TRANSPORTATION SURVEY RESULTS & RECOMMENDATIONS
FINAL REPORT

AUGUST 8, 2016
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UNIVERSITY OF MANITOBA SURVEY RESULTS 2016

TRANSPORTATION to FORT GARRY CAMPUS

Current Travel:
- Drive: 45
- Bike: 10
- Carpool: 20
- Transit: 15
- Walk: 20

In January 2016, 3,193 students, faculty, employees and non-University employees from Fort Garry campus took part in the transportation survey. Here’s what you told us about your commute to campus.

Future Travel:
- 38% of you ideally want to take transit to campus
- 35% of you ideally want to bike to campus
- 26% of you ideally want to carpool to campus

Parking:
A majority, 62%, of drivers and carpoolers are parking on campus with a monthly permit, while 21% park casually on campus.

TRANSPORTATION to BANNATYNE CAMPUS

Current Travel:
- Drive: 50
- Bike: 20
- Carpool: 10
- Transit: 15
- Walk: 5

In January 2016, 734 students, faculty, employees and non-University employees from Bannatyne campus took part in the transportation survey. Here’s what you told us about your commute to campus.

Future Travel:
- 36% of you ideally want to take transit to campus
- 31% of you ideally want to bike to campus
- 24% of you ideally want to carpool to campus

Parking:
A majority - 60% - of drivers and carpoolers park on campus with a monthly permit, while 11% park on the street and 10% are dropped off.

GREEN ACTION CENTRE
YOU ASKED FOR...

- Improved walking infrastructure
- Discounted bus pass
- Increased bus frequency
- Improved cycling infrastructure
- Affordable student housing

Many of you are also interested or very interested in flexible parking permits and an Emergency Ride Home program in case you need to get home in a hurry.

ARRIVALS & DEPARTURES

Not surprisingly, most of you arrive on campus between 8 and 10am, and depart between 4 and 6pm.

Thank you to all students, faculty, staff and non-University employees who took the time to share your transportation experiences, needs and challenges with us.
1. Project Overview

As part of its commitment to exceptional student experience, sustainable development, action on climate change and striving to remain an employer of choice, the University of Manitoba contracted Green Action Centre to plan, design and deliver a comprehensive commuting survey open to all students, faculty, employees and other non-University employees working at facilities on campus including SmartPark. Beyond establishing a baseline for how members of the University community currently travel to and from their primary campus and the associated emissions, the survey explores interest in a variety of options that, if available, would affect an individual’s decision how to travel to or between campuses and to meetings at off-campus sites.

The online survey went live January 18 and closed February 5, 2016, with the link circulated via email to all faculty and staff and through weekly e-news sent to students. Participating SmartPark tenants and Manitoba Agriculture, Food and Rural Development employees on Fort Garry Campus also received the link to circulate to their employees. A total of 295 hard copies of the questionnaire were provided, along with self-addressed, stamped envelopes, to groups without internet access, specifically Physical Plant employees and some Aramark staff.

To encourage participation in the survey, a communications and outreach plan was conducted jointly through the Office of Sustainability, Marketing and Communications Office and Green Action Centre. Students, employees, faculty and non-University employees were notified and reminded of the transportation survey through a variety of methods, including:

- Direct emails to University employees and faculty
- E-news stories in UM Today, Student Weeklies, and Week at a Glance
- Web banners and buttons on the University’s main page, departmental pages and mobile app
- Social media sharing
- Printed posters
- Outdoor coroplast signage
- UMFM PSAs
- Ad in two consecutive issues of The Manitoban
- Promotion at new staff training event
- Temporary outdoor snow stencils
- Posters on campus shuttle bus and on prominent parking meters
- Survey lounges on Bannatyne and Fort Garry campuses, complete with refreshments and opportunities to complete the survey on-site
- Distribution of 900 business cards with the survey’s online address
- Office of Sustainability’s eco-reps and staff champions
- Email to SmartPark tenants and MB Agricultural Services
This report presents a summary of the survey results, analysis and recommendations regarding which measures are most likely to be effective in supporting members of the University community to bike, bus, carpool or walk rather than drive alone to campus. The benefits of such a shift include reduced greenhouse gas (GHG) emissions, easing of parking pressures, improved health and well-being from active travel, and better air quality for all.

The results and recommendations can be used to set targets and design an action plan to reach those targets, help pinpoint where to spend time, energies and available funds to achieve the biggest impact, and contribute toward sustainability and well-being goals at the University of Manitoba. The data also serves as a benchmark against which future transportation survey results can be compared to help evaluate changes in travel behaviour and associated GHG emissions.
2. Context

The University of Manitoba offers a number of commuting-related policies, programs and supportive infrastructure.

Existing commuting-related resources and infrastructure include:

- Carpool.ca subscription - free, online ride-matching service for staff and students.
- Premium parking spots for carpoolers - 24 stalls for students/staff with permits for Lots U and Q.
- Parking permits that allow multiple vehicles on one permit.
- Moped and motorized scooter designated spots.
- Secure bike parking:
  - Fort Garry Bike Station - covered and enclosed for 100 bikes with card-lock system; 24/7 public bike repair station located outside.
  - Bannatyne Bike Station - enclosed bike parking plus 24/7 public bike repair station outside main entrance to the Brodie Centre.
- Shower-only access at Max Bell Centre on Fort Garry campus for faculty and staff; students receive an active living pass as part of their tuition. Additional showers exist in Physical Plant, ARTLab, and Education with varied access. On Bannatyne campus, students receive an active living pass for Joe Doupe Centre as part of their tuition.
- UMSU Bike Dungeon on Fort Garry Campus – student-operated, community bike shop providing repairs but primarily teaching students how to maintain their own bikes. Collaborates with Physical Plant and Security Services to refurbish or salvage parts and bikes abandoned on campus for the use and benefit of the entire University community.
- Fort Garry Shuttle Bus provides transit service around the campus on weekdays from September to April.
- Safewalk Program and Bike Unit.

Other programs – flexible or staggered hours, compressed workweek or telecommuting options – are subject to managerial or departmental discretion and can vary by union agreement. The operating unions at the University include:

- UMFA (University of Manitoba Faculty Association)
- AESES (Association of Employees Supporting Education Services)
- CAW Local 3007 (National Automobile, Aerospace, Transportation, and General Workers Union of Canada representing workers in the areas of food services, grounds, caretaking, skilled trades and engineers)
- CUPE 3909 (Canadian Union of Public Employees representing student and sessional academic workers)
- CUPE Local 1482 (Canadian Union of Public Employees representing all employees in the Faculty of Engineering employed as technical and clerical employees with exceptions)

Pending initiatives include:

- Introduction of a U-Pass (universal bus pass) for students in September 2016. Winnipeg Transit will be adding drivers and buses to accommodate the anticipated increase in ridership.
- Development of the Southwood Lands adjacent to the Fort Garry campus.
- Construction of the Southwest Rapid Transit Corridor (Stage 2) with a station located at Investors Group Field and adjacent facilities for walking and cycling that connect with the Fort Garry campus.
3. Survey Responses

A total of 4,384 responses were received including 40 hard copy responses. Given an estimated University community of 40,000, this represents an approximate 11% response rate overall. Figure 1 below shows the breakdown of respondents by affiliation and by their primary campus. ‘Other’ represents respondents who: did not choose their primary campus on the hard copy of the survey, those who chose ‘Other’ on the online survey, and those who attend William Norrie Campus. We received a number of comments regarding the absence of St. Boniface as a campus location, with some of these respondents likely choosing other as a result.

A. Commuting to and from Campus

The primary purpose of the survey was to establish how members of the University of Manitoba community – including students, employees, faculty, and non-University employees – travel to and from their primary campus. In this section we present aggregate numbers for all respondents as well as by affiliation and by campus. Summary profiles for the two main campuses, Fort Garry and Bannatyne, are included in Appendix A and B.

Mode Share

The mode shares presented below represent the percentage of overall trips made by a given mode and based on the number of days the respondent travels to their primary campus. To capture multiple modes, respondents could specify within the given time frame (either September to April or May to August) what percentage of trips they typically made by each mode and how many days per week they travel to their primary campus. Note that ‘Other’ includes Handi-Transit/taxi, scooter/moped and motorcycle.
As shown in Figure 2, less than half of the respondents drive alone to their primary campus. There is a shift in the spring/summer mode shares when the percentage of biking to campus almost triples, and carpooling and transit usage decrease while driving alone increases slightly.

**Figure 2: Seasonal Mode Share for all respondents**
By Affiliation

There is an unmistakable disparity in mode shares among the various types of respondents as shown in Figure 3 below, with students primarily choosing transit to travel to their primary campus and non-University employees primarily driving alone.

By Campus

The mode shares for all respondents from Fort Garry and Bannatyne campuses, shown below in Figure 4, mirror mode shares for the University campus as a whole with a few exceptions. First, Bannatyne Campus has a 5% higher mode share for drive alone, mostly reflected in the slightly lower transit mode share. Second, there is no shift in drive alone mode for Bannatyne Campus in the spring/summer period, with reductions in carpooling and transit mode shares feeding into the tripling of biking trips.
SmartPark respondents differ significantly with drive alone representing more than three-quarters of the mode share with a slight decrease in spring and summer with the tripling of biking trips (see Figure 5).

<table>
<thead>
<tr>
<th>Mode</th>
<th>Sept-Apr [n=262]</th>
<th>May-Aug [n=251]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>76.6%</td>
<td>71.3%</td>
</tr>
<tr>
<td>Bike</td>
<td>2.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Carpool</td>
<td>7.2%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Transit</td>
<td>10.5%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Walk</td>
<td>2.0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Park &amp; Ride</td>
<td>0.8%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Other</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

**Figure 5: Seasonal Mode Share, SmartPark**

By Student Age Group

There is a noticeable shift in the modes used by students as they age, as shown in Figures 6 and 7. (Note that ‘Other’ represents Handi-transit/taxi, scooter/moped and motorcycle.) Interestingly, while transit mode share is dominant in the youngest group category (16-19), it contracts, along with carpooling, through the next two age groups (20-21 and 22-24) while the drive alone mode share expands. This reverses in the 25-29 age groups with transit mode share increasing to almost 50% and bike mode share rebounding to exceed that of the youngest group. But then the transit mode share begins to contract again after age 30 and is cut in half by 40+ years of age. Essentially the transit mode share and drive alone mode share reverse numbers between respondents in their 30s and those 40+. Meanwhile the bike mode share climbs steadily as the respondents age, growing from 4.7% in the 16-19 age group to 19.2% for the 40+ age group.

**Figure 6: Student Respondents by Age Category [n=1718]**

- 16-19: 15.7%
- 20-21: 23.2%
- 22-24: 29.1%
- 25-29: 20.0%
- 30-39: 9.4%
- 40+: 2.6%
Mode Share: 16-19 year olds
- Drive Alone: 45.1%
- Bike: 4.7%
- Carpool: 20.8%
- Transit: 18.7%
- Walk: 7.4%
- Park&Ride: 0.1%
- Other: 3.2%

Mode Share: 20-21 year olds
- Drive Alone: 40.4%
- Bike: 3.7%
- Carpool: 16.5%
- Transit: 14.3%
- Walk: 6.5%
- Park&Ride: 2.5%
- Other: 0.3%

Mode Share: 22-24 year olds
- Drive Alone: 29.9%
- Bike: 7.3%
- Carpool: 14.3%
- Transit: 38.3%
- Walk: 7.4%
- Park&Ride: 2.5%
- Other: 0.3%

Mode Share: 25-29 year olds
- Drive Alone: 49.5%
- Bike: 9.3%
- Carpool: 23.3%
- Transit: 10.5%
- Walk: 6.2%
- Park&Ride: 0.8%
- Other: 0.4%

Mode Share: 30-39 year olds
- Drive Alone: 41.1%
- Bike: 10.8%
- Carpool: 13.2%
- Transit: 10.3%
- Walk: 22.8%
- Park&Ride: 0.0%
- Other: 0.0%

Mode Share: 40+ year olds
- Drive Alone: 40.9%
- Bike: 12.7%
- Carpool: 21.3%
- Transit: 4.6%
- Walk: 19.0%
- Park&Ride: 1.4%
- Other: 0.0%

Figure 7: Mode shares by age categories
B. Respondent Postal Code Heat Map

Survey respondents were asked to enter the local postal code from which they commute most often. Figure 8 contains a heat map of approximate home locations of respondents, which can be used to identify potential carpooling hotspots and park & ride needs for those travelling longer distances. Many of the survey respondents reside in the neighbourhoods of River Heights, Wolseley, Osborne, and Fort Garry.

The map also shows the broad geographic range from which University community members commute. Beyond the perimeter, individuals are commuting from as far away as Steinbach to the south and Selkirk to the North, creating an opportunity to encourage carpooling among University members living in communities outside Winnipeg.

Figure 8: Heat map of respondents’ home postal codes, Winnipeg and surrounding areas
C. Number Adults in Carpool

It is clear from Figure 9 that the vast majority of carpools travelling to University of Manitoba campuses comprise 2 adults.

![Diagram showing number of adults per carpool vehicle](image)

**Figure 9: Number of Adults per Vehicle in Carpool Vehicles**

D. Perception of Mode Share

There is a general perception (perhaps based on the number of surface parking lots visible as one enters the Fort Garry campus) that the vast majority of those travelling to the University of Manitoba drive alone. However, previous estimates, and now this survey, confirm this is not the case.

To determine whether perceptions are catching up with reality, respondents were asked whether they thought 15%, 30%, 45% or 60% of those commuting to the Fort Garry Campus got there by bus, carpool, bike or other active means. The correct answer, based on previous estimates, was 60%, however, only 35% of respondents chose that number. This shows the perception persists, with the most respondents continuing to believe that the majority drive alone to the Fort Garry Campus, as shown in Figure 10.

![Bar chart showing perception of mode share](image)

**Figure 10: Perception of Mode Share to Fort Garry Campus**

(What percentage arrive by bus, carpool, bike or other active means - 15%, 30%, 45% or 65%)
E. Preferred or ‘Ideal’ Commute Mode

While establishing a baseline of the current modes used by University community members is important, it does not tell the whole story. The fact that someone drives alone to their primary campus does not necessarily mean that driving is how they want to commute. To explore the idea further, respondents were asked the following: “Under ideal circumstances, how would you prefer to commute to and from campus/work.” Respondents were allowed to choose up to two modes, recognizing there can be seasonal differences in how people prefer to commute. Figures 11 and 12 reflect the ideal modes of respondents from Fort Garry and Bannatyne, respectively.

Of most interest are the responses from those who currently drive alone to campus and what their preferred mode would be under ‘ideal circumstances’. This group represent an opportunity to switch some or more of their trips to an active or green mode of transportation, and reduce their associated commuting GHG emissions.

The four charts in Figure 13 include only those respondents who indicated they drive alone for at least 20% and up to 100% of their typical commute to campus in the September to April timeframe. Again, note that respondents could chose up to two different modes for their preferred or ‘ideal’ commute.

As shown in Figure 13, only one-quarter of students who currently drive alone to campus indicate this is their preferred mode, or one of their two preferred modes. The greatest interest by far is in biking to campus, followed by carpooling.

About half of faculty respondents who currently drive alone chose driving as their preferred mode, or at least one of two. Again there is particularly strong interest in biking to campus and also in transit.
University employees who responded they currently drive 20% or up to 100% of their commute also showed good interest in biking as well as carpooling, as shown in Figure 13. Less than one-third of employees chose driving alone as their preferred mode or one of their two preferred modes.

Non-university employees, who represent the highest drive alone mode share overall, are least likely to prefer a mode other than driving as shown in Figure 13. Notably though, this group of respondents also showed the most interest in biking as one of their preferred modes.

**Figure 13: Ideal mode of students, employees, faculty and non-University employees who drive 20-100% of trips**
4. On-campus Travel Between Buildings

Respondents were asked how they get from building to building once on campus, choosing all modes that apply. Not surprisingly, almost all respondents (89.9%) indicated they only walk for these trips. A few also drive alone (4%), take a campus shuttle (3%), bike (2%), use regular transit (1.6%), or carpool (1.3%). [n=4,384]
5. Commuting Emissions

The emissions associated with the commute to and from campus is summarized by mode in Table 1. This includes carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O) for the September to April and May to August timeframes, and for the year-round total.

<table>
<thead>
<tr>
<th></th>
<th>All Respondents</th>
<th>Drive Alone</th>
<th>Carpool</th>
<th>Transit</th>
<th>Park &amp; Ride</th>
<th>Handi-Transit / Taxi</th>
<th>Motorcycle</th>
<th>Scooter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2 Sept-Apr</td>
<td>1944.8190</td>
<td>257.7106</td>
<td>150.7427</td>
<td>28.6609</td>
<td>1.4681</td>
<td>1.1085</td>
<td>0.1888</td>
<td></td>
<td>2384.6986</td>
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<tr>
<td>CO2 May-Aug</td>
<td>787.1849</td>
<td>60.5061</td>
<td>40.7968</td>
<td>4.7779</td>
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<td>2.1651</td>
<td>0.4357</td>
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<td>CO2 Year-round</td>
<td>2732.0039</td>
<td>318.2167</td>
<td>191.5395</td>
<td>33.4388</td>
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<td>N2O May-Aug</td>
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<td>N2O Year-round</td>
<td>0.0260</td>
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<td>0</td>
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</tr>
</tbody>
</table>
Per person average CO2, CH4 and N2O emissions are shown in Table 2, along with their respective upper and lower confidence intervals and margin of error. The margin of error ranged from +/- 3.5 to 4.5, and emissions are shown in kgs rather than tonnes. Note that the number of respondents for the calculation of commuting emissions is fewer [n=3,912] than the number of overall survey responses due to incorrect or incomplete postal codes, which meant the distance of their commute could not be identified. While these survey responses could not be included in the calculation of emissions, the remainder of their data has been included.

Table 3 contains the extrapolated emissions estimates for the entire University community of 40,000 individuals. Upper and lower confidence intervals and margins of error are also shown. As in Table 2, the margin of error ranged from +/-3.5 to 4.5, and emissions are shown in kgs rather than tonnes.
The percentage CO2 emissions associated with the commute choice by all respondents is shown below in Figure 14, broken down by the September to April and May to August timeframes.

**Figure 14: Mode share and CO2 emissions for all respondents, September to April and May to August**
A. By affiliation and mode

Figure 15 compares the response rate by affiliation (students, faculty, University employees and non-University employees) with their year-round associated contribution to commuting emissions as a group. So while students represent 39.3% of overall respondents, they represent only 26.1% of overall commuting emissions by respondents. Similarly, faculty respondents represent 16.3% of overall respondents yet contribute 12.1% to overall commuting emissions.

**Table 4: Year-round CO2 emissions by affiliation**

<table>
<thead>
<tr>
<th>CO2 Emissions (Tonnes) Year-round</th>
<th>Drive Alone</th>
<th>Carpool</th>
<th>Transit</th>
<th>Park &amp; Ride</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>341.7</td>
<td>34.2</td>
<td>18.5</td>
<td>0.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Non-university Employees</td>
<td>482.9</td>
<td>24.2</td>
<td>7.6</td>
<td>1.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Students</td>
<td>587.5</td>
<td>135.7</td>
<td>102.4</td>
<td>29.2</td>
<td>1.4</td>
</tr>
<tr>
<td>University Employees</td>
<td>1319.8</td>
<td>124.1</td>
<td>63.0</td>
<td>2.7</td>
<td>2.9</td>
</tr>
</tbody>
</table>

**Figure 15: Response rate and emissions by affiliation**
B. By campus

The year-round CO2 emissions associated with the commute for all respondents to the Bannatyne and Fort Garry campuses and to SmartPark are listed below in Table 5. The emissions contribution of each mode by location is shown in Figure 16.

<table>
<thead>
<tr>
<th>Location</th>
<th>Drive Alone</th>
<th>Carpool</th>
<th>Transit</th>
<th>Park &amp; Ride</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bannatyne Campus</td>
<td>458.3</td>
<td>56.7</td>
<td>28.5</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Fort Garry Campus</td>
<td>1888.3</td>
<td>243.0</td>
<td>157.6</td>
<td>30.1</td>
<td>4.7</td>
</tr>
<tr>
<td>SmartPark</td>
<td>381.0</td>
<td>18.1</td>
<td>5.4</td>
<td>2.3</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Table 5: Year-round CO2 Emissions by Campus

Figure 16: Year-round CO2 emissions by mode and location
6. Parking Locations

Figure 17 shows where commuters to campus currently park, with the majority using monthly permits for campus parking at both Fort Garry and Bannatyne locations. Perhaps not surprisingly, is the higher percentage of respondents who use street parking at the Bannatyne campus given its proximity to adjacent residential neighbourhoods. This is less of an option at Fort Garry campus, which results in more use of casual parking on campus.

**Figure 17: Parking Locations by Campus**

<table>
<thead>
<tr>
<th>Campus</th>
<th>On-campus, monthly</th>
<th>On-Campus, casual</th>
<th>Drop-off</th>
<th>Commercial, monthly</th>
<th>Commercial, casual</th>
<th>Street</th>
<th>Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Garry</td>
<td>62%</td>
<td></td>
<td></td>
<td>21%</td>
<td>9%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Bannatyne</td>
<td>60%</td>
<td></td>
<td>5%</td>
<td>10%</td>
<td>7%</td>
<td>4%</td>
<td>11%</td>
</tr>
</tbody>
</table>
7. Arrival and Departure Times

To get a sense of when most people are commuting to and from campus, or perhaps more accurately to confirm that the peak arrival and departure times are the same across the board, respondents were asked to indicate what times they typically arrive and depart from campus/work. As shown in Figure 18 below, there is an influx of students, faculty, employees and non-University employees arriving and departing within the same two-hour period. Arrivals primarily occur between 7 and 11 a.m., peaking at 9 a.m. Departures are a little more spread out from 3 to 7 p.m., peaking at 5 p.m.
8. Inter-campus Commuting

In addition to establishing the current commuting patterns to respondents’ primary campus or work location, the survey questionnaire explored the modes used and number of weekly trips for those who travel between campuses or SmartPark. A total of 417 respondents completed this section, indicating that they travel one or more times per week between campuses or SmartPark.

A. Frequency of Trips

Of the total number of reported weekly round-trips between campuses, almost half (49.7%) are made between SmartPark and Fort Garry Campus. This is followed closely by trips between Fort Garry and Bannatyne campuses at 46.2%. Figure 19 summarizes weekly travel between campuses.

B. Mode Share

Respondents were asked to identify the primary mode they use for trips between campuses or SmartPark. Figure 20 shows the wide variety of modes with the most frequent including drive alone (38%), transit (28%) and walking (25%).

![Mode share: Inter-campus Trips](image)
C. Estimated Emissions

The following CO2 emissions are a rough approximation based on known distances and estimated average number of round-trips made per week. Year-round emissions are shown for all respondents and for all campuses in Table 6 and broken down by trips between specific locations in Table 7.

**TABLE 6: ESTIMATED CO2 EMISSIONS FROM INTER-CAMPUS TRAVEL**

<table>
<thead>
<tr>
<th>Inter-campus Travel (Tonnes)</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>All affiliations, all campuses, year-round</td>
<td>78.53</td>
</tr>
</tbody>
</table>

**TABLE 7: ESTIMATED CO2 EMISSIONS FROM INTER-CAMPUS TRAVEL BY JOURNEY**

<table>
<thead>
<tr>
<th>Emissions by Journey (Tonnes)</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bannatyne - Fort Garry</td>
<td>62.5</td>
</tr>
<tr>
<td>Fort Garry - SmartPark</td>
<td>7.1</td>
</tr>
<tr>
<td>Fort Garry - Glenlea</td>
<td>1.7</td>
</tr>
<tr>
<td>Fort Garry - Ian Morrison</td>
<td>4.8</td>
</tr>
<tr>
<td>Fort Garry - William Norrie</td>
<td>2.0</td>
</tr>
</tbody>
</table>

As shown in Figure 21, although the number of trips between Fort Garry and SmartPark represent almost half of all inter-campus trips, they represent only 9% of the associated emissions due to the shorter distances involved. The trips between Bannatyne and Fort Garry campuses and between Fort Garry Campus and Glenlea Research Station represent significantly higher contributions to emissions due to the longer travel distance.

**FIGURE 21: CO2 EMISSIONS AND PERCENTAGE OF INTER-CAMPUS TRIPS**
D. Interest in Bikesharing or Carsharing

The University of Manitoba does not currently offer bikesharing or carsharing on campus. Given the shorter distances, bikesharing could be a potential option for travel around Fort Garry campus or between the core campus and SmartPark while carsharing could be well-suited for the longer trips between Fort Garry and Bannatyne campuses.

To explore potential interest, respondents were asked if they would consider using either bikesharing or carsharing for inter-campus trips. There is some challenge in asking about these options, due to a lack of familiarity or experience with such programs by respondents. The results are shown in Figures 22 and 23.
9. Commuting to Non-campus Sites

A total of 559 respondents completed this section, indicating that they travel one or more times per week from campus to non-campus sites.

A. Frequency of Trips

Table 8 outlines the number of estimated trips made per week by the 559 respondents who indicated they travel from campus or SmartPark one or more times per week to non-campus sites for school- or work-related reasons.

**Table 8: Frequency of Trips to Non-campus Sites**

<table>
<thead>
<tr>
<th>Trips to Non-campus Sites</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # trips per week</td>
<td>1256</td>
</tr>
<tr>
<td>Average # of trips per week</td>
<td>2.25</td>
</tr>
<tr>
<td>Average round-trip distance per trip</td>
<td>9.48</td>
</tr>
<tr>
<td>Total km/week</td>
<td>11912</td>
</tr>
</tbody>
</table>

B. Mode Share

Respondents were asked how they typically travel for these trips, with the majority indicating they drive alone (58%), take transit (25%) or carpool (10%) as shown in Figure 24.

**Figure 24: Travel mode used for non-campus trips**
C. Estimated Emissions

The estimated CO2 emissions for trips to non-campus sites are shown in Table 9. This is a rough approximation based on estimated distances and frequency of trips by respondents.

**Table 9: Estimated CO2 Emissions from Trips to Non-Campus Sites**

<table>
<thead>
<tr>
<th>Trips to Non-Campus Sites (Tonnes)</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>All affiliations, all campuses, year-round</td>
<td>186.1</td>
</tr>
</tbody>
</table>

D. Interest in Carsharing

As noted under Inter-campus Trips, the University of Manitoba does not currently offer carsharing on campus. Carsharing could be well-suited for trips between campus and non-campus sites. To explore potential interest, respondents were asked if they would consider using carshare vehicles for trips to non-campus sites. Again, there is some challenge in asking about this option, due to a lack of familiarity or experience with carsharing. The results are shown in Figure 25 below.
10. Influences on Commute Choice

Tables 10 and 11 explore how availability of a variety of potential options would affect respondents’ decision how to travel to or between campuses. While not all of these options are within the purview of the University, such as improvements to walking and cycling infrastructure leading to the Fort Garry or Bannatyne campuses, there may be opportunities to explore partnerships or exert influence to create the desired change.

A. Fort Garry Campus

Key areas of interest include improved walking and cycling infrastructure, increased frequency of and space on buses, discounted bus passes (EcoPass for faculty, employees and non-University employees; U-Pass for students), flexible parking permits, and affordable student housing close to campus. Note that only students were asked about affordable housing close to campus, and only faculty and university employees were asked about an Emergency Ride Home Program and bus tickets for work-day travel.

<table>
<thead>
<tr>
<th>TABLE 10: POTENTIAL INFRASTRUCTURE AND PROGRAM CHANGES AND THEIR INFLUENCE ON COMMUTE CHOICE TO FORT GARRY</th>
<th>[5 = VERY IMPORTANT; 1 = NOT IMPORTANT]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Garry [n=3193]</td>
<td>5</td>
</tr>
<tr>
<td>Secure bike parking</td>
<td>21%</td>
</tr>
<tr>
<td>On-campus bikeshare</td>
<td>13%</td>
</tr>
<tr>
<td>On-campus childcare</td>
<td>15%</td>
</tr>
<tr>
<td>Lockers</td>
<td>16%</td>
</tr>
<tr>
<td>Showers</td>
<td>15%</td>
</tr>
<tr>
<td>Improved cycling infrastructure</td>
<td>40%</td>
</tr>
<tr>
<td>Improved walking infrastructure</td>
<td>46%</td>
</tr>
<tr>
<td>Carshare vehicles</td>
<td>9%</td>
</tr>
<tr>
<td>Increased bus frequency, space</td>
<td>43%</td>
</tr>
<tr>
<td>Discounted bus pass</td>
<td>53%</td>
</tr>
<tr>
<td>Bus tickets for work-day travel</td>
<td>21%</td>
</tr>
<tr>
<td>Preferential parking for carpools</td>
<td>18%</td>
</tr>
<tr>
<td>Assistance finding a carpool partner</td>
<td>14%</td>
</tr>
<tr>
<td>Flexible parking permit</td>
<td>32%</td>
</tr>
<tr>
<td>Emergency Ride Home program</td>
<td>23%</td>
</tr>
<tr>
<td>Affordable student housing close to campus</td>
<td>38%</td>
</tr>
<tr>
<td>Parking for mopeds/scooters</td>
<td>5%</td>
</tr>
<tr>
<td>On-site workshops/presentations</td>
<td>8%</td>
</tr>
<tr>
<td>Access to resources</td>
<td>18%</td>
</tr>
<tr>
<td>Events and regular communication</td>
<td>11%</td>
</tr>
</tbody>
</table>
B. Bannatyne Campus

While improved walking and cycling infrastructure, increased frequency of and space on buses, discounted bus pass (EcoPass for faculty, employees and non-University employees; U-Pass for students), affordable student housing near to campus, and flexible parking permits were also identified as key to Bannatyne Campus respondents, they scored a number of other influences higher than Fort Garry Campus respondents. These include secure bike parking, bus tickets for work-day travel, and an Emergency Ride Home Program. Again, note that only students were asked about affordable housing close to campus, and only faculty and university employees were asked about an Emergency Ride Home Program and bus tickets for work-day travel.

<table>
<thead>
<tr>
<th>Potential Infrastructure and Program Changes</th>
<th>Bannatyne [n=734]</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure bike parking</td>
<td>26%</td>
<td>10%</td>
<td>8%</td>
<td>7%</td>
<td>23%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>On-campus bikeshare</td>
<td>10%</td>
<td>7%</td>
<td>12%</td>
<td>9%</td>
<td>34%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>On-campus childcare</td>
<td>19%</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
<td>19%</td>
<td>49%</td>
<td></td>
</tr>
<tr>
<td>Lockers</td>
<td>19%</td>
<td>12%</td>
<td>13%</td>
<td>6%</td>
<td>24%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Showers</td>
<td>19%</td>
<td>13%</td>
<td>14%</td>
<td>8%</td>
<td>23%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Improved cycling infrastructure</td>
<td>39%</td>
<td>12%</td>
<td>10%</td>
<td>4%</td>
<td>16%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Improved walking infrastructure</td>
<td>46%</td>
<td>18%</td>
<td>15%</td>
<td>5%</td>
<td>7%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Carshare vehicles</td>
<td>10%</td>
<td>9%</td>
<td>19%</td>
<td>11%</td>
<td>30%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Increased bus frequency, space</td>
<td>36%</td>
<td>17%</td>
<td>14%</td>
<td>6%</td>
<td>11%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Discounted bus pass</td>
<td>50%</td>
<td>13%</td>
<td>10%</td>
<td>3%</td>
<td>12%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Bus tickets for work-day travel</td>
<td>28%</td>
<td>13%</td>
<td>14%</td>
<td>6%</td>
<td>21%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Preferential parking for carpools</td>
<td>20%</td>
<td>15%</td>
<td>18%</td>
<td>10%</td>
<td>23%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Assistance finding a carpool partner</td>
<td>16%</td>
<td>14%</td>
<td>19%</td>
<td>9%</td>
<td>25%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Flexible parking permit</td>
<td>30%</td>
<td>17%</td>
<td>15%</td>
<td>7%</td>
<td>17%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Emergency Ride Home program</td>
<td>25%</td>
<td>13%</td>
<td>18%</td>
<td>8%</td>
<td>21%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Affordable student housing close to campus</td>
<td>32%</td>
<td>12%</td>
<td>13%</td>
<td>7%</td>
<td>17%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Parking for mopeds/scoters</td>
<td>6%</td>
<td>8%</td>
<td>12%</td>
<td>8%</td>
<td>31%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>On-site workshops/presentations</td>
<td>10%</td>
<td>11%</td>
<td>21%</td>
<td>15%</td>
<td>30%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Access to resources</td>
<td>19%</td>
<td>15%</td>
<td>22%</td>
<td>12%</td>
<td>22%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Events and regular communication</td>
<td>11%</td>
<td>14%</td>
<td>25%</td>
<td>14%</td>
<td>27%</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>
Figure 26: Commuting Influences Ranked as Important (4) or Very Important (5)
11. Awareness of Existing Resources

All respondents were asked about their awareness of a variety of existing resources and were asked to indicate all that apply. Those resources include:

- Safewalk Program and Bike Unit
- Multiple vehicle licences allowed on one parking permit
- Secure bike parking
- Transportation resources web page / maps
- Bike Dungeon at Fort Garry Campus
- Preferred parking spots for carpools
- 24-hour bike repair stations at Fort Garry and Bannatyne campuses
- Flexible scheduling in union agreement(s)
- Moped / motorized scooter parking areas
- Shower-only pass at Max Bell Centre
- Carpool.ca subscription (free online ride-matching service for University members)

As shown in Figure 27, the Safewalk Program and Bike Unit are the most well-known of all existing resources followed by the ability of have multiple vehicle licences on one parking permit, though even these are known by less than half the respondents (39% and 33% respectively). One-quarter of respondents indicated they were not aware of any of the resources listed.

As shown in Figure 27, the Safewalk Program and Bike Unit are the most well-known of all existing resources followed by the ability of have multiple vehicle licences on one parking permit, though even these are known by less than half the respondents (39% and 33% respectively). One-quarter of respondents indicated they were not aware of any of the resources listed.
A. By affiliation

Looking at the awareness of existing resources by affiliation in Figure 28 reveals specific information gaps and underscores an overall low awareness of what’s already available on campus. This was supported in the comments section by the number of respondents who expressed surprise at the availability of many of the resources listed. While demonstrating the challenge of communicating to such a large and diverse population, it shows a clear opportunity.

![Graph showing awareness of existing resources by affiliation](image)

**Figure 28: Awareness, by affiliation, of existing resources**