

Transportation and Parking Management Plan

Executive Summary

By Todd Litman
Victoria Transport Policy Institute



2009

Camosun College

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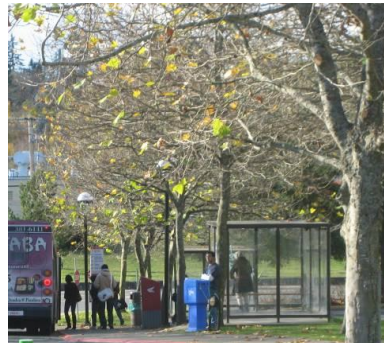
Executive Summary

Revised 2010

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For
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Summary

The Camosun College Transportation and Parking Management (TPM) Project includes a planning process to identify optimal solutions to campus transportation and parking problems. Through the TPM project, specific ways to improve transportation and parking management in order to create a more sustainable campus will be identified. The plan will be flexible and responsive to future demands and conditions. This TPM plan describes existing transportation and parking conditions, identifies current and future challenges, and recommends specific transportation and parking policies and management programs. The TPM Project will continue beyond this plan through the implementation phases. The full report is available on the Camosun web site: www.Camosun.ca/transportation



Introduction

The Camosun College Transportation and Parking Management (TPM) Project is developing a plan to improve campus transportation and parking. Camosun College is experiencing various transportation and parking problems. Improved management can help address these problems and achieve other planning objectives such as climate change emission reductions, creating a more sustainable campus. The plan will be flexible and responsive to future demands and conditions.

Current trends are changing travel demand (the amount and type of travel people want):

- Increased urbanization and local development are increasing traffic congestion on local roads, and therefore the value and feasibility of using space-efficient modes such as walking, ridesharing and public transit.
- Growing environmental concerns are justifying more support for energy efficient and space efficient modes to reduce pollution emissions and the need to pave more land.
- Growing health concerns are justifying more support for physically active modes such as walking and cycling, as a way for people to exercise while traveling.
- Rising construction costs are reducing the feasibility of expanding road and parking facilities. Structured and underground parking now costs \$25,000 to \$50,000 per space.
- Improved technologies can help improve alternative modes, for example, by providing real-time bus arrival information and increased feasibility of telework.
- Rising fuel prices and increasing consumer financial concerns are increasing demand for cost efficient modes such as walking, cycling, ridesharing, public transit and telework.

For evaluation purposes we have condensed these into the planning objectives defined in Table 1. This explicitly identifies the objectives to consider when evaluating potential transportation and parking improvement options in this study.

Table 1 Transport and Parking Planning Objectives

Planning Objective	Definition
Mode shift targets	Reduce automobile trips. Increase use of alternative modes.
Accessibility	Improve students, employees and visitors' access to Camosun facilities and services.
Service quality	Improve user convenience and comfort.
Traffic congestion	Reduce traffic congestion on local roads.
Parking convenience	Improve the convenience of parking at campus.
Transport affordability	Reduce transportation costs, particularly for lower-income users.
Mobility for non-drivers	Improve mobility options for non-drivers, including people with special needs.
Energy conservation and pollution reductions	Reduce per capita energy consumption and climate change emissions.
Land use	Reduce impervious surface and habitat loss. Accommodate planned campus development. Support regional smart growth goals.
Revenue needs	Provide funding for parking, transportation and other campus programs.

This table identifies the objectives used to evaluate potential transportation and parking improvement options in this study.

Current and Future Conditions

Camosun currently has approximately 8,000 students and 1,200 staff. Only modest growth of these numbers is expected for the foreseeable future. Student housing is planned at Interurban in the next five years which will displace some existing parking and add residential parking demand. The Health and Human Services program is planning to relocate from Lansdowne to the Interurban campus in the next five years.

Respondents to the 2008 Transportation and Parking (T&P) Survey were asked to indicate where they live. The largest single group is located in the Western Communities (Colwood and Langford), although most other respondents live in core communities (Oak Bay, Esquimalt, Saanich and Victoria). According to the Survey the majority of Camosun College commuters travel to campus by car (63%). Fewer students (58%) than faculty or staff (78% of each group) choose this mode. More than one-third of students (34%) travel by bus compared to 10% of staff and 7% of faculty. Faculty are more likely to bike (11%) than staff (5%) or students (3%). Many commuters use a combination of modes. Nearly half of respondents (45%) report they sometimes use another commute mode. Of respondents who use a secondary mode, their mean use is 5.65 times per month.

There is a significant amount of travel between the two Camosun campuses. The 2008 T&S Survey asked, “In a typical week, how many trips do you make between Camosun College's two campuses?” About 60% report no travel between campuses, but some people make numerous intercampus trips. The mean frequency is 1.2 trips per week. Of those trips, 73.5% are made by driving and 12% as a car passenger.

Many survey respondents indicate ability and willingness to change travel patterns if given suitable incentives and support. About 44% indicated that the 50¢ per litre fuel price increase (about \$1.00 for a typical 20 kilometer round-trip commute) during 2008 caused them to change their travel patterns including shifts to walking, cycling, ridesharing and public transit. This indicates that Camosun commuters are sensitive to travel costs.

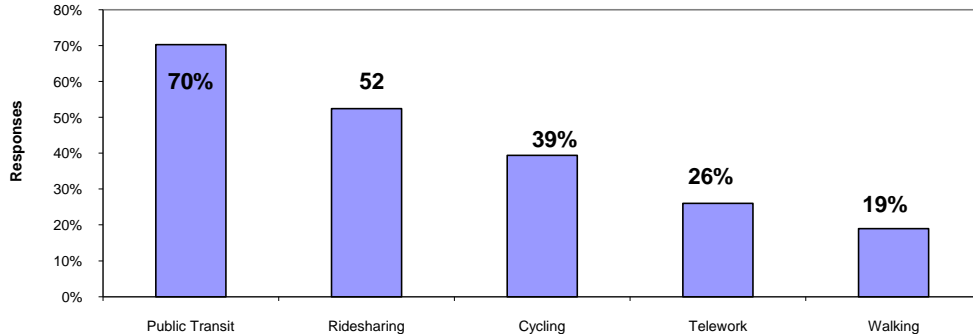
Table 2 **Willingness To Use Alternative Modes (Craig 2009)**

	Portion of Respondents	Mean Days Per Week	Mean Months Per Year
Public Transit	70%	4.10	NA
Ridesharing	52%	3.20	NA
Cycling	39%	2.78	6.57
Telework	26%	1.86	NA
Walking	19%	2.18	5.48

This table indicates the portion of respondents who would consider shifting to alternative modes and the days per week (and for walking and cycling, months per year) they would shift.

Table 2 indicates the portion of respondents indicating that they would consider shifting to alternative modes, and the number of days per week and months per year they would shift. Figure 1 illustrates the portion who would consider shifting commute mode. These indicate that most Camosun commuters would consider shifting from driving to alternative modes if given suitable support and incentives.

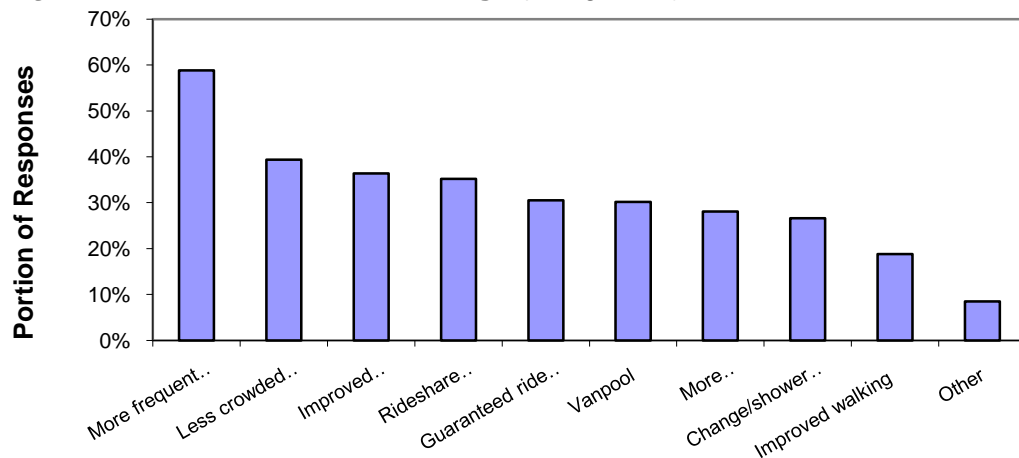
Figure 1 Portion of Respondents Willing To Use Alternative Modes (Schaefer 2009)



This graph illustrates the alternative modes respondents would consider using. Public transit, ridesharing and cycling rank first, second and third.

Respondents were asked, “What transportation improvements might motivate you to use alternative commute modes more frequently? (Check all that apply.)” The most common responses are, “More frequent transit service” (58.8%), “Less crowded/more comfortable buses” (39.4%), “Improved cycling paths” (36.4%), “Rideshare matching service” (35.2%), “Guaranteed ride home service” (30.5%), “Vanpool” (30.2%), “More comfortable/safer bus stops” (28.1%), “Improved change/shower facilities” (26.6%), and “Improved walking paths/sidewalks” (18.8%). Figure 2 summarizes these results.

Figure 2 Incentives For Change (Craig 2009)



This graph indicates responses to the question, “What transportation improvements might motivate you to use alternative commute modes more frequently”

Current Conditions By Mode

The following modes were described by current travel conditions to Camosun in the full report, using results of the (list the various) surveys and analysis. Questions addressed included: what is currently available, frequency of use, and constraints to use.

- Walking and Cycling
- Public Transit
- Ridesharing (Car- and Vanpooling)

Current Parking Passes, Regulations and Fees

Types of Parking Passes

The college issues various parking passes, which are listed below and described in the full report. There are currently no long-term (annual or term) parking passes available to general students.

- Hang tag employee parking passes
- Term employee parking passes
- User pay parking permits.
- Student motorcycle permits
- Staff motorcycle permits
- Special client parking passes
- Visitor passes
- Car pool permits
- Disability permits

Parking Fees

The following fees currently apply at Camosun parking facilities. Short term and daily parking is purchased using meters that take coins (\$0.25, \$1.00, \$2.00) and credit cards.

Table 3 College Parking Prices (Camosun 2008)

Type	Price
Short-term	\$0.50 per 20 minutes, \$1.50 per hour
Daily	\$2.00 for 4 hours, \$4.00 per day
Carpool parking	\$1.75 per day, \$8.75 per week
Weekly	\$16 for one week, \$32 for two weeks, \$48 for three weeks, \$64 for four weeks.
Motorcycle	\$10 per month or \$40 per semester
Disabled parking	\$120/semester (pro-rated for temporary disabilities or part-time attendance)

This table indicates the price of various parking passes.

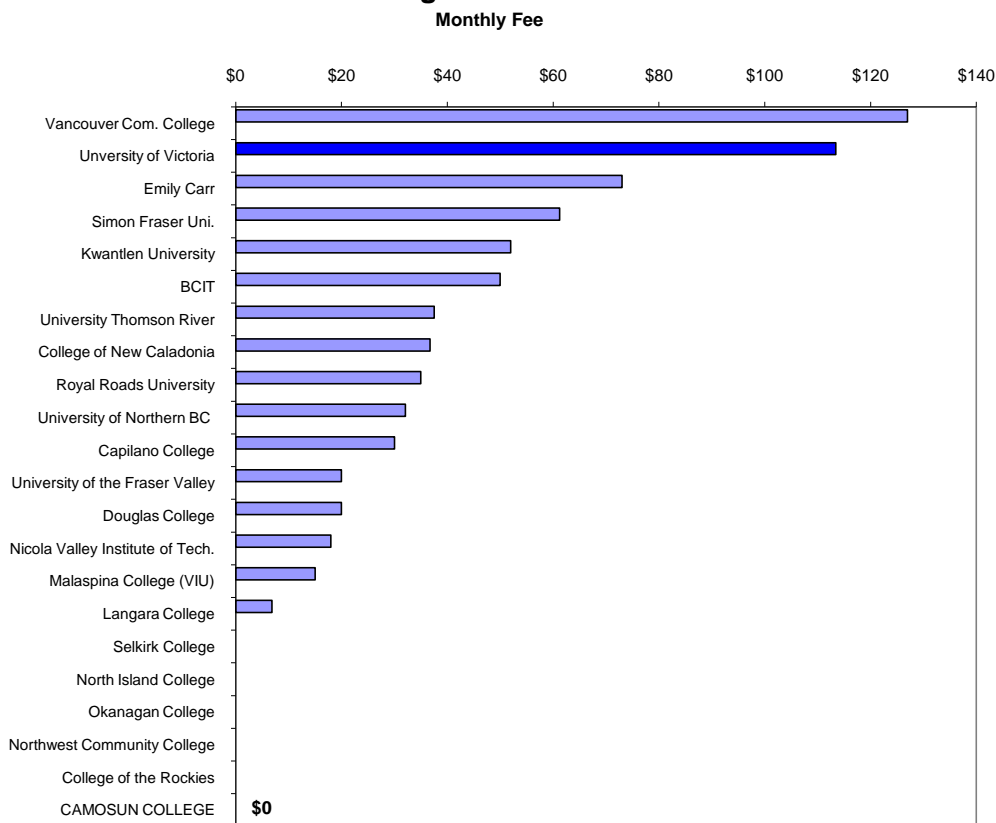
Comparison With Other Campuses

For this study the researchers surveyed transportation and parking policies at 23 British Columbia colleges and universities.

Parking Fees

Camosun is one of six institutions that provide free employee parking, and is the only one of these located in a major urban area, as illustrated in Figure 3.

Figure 3 Incentives For Change



The overall average rate for BC colleges and universities that charge for parking is \$5.20 for an 8 hour day. Camosun College currently charges \$4.00 per day, somewhat lower than the overall average and significantly lower than most other urban campuses, including the nearby University of Victoria which charges \$6.00 per day.

Parking Supply

This study also calculated the ratio of full-time equivalent (FTE) students to the number of general-use parking spaces for the 23 British Columbian colleges and universities. Camosun has a relatively low value (0.15) compared with other campuses, although may reflect the fact that many of these institutions have other activities besides teaching.

Recommendations Summary

Table 4 summarizes transportation and parking management recommendations. Refer to the full Plan for details on each of the recommendations.

Table 4 Recommendations Summary

Recommendation	Description
1. Change Management	Change how transportation and parking problems are defined and the range of solutions considered. Create new organizational relationships.
2. Transportation Management Program (TMP)	Establish a program within Ancillary Services responsible for transportation and parking management activities
3. Transportation Management Association (TMA)	Coordinate with other local organizations (UVic, municipal governments, businesses, etc.) to provide transportation and parking management services.
4. Improve transportation options	Work with BC Transit, local, regional and provincial governments to improve the quantity and quality of alternative modes
4.1 Public transit	Increase transit routes, service frequency and service hours. Improve user information, waiting areas and amenities such as onboard Internet access.
4.2 Ridesharing (carpooling and vanpooling)	Improve rideshare matching services, promotion efforts and incentives.
4.3 Walking conditions	Improve walking conditions on and around the campus. Insure <i>universal design</i> (facilities that accommodate all users).
4.4. Cycling conditions	Improve cycling conditions on and around campus, including paths, lanes, parking and support services.
4.5. Carsharing and taxi services	Insure that carsharing and taxi services are conveniently available on campuses.
4.6. Telework	Establish telework policies and support services.
4.7. Alternative schedules	Encourage alternative class and work schedules that reduce travel peaks.
4.8 Intercampus transport	Create programs
5. Parking management	Implement various parking management strategies.
5.1 Shared parking	Share parking facilities among users and buildings, including offsite parking as an overflow option.
5.2 Staff parking pricing and cash out	Eliminate or cash out free employee parking. Charge employees for parking and offer alternative benefits.
5.3 Parking price targets	Establish targets to increase parking fees, particularly during peak periods, to reduce problems and generate revenues for transportation programs.
5.4 Overflow parking plans	Establish overflow parking plans for special events.
5.5 Improve parking user information and enforcement	Provide better user information on parking and transportation options. Improve enforcement on campus, and of nearby spillover parking.
5.6 Parking pass rules and audits	Establish clearer rules concerning the allocation of free parking passes. Provide alternatives, such as free transit passes.
6. Smart growth development policies	Build compact development, particularly affordable housing, within or near existing campuses, including on existing parking lots.
7. Program evaluation	Perform ongoing evaluation to track problems, impacts and user satisfaction.

This table summarizes transportation and parking management recommendations.

Evaluation

Table 5 evaluates potential solutions to Camosun College transportation and parking problems in terms of various planning objectives. Expanding roadways helps reduce traffic congestion and therefore accessibility and service quality for motorists, but by increasing total traffic volumes tends to exacerbate other problems such as parking congestion, inadequate mobility for non-drivers (wider roads and higher traffic volumes and speeds degrade walking and cycling conditions), increasing funding requirements and increase total pollution emissions. Similarly, expanding parking supply increases parking convenience but by accommodating more total vehicle trips to campus tends to exacerbate other problems, including traffic congestion. Solutions that improve travel options and encourage use of alternative modes tend to provide more total benefits.

Table 5 Comprehensive Evaluation of Potential Solutions

Planning Objectives	Expand Roads	Expand Parking	Improve Walk/Cycle	Ride-share	Improve Transit	Parking Pricing	Market-ing
Mode shift targets	✘	✘	✓	✓	✓	✓	✓
Accessibility	✓		✓	✓	✓	✓	✓
Service quality	✓	✓	✓	✓	✓	✓	✓
Traffic congestion	✓	✘	✓	✓	✓	✓	✓
Parking convenience	✘	✓	✓	✓	✓	✘	✓
Transport affordability			✓	✓	✓	✘	✓
Mobility for non-drivers	✘	✘	✓	✓		✓	
Pollution reductions	✘	✘	✓	✓	✓	✓	✓
Impervious surface	✘	✘	✓	✓	✓	✓	✓
Revenue needs						✓	

(✓ = positive effects, ✘ = negative impacts)

This table indicates the impacts (benefits and costs) of potential solutions. Expanding roads and parking facilities tend to solve one problem but, by increasing total vehicle trips, exacerbate others. Solutions that improve travel options and encourage use of alternative modes tend to provide more total benefits.

Overcoming Obstacles

Any policy change faces obstacles, and changes to well established transportation and parking policies are likely to face a variety of objections. In particular, many employees are accustomed to commuting by automobile and will consider parking subsidy reductions financially burdensome and unfair. Similarly, some students will consider increased parking prices to be financially burdensome and unfair.

This resistance can be overcome by pointing out that subsidized parking:

- Is unfair since it favors motorists over people who use other commute modes.
- Causes parking and traffic problems (since it encourages automobile travel).
- Reduces commuter options. Employees are better off with more flexible subsidies that can be used for any mode.
- Increases transportation and parking problems. Parking subsidies and low parking prices increase transportation and parking congestion.
- Is exceptional. Camosun is the only urban college or university in British Columbia that offers free employee parking, and parking fees are significantly lower than most other urban campuses, including the nearby University of Victoria.
- Contradicts long term trends and strategic planning objectives.

Resistance to more rational parking prices can also be addressed by improving alternatives so students, staff and faculty can more easily reduce their automobile trips, and by providing targeted discounts for financially constrained commuters who depend on automobile travel. For example, students who qualify for certain need-based grants could be offered half-priced parking fees.

Conclusions

Camosun College faces various transportation and vehicle parking challenges, including rising traffic and parking congestion, rising transportation costs to students and staff, and limited land for campus development. It is impractical to expand local roadways or parking supply: there are currently no plans or funds for such projects, they would face considerable stakeholder opposition, they would take years to implement, and the added capacity would fill with generated traffic resulting in modest benefits.

This study indicates that per capita peak period trips and parking demand must be reduced 20-40% over the next decade to avoid severe traffic and parking problems and accommodate planned growth. Various trends (aging population, rising fuel prices, shifting consumer preferences, increasing environment and health concerns, etc.) and government policies (pedestrian and cycling plans, regional public transit improvements, fuel and road pricing, etc.) will help achieve these targets. However, Camosun College will need to change its policies and implement new programs to achieve these objectives.

No single strategy is sufficient. A variety of policies and programs will be needed to improve travel options and give commuters incentives to use more efficient modes. Improvement to public transit services, rideshare programs, cycling, walking and carsharing services, and special programs such as intercampus shuttles can help reduce trips. Achieving demand reduction targets will also require reforming the current policy of offering free employee parking and no comparable benefit for other commute modes. In addition, parking fees can be adjusted to increase efficiency, with higher fees at congested times and locations, and discounts at offpeak periods and less convenient locations.

Camosun College is already implementing some of these strategies but much more can be done. This report analyzes current conditions, defines problems, evaluates potential solutions and provides specific recommendations for improving transportation and parking. This lays the foundation for a specific action plan. Such a plan can be flexible and responsive – including some to be implemented immediately and others that should be deployed as needed to achieve specific targets and address future problems.

These policies and programs face various obstacles. These can be overcome by emphasizing the need for change and the positive benefits to individuals and the community that result.

For Additional Information

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