	3	10	3	27	82
	%	5.6%	7.4%	21.1%	9.4%	7.1%	8.7%	7.5%	14.4%	11.3%
Strongly disagree	Count		7	2	6	3	8	4	28	58
	%		10.3%	2.6%	3.3%	7.1%	7.0%	10.0%	14.9%	8.0%
Total	Count	18	68	76	181	42	115	40	188	728
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More or better bicycle parking

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	5	29	16	47	12	40	17	48	214
	%	27.8%	43.3%	21.3%	26.9%	30.0%	36.0%	44.7%	26.2%	30.3%
Somewhat agree	Count	11	24	39	88	22	53	14	87	338
	%	61.1%	35.8%	52.0%	50.3%	55.0%	47.7%	36.8%	47.5%	47.8%
Somewhat disagree	Count	2	8	14	30	3	12	5	23	97
	%	11.1%	11.9%	18.7%	17.1%	7.5%	10.8%	13.2%	12.6%	13.7%
Strongly disagree	Count		6	6	10	3	6	2	25	58
	%		9.0%	8.0%	5.7%	7.5%	5.4%	5.3%	13.7%	8.2%
Total	Count	18	67	75	175	40	111	38	183	707
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Improve snow clearing on pathways

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	10	34	21	69	15	58	17	55	279
	%	55.6%	50.0%	27.6%	39.7%	37.5%	52.7%	43.6%	28.9%	39.0%
Somewhat agree	Count	7	20	31	68	20	38	12	79	275
	%	38.9%	29.4%	40.8%	39.1%	50.0%	34.5%	30.8%	41.6%	38.5%
Somewhat disagree	Count	1	8	13	19	2	8	5	25	81
	%	5.6%	11.8%	17.1%	10.9%	5.0%	7.3%	12.8%	13.2%	11.3%
Strongly disagree	Count		6	11	18	3	6	5	31	80
	%		8.8%	14.5%	10.3%	7.5%	5.5%	12.8%	16.3%	11.2%
Total	Count	18	68	76	174	40	110	39	190	715
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

j. Improve snow clearing for cycling lanes on roads

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	10	32	21	74	10	49	14	57	267
	%	55.6%	47.8%	28.0%	42.5%	25.6%	45.4%	35.0%	30.6%	37.8%
Somewhat agree	Count	8	19	32	57	20	38	16	70	260
	%	44.4%	28.4%	42.7%	32.8%	51.3%	35.2%	40.0%	37.6%	36.8%
Somewhat disagree	Count		7	12	23	2	10	5	28	87
	%		10.4%	16.0%	13.2%	5.1%	9.3%	12.5%	15.1%	12.3%
Strongly disagree	Count		9	10	20	7	11	5	31	93
	%		13.4%	13.3%	11.5%	17.9%	10.2%	12.5%	16.7%	13.2%
Total	Count	18	67	75	174	39	108	40	186	707
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

More shared lanes on roads, where cars and bikes can safely travel side by side.

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	12	35	23	68	10	42	17	37	244
	%	70.6%	50.7%	29.9%	37.6%	24.4%	36.8%	43.6%	19.8%	33.7%
Somewhat agree	Count	2	20	33	75	14	44	11	82	281
	%	11.8%	29.0%	42.9%	41.4%	34.1%	38.6%	28.2%	43.9%	38.8%
Somewhat disagree	Count	3	6	10	28	10	11	4	31	103
	%	17.6%	8.7%	13.0%	15.5%	24.4%	9.6%	10.3%	16.6%	14.2%
Strongly disagree	Count		8	11	10	7	17	7	37	97
	%		11.6%	14.3%	5.5%	17.1%	14.9%	17.9%	19.8%	13.4%
Total	Count	17	69	77	181	41	114	39	187	725
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Make it easier to bring bicycles on public transit

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	7	28	23	58	11	49	15	32	223
	%	38.9%	43.1%	31.9%	32.8%	27.5%	44.1%	37.5%	17.4%	31.5%
Somewhat agree	Count	10	24	28	68	19	38	17	84	288
	%	55.6%	36.9%	38.9%	38.4%	47.5%	34.2%	42.5%	45.7%	40.7%
Somewhat disagree	Count	1	9	12	34	6	13	3	31	109
	%	5.6%	13.8%	16.7%	19.2%	15.0%	11.7%	7.5%	16.8%	15.4%
Strongly disagree	Count		4	9	17	4	11	5	37	87
	%		6.2%	12.5%	9.6%	10.0%	9.9%	12.5%	20.1%	12.3%
Total	Count	18	65	72	177	40	111	40	184	707
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

More quiet roads with reduced vehicle access and speeds

		Refined Cyclist Categories							Total	
		Fearless Cyclist	Enthusiatic Cyclist	Assured Regular Cyclist	Comfortable with Infrastructure Cyclist	Concerned Cyclist	Comfortable with Infrastructure Non-Cyclist	Concerned Non-Cyclist		Reluctant to Cycle
Strongly agree	Count	8	25	15	56	16	43	19	37	219
	%	44.4%	37.3%	19.5%	31.6%	39.0%	38.4%	47.5%	19.7%	30.4%
Somewhat agree	Count	6	26	37	71	19	40	15	87	301
	%	33.3%	38.8%	48.1%	40.1%	46.3%	35.7%	37.5%	46.3%	41.8%
Somewhat disagree	Count	4	10	12	33	3	19	3	29	113
	%	22.2%	14.9%	15.6%	18.6%	7.3%	17.0%	7.5%	15.4%	15.7%
Strongly disagree	Count		6	13	17	3	10	3	35	87
	%		9.0%	16.9%	9.6%	7.3%	8.9%	7.5%	18.6%	12.1%
Total	Count	18	67	77	177	41	112	40	188	720
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Statistically significant differences (p<.05)

Data Associated with Table 5.2:

Improvements to Encourage More Cycling among Cyclist Categories						
Improvements	Cyclist Category	% of Respondents				Total
		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	
Introduce bike only lanes that run alongside a road but are physically separated from both cars and pedestrians	Fearless Cyclist (n=18)	67	22	11	0	100
	Confident Cyclist (n=145)	58	30	7	5	100
	Interested (Novice) (n=376)	59	30	7	5	100
	Reluctant to Cycle (n=193)	43	43	5	9	100
More separate pathways for cyclists and pedestrians	Fearless Cyclist (n=18)	61	22	17	0	100
	Confident Cyclist (n=144)	50	38	8	3	100
	Interested (Novice) (n=377)	56	32	9	3	100
	Reluctant to Cycle (n=191)	30	51	7	12	100
More bicycle only lanes on roads	Fearless Cyclist (n=18)	72	17	11	0	100
	Confident Cyclist (n=143)	53	35	6	6	100
	Interested (Novice) (n=371)	51	35	8	6	100
	Reluctant to Cycle (n=193)	31	44	14	11	100
More or better signs and maps that show bike routes	Fearless Cyclist (n=18)	39	50	11	0	100
	Confident Cyclist (n=141)	43	37	11	9	100
	Interested (Novice) (n=375)	47	38	11	4	100
	Reluctant to Cycle (n=193)	30	50	7	14	100
Increase education about road rules for cyclists*	Fearless Cyclist (n=18)	22	56	17	6	100
	Confident Cyclist (n=145)	34	44	12	10	100
	Interested (Novice) (n=376)	47	36	11	6	100
	Reluctant to Cycle (n=193)	39	45	7	9	100
Improve gravel clearing on cycling routes	Fearless Cyclist (n=17)	65	29	6	0	100
	Confident Cyclist (n=144)	41	42	7	10	100
	Interested (Novice) (n=373)	38	47	10	6	100
	Reluctant to Cycle (n=187)	28	48	11	14	100
Increase motorist education about cyclists	Fearless Cyclist (n=18)	72	28	0	0	100
	Confident Cyclist (n=142)	47	32	12	8	100
	Interested (Novice) (n=377)	48	36	10	5	100
	Reluctant to Cycle (n=193)	31	47	10	12	100
More paved pathways, which are shared with pedestrians and other groups	Fearless Cyclist (n=18)	50	44	6	0	100
	Confident Cyclist (n=144)	39	40	15	6	100
	Interested (Novice) (n=378)	42	44	9	6	100
	Reluctant to Cycle (n=188)	21	49	14	15	100
More or better bicycle parking*	Fearless Cyclist (n=18)	28	61	11	0	100
	Confident Cyclist (n=142)	32	44	15	8	100
	Interested (Novice) (n=364)	32	49	14	6	100
	Reluctant to Cycle (n=183)	26	48	13	14	100
Improve snow clearing on pathways	Fearless Cyclist (n=18)	56	39	6	0	100
	Confident Cyclist (n=144)	38	35	15	12	100
	Interested (Novice) (n=363)	44	38	9	9	100
	Reluctant to Cycle (n=190)	29	42	13	16	100
Improve snow clearing for cycling lanes on roads*	Fearless Cyclist (n=18)	56	44	0	0	100
	Confident Cyclist (n=142)	37	36	13	13	100
	Interested (Novice) (n=361)	41	36	11	12	100
	Reluctant to Cycle (n=186)	31	38	15	17	100
More shared lanes on roads, where cars and bikes can safely travel side by side	Fearless Cyclist (n=17)	71	12	18	0	100
	Confident Cyclist (n=146)	40	36	11	13	100
	Interested (Novice) (n=375)	37	38	14	11	100
	Reluctant to Cycle (n=187)	20	44	17	20	100
Make it easier to bring bicycles on public transit	Fearless Cyclist (n=18)	39	56	6	0	100
	Confident Cyclist (n=137)	37	38	15	9	100
	Interested (Novice) (n=368)	36	39	15	10	100
	Reluctant to Cycle (n=184)	17	46	17	20	100
More quiet roads with reduced vehicle access and speeds	Fearless Cyclist (n=18)	44	33	22	0	100
	Confident Cyclist (n=144)	28	44	15	13	100
	Interested (Novice) (n=370)	36	39	16	9	100
	Reluctant to Cycle (n=188)	20	46	15	19	100
More shower and locker facilities at work or school	Fearless Cyclist (n=17)	41	29	24	6	100
	Confident Cyclist (n=135)	24	46	15	16	100
	Interested (Novice) (n=344)	27	42	19	13	100
	Reluctant to Cycle (n=180)	17	46	15	22	100

Note: * Indicates differences are not statistically significant. All other differences in the table are statistically significant (p<.05)

APPENDIX D -Factors for Types of Cyclists

Fearless Cyclist (2%)

- Cycle at least once a week
- Agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does not have specific bike infrastructure such as bike lanes
- Agree that:
 - Riding is an extremely important part of my life
 - I often refer to myself as a cyclist when talking to other people
 - I am willing to ride my bike in bad weather including snow
 - I am more likely to ride a bike, even when other forms of transportation such as a car or public transit are more convenient to use

Confident Cyclist (19%)

Enthusiastic (9%)

- Cycle at least once every two weeks
- May agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does not have specific cycling infrastructure such as bike lanes; but more likely neighbourhood roads that do have cycling infrastructure.
- Generally agree that:
 - Riding is an extremely important part of my life
 - I am more likely to ride a bike, even when other forms of transportation such as a car or public transit are more convenient to use

Assured Regular Cyclist (10%)

- Cycle at least once every two weeks
- May agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does not have specific cycling infrastructure such as bike lanes; but more likely neighbourhood roads that do have cycling infrastructure⁶
- May agree that:
 - Riding is an extremely important part of my life
 - I am more likely to ride a bike, even when other forms of transportation such as a car or public transit are more convenient to use

Interested Cyclists (51%)

Comfortable with Infrastructure Cyclist (24%)

- Cycle at least every three or four weeks
- Agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does have specific cycling infrastructure such as bike lanes

Concerned Cyclist (6%)

- Cycles
- Does not agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does have specific cycling infrastructure such as bike lanes

Comfortable with Infrastructure Non-Cyclist (15%)

- Does not cycle
- Agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does have specific cycling infrastructure such as bike lanes

Concerned Non-Cyclist (5%)

- Does not cycle
- Does not agree they are comfortable sharing a busier neighborhood road that has Transit bus routes and does have specific cycling infrastructure such as bike lanes

Reluctant to Cycle (28%)

- Did not cycle in past 12 months/Less than once or twice every two or three months/Once or twice every two or three months/Don't know
- Have no interest in cycling/Already ride a bike as often as like to
- Generally disagree with items that characterize respondents as identifying as cyclists

⁶ Note: Some of the Assured Regular Cyclist respondents were not comfortable with cycling on neighbourhood roads without bicycling infrastructure, but fit with other factors such as traveling in bad weather, identifying as a cyclist, frequency of cycling, etc.

