CITY OF LETHBRIDGE

Skatepark Master Plan

Final Document Issue 3/30/11

EXECUTIVE SUMMARY

Introduction:

Building upon the success of existing recreational opportunities within the city of Lethbridge, it is important and timely to take a closer look at the needs of youth and the variety of non-structured play, and sports available to local residents. Consistent with Canadian cities across the nation, many of Lethbridge's youth are engaging in non-structured athletic pursuits and 'action sports'. Commonly defined as wheeled sports relating to skateboarding, BMX'ing, and aggressive in-line skating, action sports are the fastest growing area of recreation across North America. These sports can be pursued on a variety of terrain, however, many urban action sports take place on hard surfaces either within sanctioned park facilities or within the urban landscape. This study examines skateboarding and related pursuits, that currently take place within the city, either on public streets and sidewalks, or within sanctioned park facilities. The report reviews the existing needs of action sports enthusiasts – and skateboarders in particular. It reviews how the current need is being met and what disparities exist within the city of Lethbridge's network of recreational facilities.

Context for Assessing the Need for Skateboard Parks

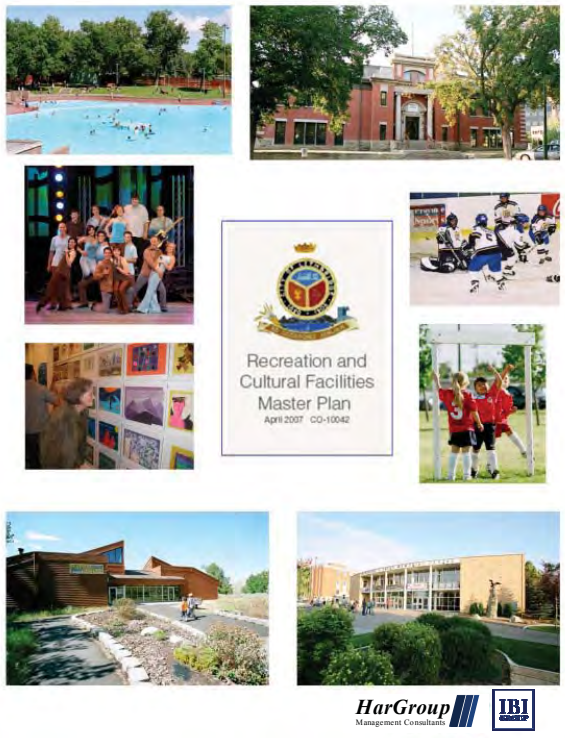


Figure E.1 Research and Cultural Facilities Master Plan

The issue of skateboard park facilities within the city of Lethbridge has been discussed for a number of years. In 2007, the Recreation and Cultural Facilities Master Plan (IBI Group & HarGroup Management Consultants), indicated that existing skateboard park facilities, located in north Lethbridge were very well used. The report went on to state, that although these facilities are well utilized, they are deemed to be the "least effective facilities serving the community". (pg120, IBI Group & Hargroup Management Consultants). This conclusion was based upon anecdotal feedback from residents who felt the location of the park created misconceptions about skateboarding, and encouraged mischief and vandalism. Since the publication of the Recreation and Cultural Facilities Plan, residents of Lethbridge with an interest in skateboarding, have solicited city officials for a more comprehensive needs assessment to determine the extent of skateboarding within the city, and related opportunities for skateboarders.

Establishing the Need

The consulting team was asked to review existing park infrastructure, examine the user group, and form an opinion on the current need for skateboarding facilities within the city. The consultants reviewed a number of sources to help determine the current need for skateboard parks and skateboarding opportunities within the city. Through an examination of statistics from a variety of local, national, and international sources (National Sporting Goods assoc., Alberta Recreational Survey, and Statistics Canada Census information), the consultants established a projected population of skateboarders within the city. In all, it was determined that a projected user group of approximately 1,100 skateboarders exists in the city of Lethbridge. This projection only includes youth within the age demographic of 5-19. It can be argued that a significant number of skateboarders are over the age of 19. However, for the purpose of this investigation only population statistics within this range were utilized to take advantage of existing survey data from the Alberta Recreational Survey 2008, and the National Sporting Goods Association Statistics 2009. This quantification of the user group, along with spatial considerations for active participation in the sport, helped determine a projected area (in m2), for accommodating the current user group.

Strategic Framework for Facility Development

Utilizing available statistical data and calculating the required, safe area for skateboarding for each participant, it was determined that a total of 3,620m2 (38, 963 square ft.) of skateable area is needed within the city of Lethbridge to meet the current need. This quantity of skateable space takes into consideration the current skateboard park, and also considers the fact that only 1/3rd of total projected participants within the user group will be active at any given time (notwithstanding special demonstrations/events). Utilizing this conservative 'filter' to determine how many skateboarders are active at any given time, it was determined that the city of Lethbridge should strive to accommodate a user group of 366 skateboarders within sanctioned facilities.

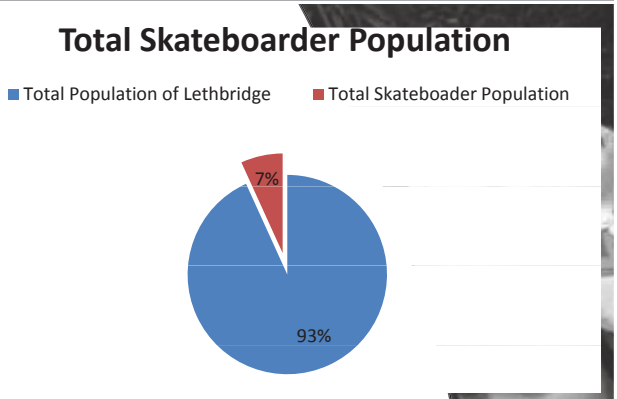


Figure E.2 Total Skateboarder Population

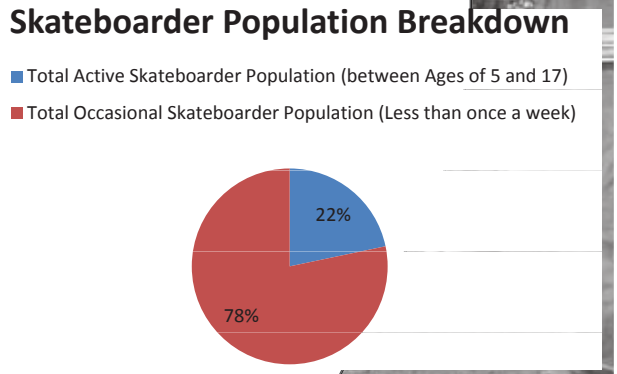


Figure E.3 Skateboarder Population Breakdown

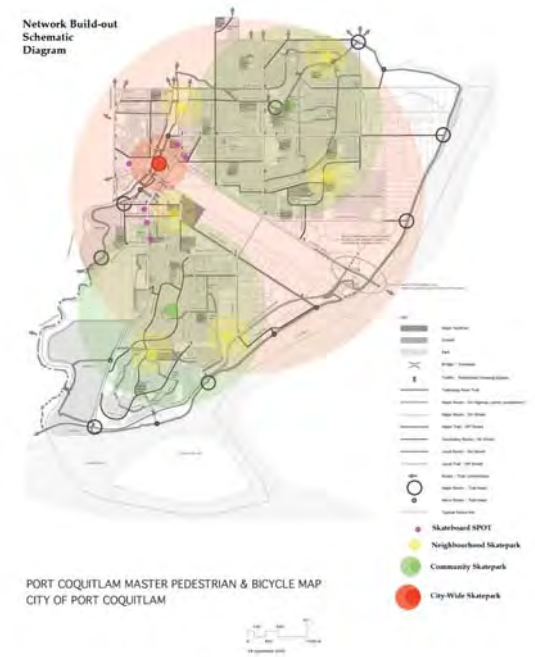


Figure E.4 Sample Network Build out from Port Coquitlam, BC

With approximately 1,500 m2 of existing skatepark terrain available for use in the city, there is a significant ' gap ' between the provision of park space and the current need. The Skatepark Master Plan (SPMP) estimates that the City of Lethbridge is providing for approximately 29% of the user group at this time. Future goals should consider the provision of additional skateboard park space within safe, and sanctioned parks facilities around the city.

Successful skatepark strategies must consider the dispersal of facilities, at a variety of scales, throughout the city. This strategic framework should review distinct communities, neighbourhoods, or geographic areas within the city and determine how best to link a series of skateboarding opportunities throughout the urban landscape. This linkage, or 'network' of opportunities for skateboarding can help to promote more compact, walkable communities, and encourage recreation in close proximity to one's home.

Overview of Recommendations

The city has a large population of skateboarders. Of the conservatively projected 1,100 participants in Lethbridge, approximately 33% may be considered active on any given day. To accommodate this need safely, the city would need to establish approximately 3,600m2 of total skateable terrain (39,000 square ft.). In considering how to provide this needed terrain, the city could develop one major facility of a regional or city-wide scale. It is the recommendation of the consulting group however, to break up the provision of skate terrain into a variety of skatepark options of varied scale, to create a skatepark network. Later in this report (section 3.1), various skatepark typologies will be discussed, along with size and other options.

The next step in establishing a working network of skateboarding opportunities in Lethbridge is to compile a list of potential city-owned sites or parks that could support a skateboard park facility. A site selection process must consider a variety of criteria related to development potential and probable costs. Other considerations include: planning and land-use criteria for the site and surrounding context, as well as supporting infrastructure, accessibility, and the more subjective "sense of place" or "spirit of place" for each potential site.

Any efforts placed on site selection must include a public process component. Once a list of potential sites is established, the public should be invited to pose questions, present concerns, and debate the merits of providing skateboard park facilities within various neighbourhoods. A successful masterplan and public process should encourage ownership and instil a sense of confidence in the public and city officials alike. Through an inclusive process future skatepark facilities have the greatest potential for success from both a user and operational standpoint.

Specific Recommendations

In our experience, the best solution for establishing a city-wide strategy for the accommodation of skateboarding, is to consider a 'network' of linked skateboard parks. Notwithstanding the strong recommendation for public process and careful site selection, the consulting team recommends the following actions to accommodate skateboarding in Lethbridge within the next 3-5 years (2011-2016):

1. Develop a large community skateboard park in South Lethbridge, to provide a skateboarding opportunity within closer proximity to users from this area of the city. Ensure that the South Lethbridge skateboard park is approximately 1,900 m2 (20,000 sq. ft.).

    a. Budget: $900,000 + design fees
    b. Timeline: ASAP

2. Develop a neighbourhood skateboard park in both east and west Lethbridge of approximately 900m2 (9,500 sq. ft.).

    a. Budget: $475,000+ design fees
    b. Timeline: 1-3 years

3. At the completion of priorities 1 and 2, the Lethbridge Recreation & Culture department may consider converting the existing North Lethbridge skatepark for BMX use. At this time, the need for supplemental and replacement square footage could be considered. It would be prudent at this point (potentially 2014 -2015), to review skateboarding trends and the effectiveness of the initial three new parks in alleviating the current and future need for skateboarding within the city. Should skateboarding be fully accommodated by the new facilities, replacement square footage for the conversion of the existing North Lethbridge skatepark, may be unnecessary.

The priority for skateboard park development should be the community facility for South Lethbridge. Current costing for new skateboard park terrain is averaging $45 per square ft. Or $480 per m2 ($45 per sq. ft.) + design fees. Costing can vary depending on site conditions, geotechnical information, as well as the anticipated extent or complexity of the skatepark design (costs derived from tendered skatepark projects since 2008).

Funding Capital Costs

The vast majority of municipal skateboard parks are funded by local tax-payers and municipal capital projects. However, in communities across Canada there are many instances where a community non-profit group, or service club, will provide partial funding for skatepark projects. Through 2010, a number of skateboard park projects were partially funded or wholly funded by federal grants or western diversification grant programs.

Through strategic planning, many communities are able to access a portion of funding for skatepark development through grants, community partnerships, or not-for-profit organizations. Often these partnerships lead to greater community ownership of the facility. It should be noted however, that in most cases, the municipal government must lead the project, hire consultants, and fund up to 75% of capital costs. Depending on the timeline for construction, these projects can be staged over a series of months or years. All fundraising campaigns for skatepark projects should be planned over a period of time – not to exceed 2-3 years. Any longer, and the community group, and local youth, can become disillusioned by the process. The most successful municipal skatepark projects are lead financially by the local government and supplemented for additional program elements (lights, coloured concrete, speciality features), by fundraising or donations.

Operational Cost Considerations

Operating costs for skateboard parks after construction, can vary depending on city policy towards graffiti removal and litter control. On average, for a community skateboard park, with a zero tolerance for graffiti – operation costs are approximately : $0.45 -$0.65 per square ft/per annum. Or $4.50 – 7.00 per square metre/per annum. These ‘order of magnitude’ estimates will provide revenue for removal of some graffiti, seasonal pressure washing of the surface, and litter removal. Costs can increase for municipalities that program skateparks for lessons, offer lighting to extend park use, or host city contests.

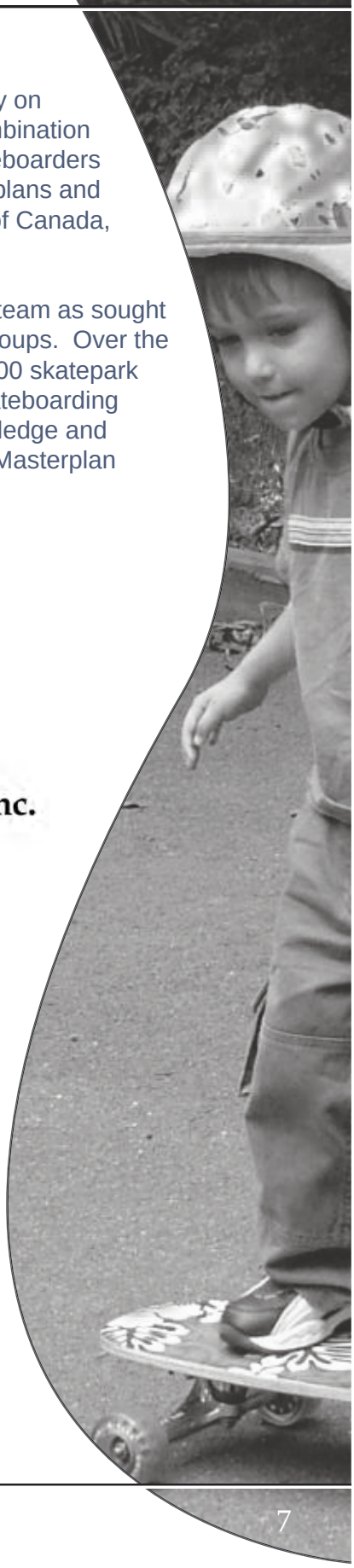
The Consulting Team

van der Zalm + associates and New Line skateparks have worked cooperatively on some of North America's most significant skateboard park facilities. With a combination of professional Landscape Architects, and planners, combined with active skateboarders and recreation enthusiasts, the consulting team has brought skatepark master plans and skateboard park facility development to communities in almost every province of Canada, around the United States, Europe, and Asia.

With the growth in action sports and skateboarding in particular, the consulting team as sought to fill the niche for professional planning and forecasting for action sport user groups. Over the past decade, the consulting team of VDZ and NLS have collaborated on over 200 skatepark specific projects world-wide. Despite the varied geography of our work, the skateboarding community has many consistencies cross culture, and cross region. This knowledge and experience helps to inform the overall framework for the Lethbridge Skatepark Masterplan (LSMP).

van der Zalm + associates
LANDSCAPE ARCHITECTURE
PARKS & RECREATION
URBAN DESIGN

New Line Skateparks Inc.



ACKNOWLEDGEMENTS

Working in partnerships with the Lethbridge Recreation and Culture and the local skateboarding community, this report builds upon the initial acknowledgements of the skateboarding community within the Recreation and Cultural Facilities Master Plan 2007 (IBI group and HarGroup management consultants). Thank you to all citizens of Lethbridge who participated in the public input and educational session held on the evening of March 1st at City Hall.

Table of Contents

INTRODUCTION
Chapter 1

Section 1:1: Introduction

As a growing community in southern Alberta, the City of Lethbridge has increasing demand for parks and open spaces. One key area of the recreational spectrum that has yet to be addressed fully is the action sports community. While the city currently does have one skatepark facility within its city limits, more will be needed in the near future to meet the current skateboarding population. With this in mind the City of Lethbridge commissioned van der Zalm + Associates along with New Line Skateparks to determine what are the current skate facility needs and how can they be achieved within the current Parks framework. This document will become the Lethbridge Skatepark Master Plan (LSMP) and will address the issue of meeting the current needs of the skateboarding user group.

The LSMP will develop a rationale for creation of spaces for skateboarding based upon current users within the city. Growth in the sport is expected to rise over the coming years, and a projection of increased users is helpful in establishing a target for overall skateable terrain; however, this document will focus on understanding the current needs of Lethbridge youth and extrapolate a reasonable square metre area of park space to accommodate this existing need.

This document will also discuss skatepark development typologies and maintenance and operational issues related to concrete skatepark development. There are a range of options available for meeting the needs of skateboarders in Lethbridge. This document will point out the varied scale options, and terrain styles that are predominantly used in communities around North America.

Section 1.2: Goals and Objectives

1. **The primary goal of the LSMP is to determine the spatial requirements for the action sports community within Lethbridge.**

2. Review existing conditions of skateparks in and around Lethbridge.

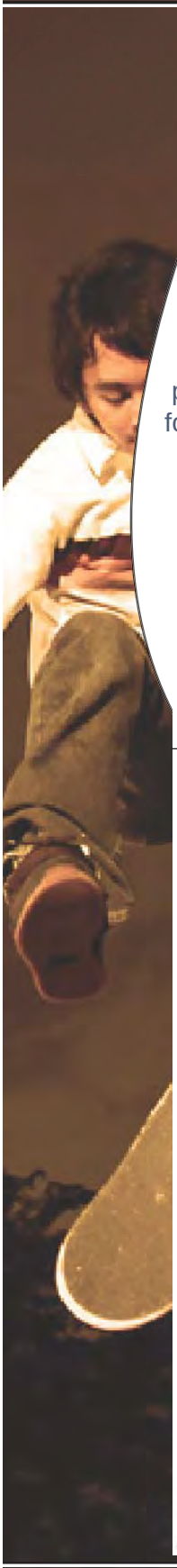
3. Provide information from several sources regarding the current amount of action sports users in Lethbridge, around Alberta, and throughout North America.

4. Suggest initial site criteria options (visibility, parking, neighbourhood impacts, noise, crime, trash and graffiti, etc.) for the selection of appropriate skatepark locations.

5. Promote skateboarding as a legitimate recreational activity within the City of Lethbridge.

6. Provide costing and funding advice for the different types of Skatepark facilities to assist City staff in on-going Capital and Operations budget.

7. Add skateboarding vibrancy to the City of Lethbridge while helping to build strong and healthy neighbourhoods.



Section 1.3: Limitations and Boundaries

The SPMP encompasses the physical area of the City of Lethbridge. Specifically, this area includes:

- Northern edge: 62nd Avenue North
- Eastern edge: 30th Street West
- Southern edge: Oldman River and 60th Avenue South
- Western edge: Research Center Road and Range Road 212

The recommendations provided by this report are based upon field review, extensive professional experience, and recreational surveys. Through this process an overall spatial need for skateboard park facilities was determined.

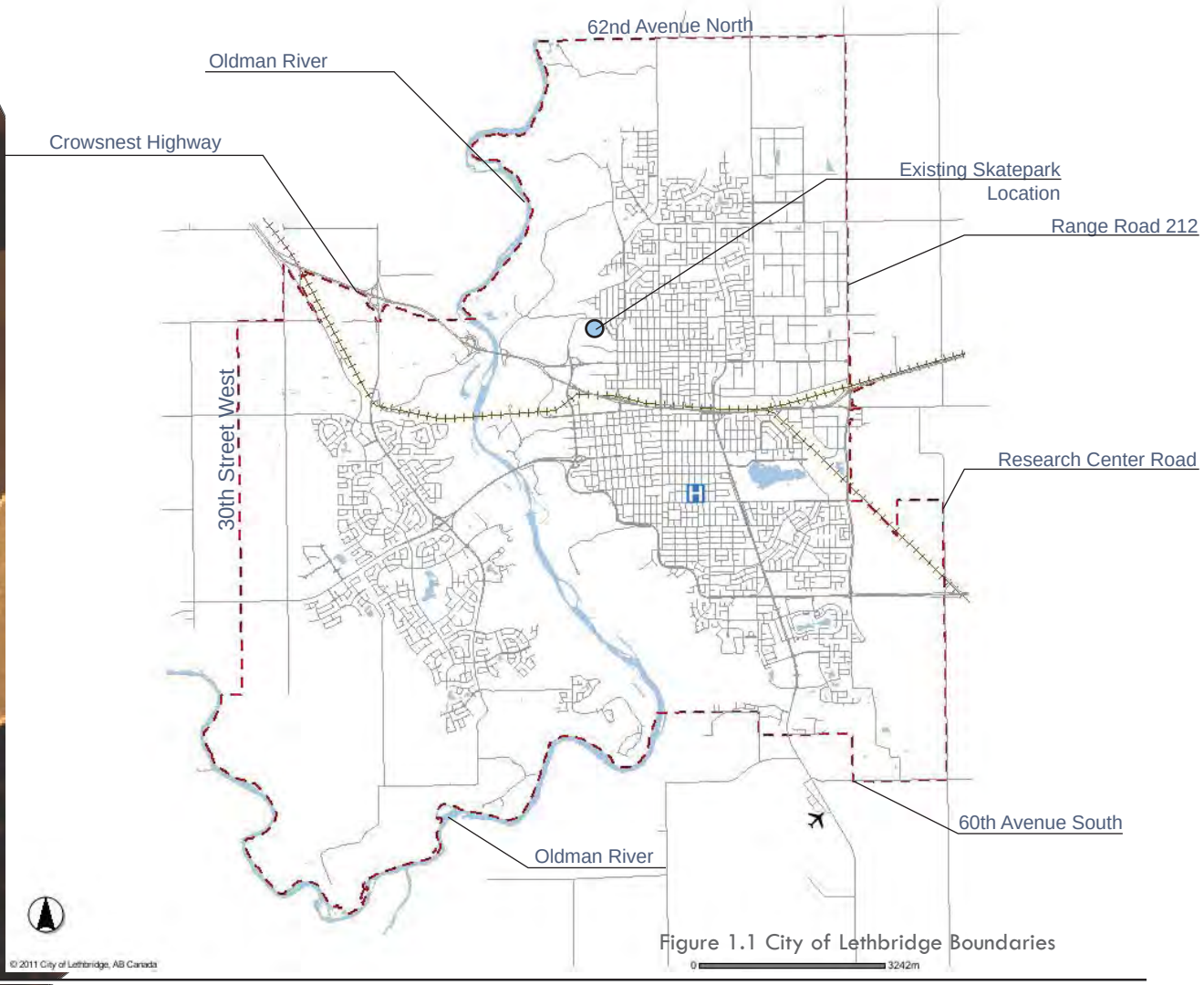


Figure 1.1 City of Lethbridge Boundaries

Section 1:3: Limitations and Boundaries

The recommendations provided by this report are based upon field review, extensive professional experience, and recreational surveys. Through this process an overall spatial need for skateboard park facilities was determined. Along with the physical limits of the City of Lethbridge, other limits include:

1. Extensive quantification of skateboarders in Lethbridge is limited to the Alberta Recreational Survey of 2008.*

* This study also averages participation rates from the National Sporting Goods Association statistics to arrive at a nationally reasonable projection of users within the city.

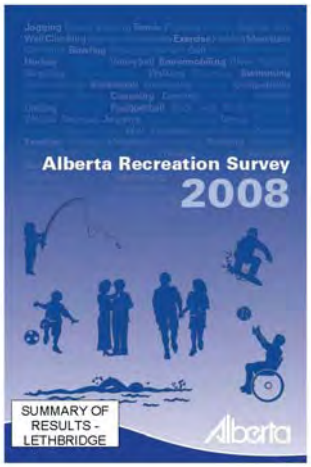
2. VDZ and NLS have extensive experience in communities around Canada and beyond. We confirm that national statistics, combined with the Alberta Recreational Survey of 2008 are indeed indicative of other communities in Canada of similar population.

3. Identification of specific sites for the development of skateboard park facilities is not part of this study.

UNDERSTANDING THE NEED

Chapter 2

Section 2.1: Determining a Population Percentage



To determine the portion of the population that currently participates in skateboarding, the consulting team referred to 2 reports: The Alberta Recreation Survey 2008 and the National Sporting Goods Association (NSGA), which is a United States organization.

The Alberta Recreation Survey 2008 determined the participation rate for skateboarding is 7.8% of households for the entire province of Alberta. The Alberta Recreation Survey does also have a Lethbridge specific skateboard percentage (6.8%), but with only 234 household respondents in a community of roughly 75,000 it is difficult to calculate the current community requirements. It was determined that the larger provincial percentages would reflect a more accurate percentage of the skateboarding user group. Therefore for the purpose of this document we will use the Alberta-wide percentage (seen below) of 7.8% of households over the total population of Alberta.

Q1. Please indicate the **NUMBER OF PEOPLE** in **your household** who took part in each of the following leisure or recreational activities during the **PAST 12 MONTHS**. In the last column, please indicate whether **YOU** personally took part in that activity.

Physical Activities

Activity	Participating Households		Participating Respondents		Participating Household Members
	Number	%	Number	%	Number
Aerobics/fitness/aquasize/yoga	1015	45.0	850	37.7	1715
Badminton	227	10.1	142	6.3	447
Bicycling	1088	48.3	944	41.9	2404
Figure skating	75	3.3	43	1.9	117
Gymnastics	159	7.1	48	2.1	242
Ice skating (not hockey)	527	23.4	426	18.9	1254
In-line skating	242	10.7	142	6.3	390
Jogging/running	755	33.5	619	27.5	1374
Martial arts (e.g., Judo, Karate)	121	5.4	62	2.8	171
Racquetball	58	2.6	39	1.7	86
Skateboarding	176	7.8	49	2.2	245
Squash	99	4.4	73	3.2	146
Swimming (e.g., in lakes, rivers, ponds)	852	37.8	783	34.7	2215
Swimming (in pools)	1062	47.1	912	40.5	2559
Table tennis	199	8.8	169	7.5	442
Tennis	261	11.6	197	8.7	509
Track and field	189	8.4	60	2.7	331
Walking for pleasure	1788	79.3	1834	81.4	3969
Wall climbing	217	9.6	123	5.5	367
Weight training	765	33.9	616	27.3	1148
Other physical activity	55	2.4	55	2.4	92

Figure 2.1 Alberta Recreation Survey 2008-Physical Activities

Section 2.1: Determining a Population Percentage

The second report we chose to review was the National Sporting Goods Association user rates. This document provides percentages based per user rather than per household. Why is this important? When calculating an overall percentage of users one needs to consider that some households have multiple skateboarders and in fact, this is typically the case as equipment, experience, and general enjoyment may be passed down through the family. It is for this purpose that we add the NSGA participation rates into our final percentage calculation.

2009 Participation - Ranked by Total Participation

Participated more than once (in millions)
Seven (7) years of age and older

Sport	Total	Sport	Total
Exercise Walking	93.4	Softball	11.8
Exercising with Equipment	57.2	Baseball	11.5
Camping (vacation/overnite)	50.9	Tennis	10.8
Swimming	50.2	Volleyball	10.7
Bowling	45.0	Football (tackle)	8.9
Workout at Club	38.3	Skateboarding	8.4
Bicycle Riding	38.1	Mountain Biking (off road)	8.4
Weight Lifting	34.5	Scooter Riding	8.1
Hiking	34.0	In-Line Roller Skating	7.9
Aerobic Exercising	33.1	Archery (target)	7.1
Fishing	32.9	Skiing (alpine)	7.0
Running/Jogging	32.2	Paintball Games	6.3
Billiards/Pool	28.2	Snowboarding	6.2
Basketball	24.4	Hunting w/Bow & Arrow	6.2
Boating, Motor/Power	24.0	Water Skiing	5.2
Golf	22.3	Target Shooting - Airgun	5.2
Target Shooting (net)	19.8	Kayaking	4.9
Hunting with Firearms	18.8	Gymnastics	3.9
Yoga	15.7	Muzzleloading	3.8
Soccer	13.6	Hockey (ice)	3.1
Table Tennis	13.3	Wrestling	3.0
Backpack/Wilderness Camp	12.3	Skiing (cross country)	1.7
Dart Throwing	12.2		

Figure 2.2 2009 Participation Rates from the National Sporting Goods Association

For simplicity and accuracy, **an 8.1% average participation rate**, from the Alberta Recreation Survey 2008 and the NSGA, will be used to determine number of skateboarders per community.

Section 2.2: Total Community Skate Terrain Required

Establishing a projected terrain to accommodate the skateboarding 'need' in Lethbridge is determined through statistical review and a calculation for safe user participation area. A conservative projection of necessary skateable square metres to accommodate the 'need' has been extrapolated. Subtracting existing terrain (see figure 2.4 on page 18) from the projected requirement provides the ultimate goal/figure for accommodating the current needs of Lethbridge Skateboarders.

Lethbridge City (Average)			
Age characteristics	**Total Pop**	**Participation Rate**	**Total Participants**
5 to 19 years	13,565	8.1%	1099
Canmore - Town (Average)			
Age characteristics	**Total Pop**	**Participation Rate**	**Total Participants**
5 to 19 years	2,055	8.1%	166
Medicine Hat - City (Average)			
Age characteristics	**Total Pop**	**Participation Rate**	**Total Participants**
5 to 19 years	10,760	8.1%	872
Brooks - City (Average)			
Age characteristics	**Total Pop**	**Participation Rate**	**Total Participants**
5 to 19 years	2,375	8.1%	192
Taber - Town (Average)			
Age characteristics	**Total Pop**	**Participation Rate**	**Total Participants**
5 to 19 years	1,735	8.1%	141

Figure 2.3 Lethbridge Population between 5 and 19 (from STATS CAN 2010)

In establishing the current number of skateboarders in Lethbridge, the consulting team utilized available statistical data. For the purposes of this study, only the 5-19 year old demographic was reviewed. It was determined that this age group is the most active for skateboarding and therefore will yield a conservative and accurate projection of current skateboarders in the community. Notwithstanding this assumption, It is clear that skateboarders in Lethbridge surpass this age limitation. It should be noted, that 39 of 43 respondents surveyed at an open house on March 1st, 2010, were older than this key demographic. This is over 90% of the open house attendees (see Figure 2.11 on page 23). Available statistics from STATS CAN, Alberta Recreation Survey 2008, and NSGA 2009 – provide consistent data for the 5-19 year old demographic and therefore, it was determined that this cohort reveals the most defensible projections for active users within the city.

Section 2.2: Total Community Skate Terrain Required

Utilizing available data, the consulting team assembled a table of projected total skateboarders in the city. Participation rates reveal a conservative estimate of participants that skateboard more than once per week. But will all users be active on any given day? Our answer to this hypothetical question is an unequivocal "no". There has been debate over how to establish a realistic percentage of use within the active participant population. The consulting team believes that predicting active participation from 33% or 1/3rd of the projected number of total skateboarders is a conservative and defensible projection. On a busy weekend day an average of 33% of the total user population will be skateboarding or bmx/inlining. This formula provides a total of 366 users on an average weekend day(assuming no special events or exhibitions).

City/Town	Active Skateboarders at any Given Time (1/3)	Current Skate Park Participant Capacity	Skateboarder Difference	Terrain per Skateboarder ($14m^2$/per Skateboarder)	Skate Park Size (m^2)
Lethbridge	366	106	260	14	3,642
Canmore	55	120	-65	14	-911
Medicine Hat	288	133	155	14	2,165
Brooks	63	86	-22	14	-311
Taber	46	86	-39	14	-551

Figure 2.4 Total Skate Terrain Required

Projecting 366 total users on any given day and subtracting the current park capacity of 106 users, leaves 260 skateboarders who are currently without a park or spot to skate formally. If we provide each of these disenfranchised skateboarders the minimum of 14 sq. mts. for safe participation, Lethbridge has a skatepark or skateable terrain deficit of 3,642 sq. mts. (39,202 sq').

Section 2.3: Calculating the Spatial Requirements for the Skateboard Community

Skaters share space by taking turns in an area. The area might be the lanes leading to and away from an obstacle or a bowl. (In skatepark designer parlance these are sometimes referred to as "rooms.") At its busiest a room might have 10 concurrent users.

Because only one skater may safely use the element or space at a time, the others stand by watching…"on deck"…waiting for their turn. This method of sharing space is rooted in 30 years of skateboarding behaviour and is an intuitive part of almost every skateboarder's approach to skating with others.

Section 2.3: Calculating the Spatial Requirements for the Skateboard Community

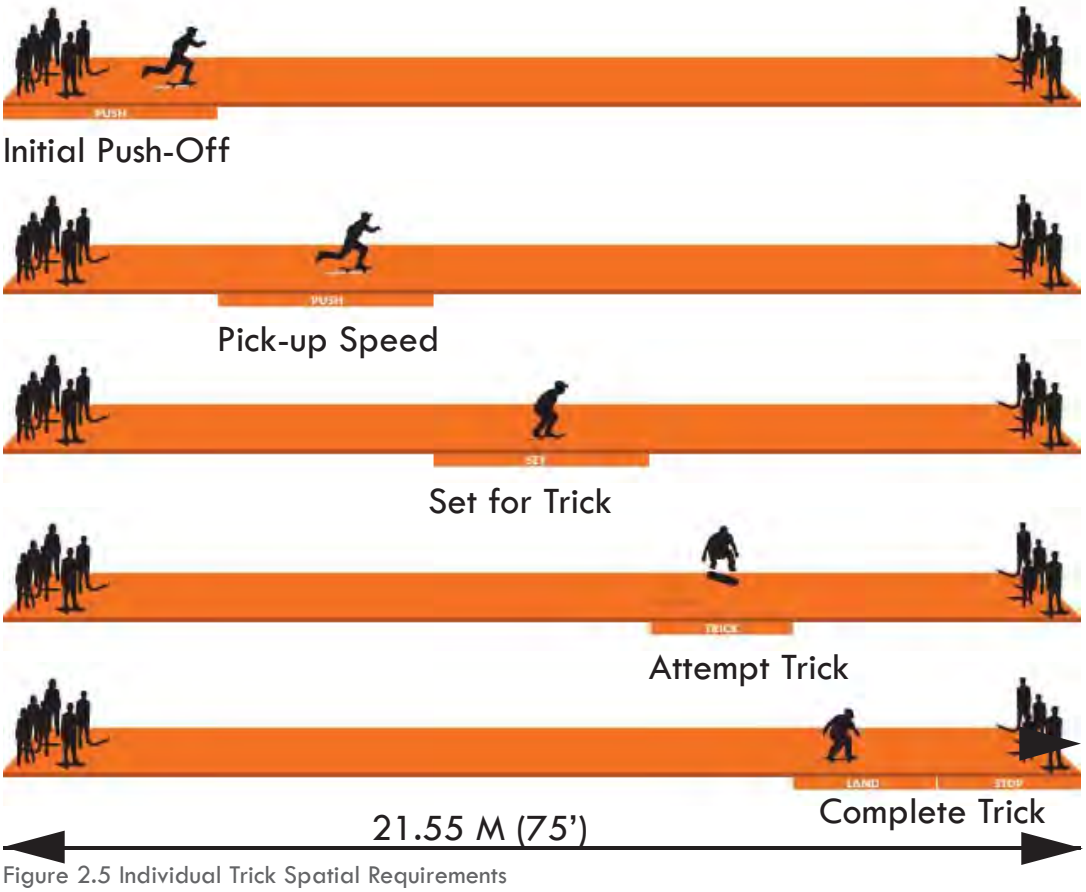


Figure 2.5 Individual Trick Spatial Requirements

The individual needs space to perform their trick. An average trick requires five stages to complete; gaining speed, setting up, doing the trick, landing, and braking. (In well-designed skateparks gaining speed and braking aren't always necessary as different structures are linked together to create "lines".) Each stage requires a minimum amount of space, illustrated below.

*The above description taken from skatepark.org Skaters for Public Skateparks.
The whole linear requirement is 21.55 sq. mts.

Presuming that some lateral space is needed to allow others to safely pass the active skater—as well as space to turn when it's required by the trick, (or to regain balance), 6.5 lateral meters (20 feet) is sufficient.

The total space for 10 concurrent users is 140 sq. mts. (1,500 sq. ft.).

This means that on average one can assume an average of 14.0 sq. mts. (150 sq. ft.) per user at any given time.

*Graphics are reprinted from Skater for Public Skateparks (www.skatepark.org)

Section 2.4: Current Regional Facilities

To gain a better understanding of the skateboarding community it is also important to look at surrounding municipalities and their approach to skate facility development. Skateboarders are inherently 'nomadic' and typically look for varied terrain to skate, both in sanctioned facilities and within the urban landscape. The construction of new park facilities will certainly alleviate skateboarding on public lands, however some level of skateboarding within the 'streets' can be anticipated as integral to the sport and culture of the skateboarding community.

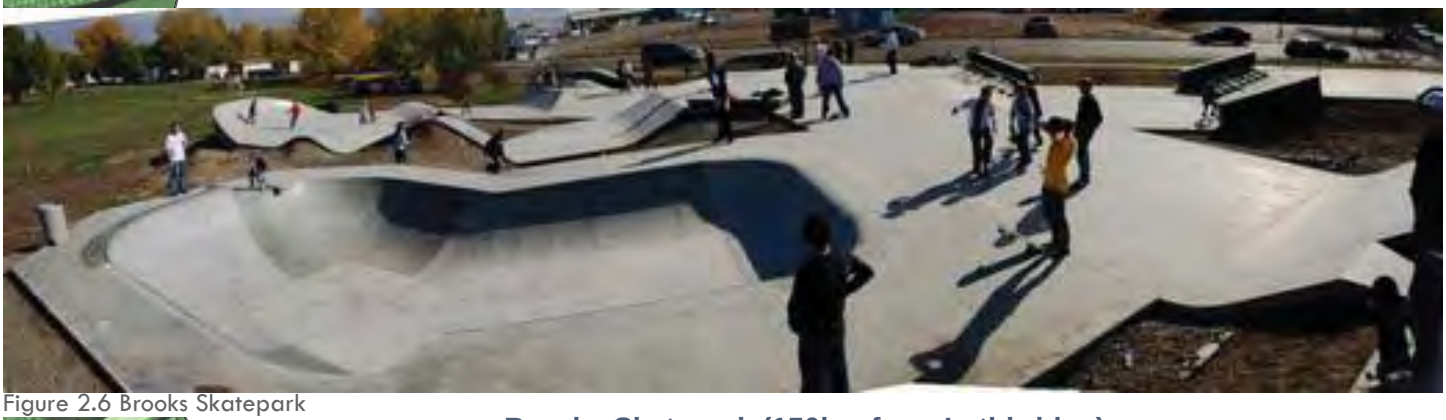


Figure 2.6 Brooks Skatepark

Brooks Skatepark (150km from Lethbridge)

Brooks (150 KMs from Lethbridge) has a park which was built in 2007. This park is an estimated 1,200 sq. mts.featuring a mostly street-style plaza with two bowl areas. Some of the terrain within the park, including the "Giant Whoops area " are currently under utilized and take a significant portion of the terrain.

Figure 2.7 Taber Skatepark

Taber Skatepark (50km from Lethbridge)

New Line Skateparks / vdz inc. designed and built the Taber park in 2009. The park is 1,200 sq. mts. and is currently used heavily. This park attracts users from both Taber and surrounding communities. Even with a 3hr commute from Calgary, this park is heavily visited by greater Calgary skateboarders. The park includes a bowl and street sections. Many Lethbridge skateboarders have indicated that they utilize this park with some regularity.

Section 2.4: Current Regional Facilities

Figure 2.8 Medicine Hat Skatepark

Medicine Hat Skatepark (170km from Lethbridge)

Medicine Hat's park was built in about 2000. The current park has 930 sq. mts. with an expansion of additional 930 sq. mts. coming soon. The current park is well-used but requires some adjustments due to unused obstacles.

Figure 2.9 Canmore Skatepark

Canmore Skatepark (314 km from Lethbridge)

New Line designed and built the Canmore skate plaza after the existing facility was deemed hazardous due to design and construction issues. The new park was built in 2009. Extensive street park with a large bowl area. Total area is 1,600 sq. mts. This park is heavily used by locals and also sees a significant number of transient use from the greater Calgary area – about 1 hr. Drive.

Section 2.5: Current Regional Terrain Provided per user

The table below summarizes the terrain offered in surrounding communities. The skate-ability of Lethbridge has been reduced to 80% to reflect the age and current quality of the skatepark. The other facilities are shown at 100% due to their recent construction and overall approval rating from the skateboarding community.

To determine the existing skatepark capacities we have calculated the skatepark facility size for each municipality and divided it by the current skatepark participant capacity . This number depicts the safe capacity of each municipal skatepark. This comparison is useful in determining how Lethbridge is 'measuring up ' to other communities in the region.

City/Town	Skate Park Size (m^2)	Skateability (%)	Skateable Terrain (m^2)	Participant Skate Ratio ($14m^2$/per Participant)	Current Skate Park Participant Capacity
Lethbridge	1,850	80%	1,480	14	106
Medicine Hat	1,860	100%	1,860	14	133
Brooks	1,200	100%	1,200	14	86
Canmore	1,600	100%	1,600	14	114
Taber	1,200	100%	1,200	14	86

Figure 2.10 Current Skatepark Capacity

When reviewing the data above with the 5-19 age range(Figure 2.3) from each municipality it should be noted that Lethbridge while having a significantly higher portion of active skateboarders has only the third highest amount of skate terrain.

Section 2.6: Public Process

On March 1st, 2011 members of the public were invited to an open house hosted at the city hall complex. This open house was attended by approximately 70 people and the consulting team derived 43 specific feedback forms from this evening. The feedback forms provided useful information to the consulting team related to age, gender, place of residence, preference for skateboarding, as well as many general comments and suggestions. (see tabulated results in appendices, as well as sample feedback form).

As part of the open house, the consulting team provided a formal presentation on the purpose for the masterplanning exercise. In addition, an educational power point was presented to show the public what is occurring in skatepark development and skateboarding culture – nationwide. In general, the members of the public who attended the open house were enthusiastic, and inquisitive about the process. A number of attendees remained after the formal presentations to ask questions and discuss the process with city staff and consultants. Both Trevor Morgan of New Line skateparks and Mark van der Zalm of VDZ+associates inc. were present to assist staff and answer questions.

Section 2.6: Public Process

The average age of attendees was 28 years old. The group was comprised of 77% male and 23% female residents from all regions of the city. The dominant group of recreational enthusiasts at the open house were skateboarders at 51% of attendees, followed by BMX, inline skaters and roller skaters (derby). 67% of attendees expressed a desire for more, small skateboarding opportunities dispersed around the city of Lethbridge, with 33% preferring a single, centralized facility to accommodate all skateboarders. This feedback is especially helpful in determining characteristics of the user group and how the LSMP may be implemented in future phases. Results of this survey and future additional survey work, will help to determine the nature of implementation and site selection for skatepark planning.

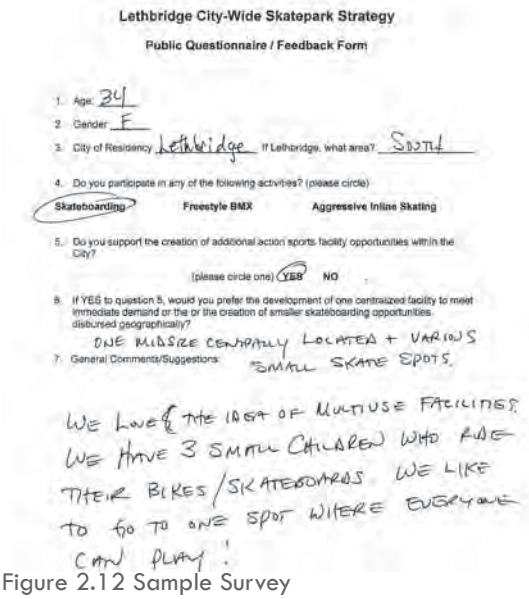
Here is a summary of the results provided:

SUMMARY

Average Age	27.1	**%**			
# of Males	31	72.1%			
# of Females	12	27.9%			
Residency %	**North**	**South**	**West**	**Other**	
	16.3%	39.5%	18.6%	25.6%	
Participation %	**Skateboarding**	**Freestyle BMX**	**Aggressive Inline**	**Rollerskating**	**No Response**
	51.2%	32.6%	4.7%	25.6%	14.0%
Support %	**CENTRALIZED**	**SMALLER**	**BOTH/EITHER**	**NO SUPPORT**	
	32.6%	27.9%	39.5%	0.0%	

Figure 2.11 Summary of Open House Survey Responses

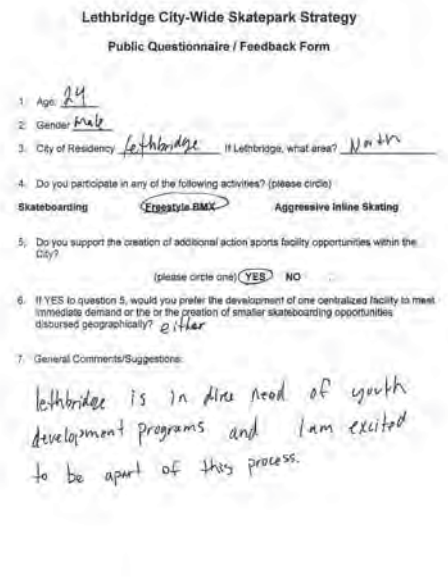
Each individual attendee filled out a survey as seen below:



Lethbridge City-Wide Skatepark Strategy

Public Questionnaire / Feedback Form

1. Age: 34
2. Gender: F
3. City of Residency: Lethbridge If Lethbridge, what area? SOUTH
4. Do you participate in any of the following activities? (please circle)
   Skateboarding Freestyle BMX Aggressive Inline Skating
5. Do you support the creation of additional action sports facility opportunities within the City?
   (please circle one) YES NO
6. If YES to question 5, would you prefer the development of one centralized facility to meet immediate demand or the or the creation of smaller skateboarding opportunities disbursed geographically?
   ONE MIDSIZE CENTRALLY LOCATED + VARIOUS SMALL SKATE SPOTS.
7. General Comments/Suggestions:
   WE LOVE THE IDEA OF MULTIUSE FACILITIES. WE HAVE 3 SMALL CHILDREN WHO RIDE THEIR BIKES/SKATEBOARDS. WE LIKE TO GO TO ONE SPOT WHERE EVERYONE CAN PLAY!

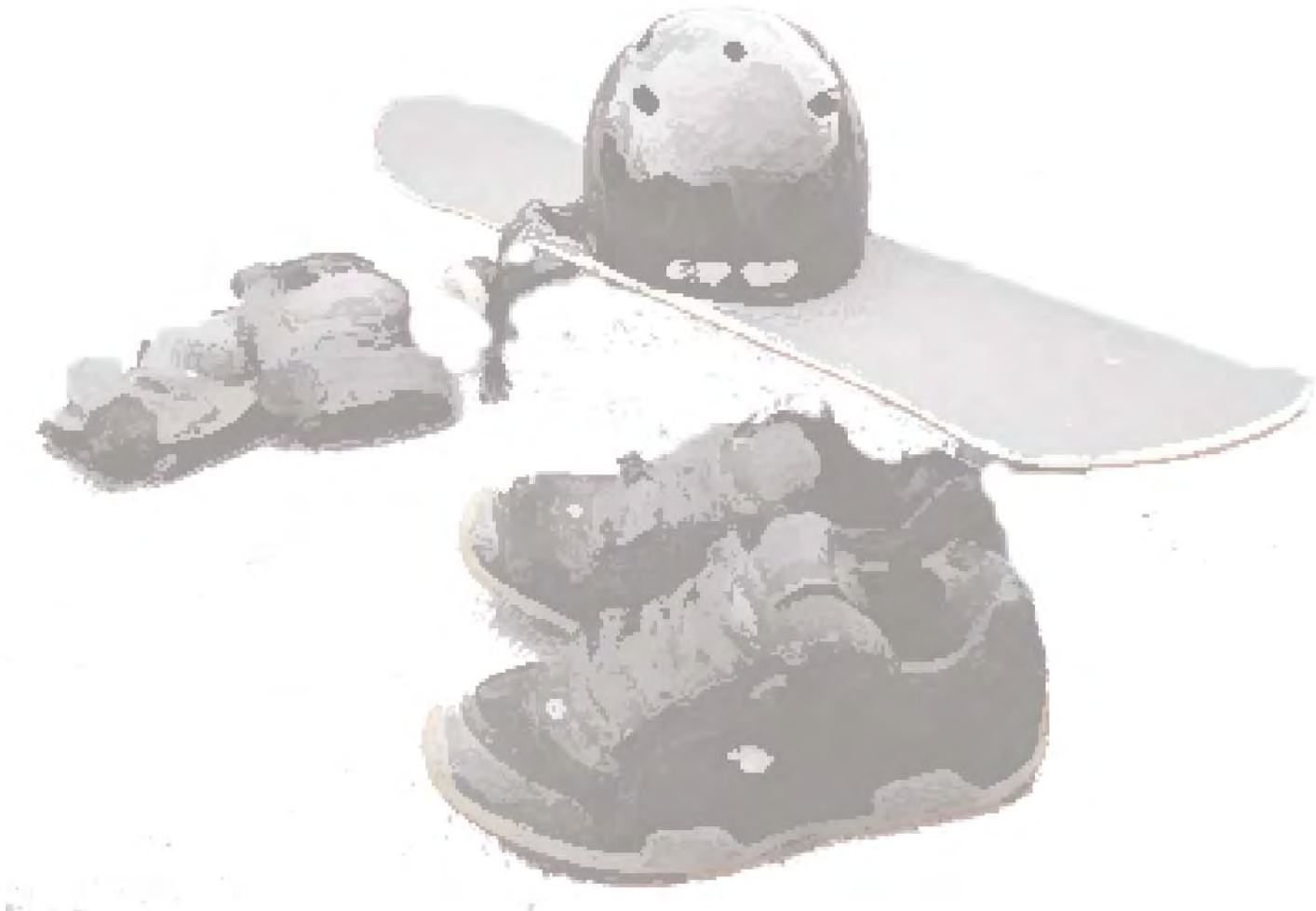


Lethbridge City-Wide Skatepark Strategy

Public Questionnaire / Feedback Form

1. Age: 24
2. Gender: male
3. City of Residency: Lethbridge If Lethbridge, what area? North
4. Do you participate in any of the following activities? (please circle)
   Skateboarding Freestyle BMX Aggressive Inline Skating
5. Do you support the creation of additional action sports facility opportunities within the City?
   (please circle one) YES NO
6. If YES to question 5, would you prefer the development of one centralized facility to meet immediate demand or the or the creation of smaller skateboarding opportunities disbursed geographically? either
7. General Comments/Suggestions:
   lethbridge is in dire need of youth development programs and I am excited to be apart of this process.

Figure 2.12 Sample Survey Response



UNDERSTANDING MODERN DEVELOPMENT
Chapter 3

Figure 3.1 Skate Spot Photo

Figure 3.2 Skate Spot Render

Figure 3.3 Neighborhood Skatepark Photo

Figure 3.4 Neighborhood Skatepark Render

Having developed an understanding of the level of skatepark 'need' that exists within the City, it is now appropriate to examine what facility development options are available to satisfy this need. The following chapter provides a detailed overview of contemporary skatepark facility styles, sizes, design and construction guidelines, site selection considerations, and anticipated development costs.

Section 3.1: Skatepark Typologies

Skate Spot (140 sq. mts. – 550 sq. mts.)

A Skate Spot is a small-scale 'skateable' opportunity typically found in a neighbourhood park or along an established paved trail. It may consist of 1 or more features that often center around one dominant terrain type and encompasses an area of than approximately 140 sq. mts. - 550 sq. mts. A 'Spot' may support users of all skill levels, however will have a focus on features that are 'low-impact' and accessible by less experienced and intermediate skill levels. Spots are often located within residential settings or in urban spaces off-setting conflict zones where a skatepark exists on private or semi-public land. Spots are also an effective means for 'linking' other skatepark opportunities around a larger geographic area – identifying a safe route of travel between larger skate destinations.

Neighbourhood Skatepark (550 sq. mts. – 1,100 sq. mts.)

A Neighbourhood Skatepark occupies a larger area of approximately 550 sq. mts. – 1,100 sq. mts., and as the name implies, typically serves the needs of the immediate neighbourhood(s) that surround it. A neighbourhood park will often include a wider variety of terrain types and support users of all skill levels but should again have a considerable amount of features that are accessible by novice and intermediate skill levels. This type of opportunity is commonly located within existing neighbourhood parks or on highly visible land in close proximity to residential development or a small commercial zone.

Section 3.1: Skatepark Typologies

Community Skatepark (1,100 sq. mts. – 2,300 sq. mts.)

A Community Skatepark typically serves the needs of 3 or more neighbourhoods and measures anywhere from approximately 1,100 sq. mts. – 2,300 sq. mts. Some level of parking and formal amenities are often associated with this scale of facility such as bathrooms/portolets, a water fountain, basic shelter, and lighting. Community facilities should accommodate all ability levels, and depending on the final scale of the facility, should provide a broad spectrum of terrain styles. Community-level opportunities are best suited in geographically central locations to the neighbourhoods they are intended to service, and are best suited in a mixed zone of residential, commercial and institutional land uses.

City-Wide Skatepark (2,300 sq. mts. – 3,700 sq. mts.)

A City-Wide Skatepark is similar to a community-scale facility in that: it is best situated in a geographically central location (in this case in relation to the entire City); and is best suited in a mixed zone of residential, commercial and institutional land uses. However, this scale of development will cater to all abilities levels, all major terrain styles and include most basic amenities (parking, formalized spectator seating zones, rest rooms and water, lighting, etc) and has a size range between 2,300 sq. mts. – 3,700 sq. mts.

Figure 3.5 Community Skatepark Photo

Figure 3.6 Community Skatepark Render

Figure 3.7 City-Wide Skatepark Photo

Figure 3.8 City-Wide Skatepark Render

Figure 3.9 Destination Skatepark Photo

Figure 3.9 Destination Skatepark Render

Figure 3.10 Street Style

Figure 3.11 Park/Obstacle Style

Section 3.1: Skatepark Typologies

Destination/Regional Skatepark (3,700 sq. mts. +)

A Regional/Destination Skatepark is approximately ~3,700 sq. mts. or larger and is intended to serve and entire county or region of users. A facility of this nature will have all major amenities and a terrain selection catering from beginner to professional level users.

Section 3.2: Skateboarding/Skatepark Terrain Styles

Since first emerging in the mid 1950's, skateboarding has evolved into an extremely diverse everyday recreation activity and high-profile professional sport with millions of participants across Canada and throughout the world. Today, skateboarding is defined by a handful of distinct riding styles – characterized by types of manoeuvres that have evolved around specific forms of terrain. Below is listing and description of common 'styles' skateboarding and related skatepark terrain types.

Street

'Street-Style' is widely regarded as the most popular of skateboarding styles. It is typically practised in public or semi-public spaces such as urban plazas. Street skateboarding began as skaters took to the streets to challenge their skills with existing built forms found in the natural urban environment. Features that are described as 'street-style' typically exist in urban public spaces, such as ledges, stairs, handrails, banks, etc.

Park/Obstacle

The emergence of what may be argued as the first generation of 'modern' sanctioned public facilities for skateboarding in the late 1990's popularized a new style of skateboarding. 'Park' or 'Obstacle' skating is the common title given to the style of skating that occurs on terrain built specifically for skateboarding. The features included in park skating are not necessarily a replica of the urban form, but rather a variation of the real thing. Skatepark designers have conjured a variety of features often inspired by opportunities in the public realm but are changed to offer an easier version, optimizing the skateability of the features. Commonly accepted skatepark features include items such as fun-boxes, up-gaps, pump-bumps, and wall rides.

Transition/Bowl

In the 1960's some skaters began to challenge their skills on the walls of empty swimming pools. This spawned a distinct style of skating (also called pool, or bowl skating) effectively introducing vertical frontiers to skateboarding. In its basic form, this style of skating mimics the back and forth carving of surfers on waves. The practice of pool skating evolved into sanctioned municipal skateparks. This style of skateboarding saw its popularity peak in the 1980's, eventually falling aside to street skating. However, in recent years transition/bowl skating has seen a marked renewal in interest characterized by a myriad of manoeuvres on curved surfaces that approach, reach, or in some cases even exceed, a vertical plane.

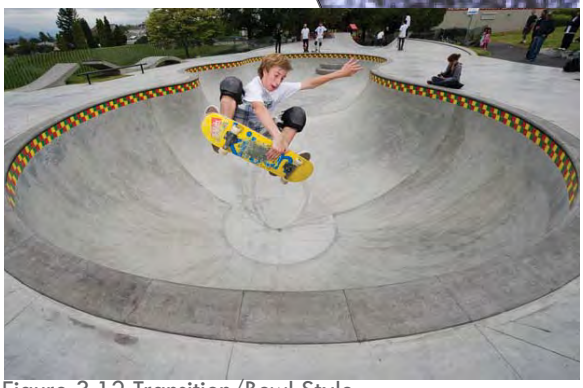


Figure 3.12 Transition/Bowl Style

Downhill (not typically reflected represented in a specific skatepark terrain type)

This style of skateboarding occurs on hills and other inclined surfaces. Downhill skating (also known as slope-style), requires participants to stand (or luge has some riders lay on their backs), on their skateboards travelling at relatively high speeds downhill. Despite a consistent interest in this style of skateboarding, downhill has never been a dominant style. Typically a longer board is used, where varied terrain is preferred with most favouring low-traffic areas with high gradient slopes.

Figure 3.13 Downhill

Longboarding (not typically reflected represented in a specific skatepark terrain type)

True to it's name, this style of skateboarding also occurs on a longer board and is typified by wide turns or tight carves usually on flat surfaces, or low gradient slopes. The roots of this style of skating are also derived from the back and forth motion of surfers carving on waves. This is generally accepted as the smoothest style of skateboarding, and is common and most efficient for transportation purposes.

Figure 3.14 Longboarding

Section 3.3: Successful Skatepark Development Principles

As a result of considerable advances in the field of municipal skatepark development, today's skateparks both look and serve the community much differently than they once did. Largely gone are the stereotypical 'concrete squares' of the past as a new era of facility design and construction responds to far more than the basic function of concrete surfacing. This means facilities that not only provide premium quality terrain for skateboarding/ youth activity, but integrated public landscapes that incorporate inviting viewing/socializing areas, relevant art and sculpture, 'green' development principles, and strong connections to surrounding amenities. This integration of complex components is becoming the new definition of a modern municipal skatepark. The following pages illustrate examples of successful skatepark development principles (from a Destination-Level facility through to a Skate Spot) from communities throughout Alberta and across Canada.

The strength of a masterplanning exercise allows for community development of a skatepark strategy that may provide varied terrain, in geographically dispersed areas of the city. The development of a ' network ' of skate opportunities is emerging as a consistent and sound strategy for community development. Not unlike a sportsfield development strategy, it is useful to think about skateboarding, and skateparks as a legitimate extension of the recreational spectrum in any community. As such, the provision of a network of skatepark typologies, dispersed in a logical, and strategic fashion throughout the community is the best way to safely, and conveniently serve the whole community.

To build upon the notion of a skatepark network – it is useful to consider a progression of terrain options to create variety, and contrast throughout the parks system. By carefully planning the network terrain, skateboarders may choose options for park/ obstacle, street, or bowl/transition terrain in the various built parks around the city.

On the following pages we have compiled a number of skatepark developments from other Canadian cities. These examples indicate how a variety of skatepark typologies can be successfully integrated into community parks, or downtown landscapes. The examples included indicate a variety of terrain options, as well as site selection options: mixed-use zoning in an urban context, suburban park locations, high-profile waterfront locations, adjacency to schools, residential etc. . Some of the examples also discuss methods for successfully including a broader cross-section of the population in a sense of ownership for the facility.

The Plaza at the Forks, Winnipeg MB - *Destination/Regional Park*

Size: 48,000 sqft
Budget: $2.5 Million
Timeline: Opened Summer 2006

Owner: Forks Renewal Corp.
Contact: Paul Jordan, 204.987.4362

Skaters for Public Skateparks
Public Space Award

Canadian Society of Landscape Architects
National Honour Award

Covering a total area of over 44,000 square feet, the Plaza at the Forks consists of a meticulously detailed skateable sculpture plaza and expansive modern bowl complex tied seamlessly into the heart of downtown Winnipeg's urban fabric. The facility is the first of its kind within the world and has quickly become one of Winnipeg's most celebrated public places and a destination for skateboarders and other urban explorers from around the globe.

The concept for the Plaza was unique from the onset. The Forks, aptly named due to its position marking the amalgamation of Assiniboine and Red rivers, serves as one of Winnipeg's preeminent meeting places. The area is steeped in over 6000 years of cultural and historical significance and is visited by over 4 million people each year for a range of attractions and activities. Accordingly, the riverside setting is highly programmed with stringent development guidelines and a commitment to utmost site sensitivity. Our team's challenge was to preserve the essence of this beloved public space while introducing a thoroughly modern world class youth/skatepark.

Figure 3.15 Successful Development Project - The Forks

The Plaza at the Forks, Winnipeg MB - continued...

The result is an urban landscape like no other. Far from the typical skatepark, the Plaza at the Forks is better described as a premier urban park/plaza and gathering place that is 'perfect for skateboarding'. On any given day, one may see up to hundreds of visitors skateboarding, inline skating, biking, viewing art, strolling through, or simply sitting by to watch and socialize. It has truly become a place for all ages, back grounds, and interests to enjoy.

Central Plaza - 29,000 sqft: Inspired by prized skate spots around the world and the rich history and culture of the Forks district, the main plaza area is made up of an endless combination of stair sets, banks, rails and ledges set within a host of custom sculptures and other art pieces - the majority of which may be ridden by skateboard, BMX or inline skates. Along with input from heritage and culture experts, our team undertook extensive consultation with leaders of the local skateboarding and art community to devise a final layout and detailing that would be optimal not only in skate function but also true to the culture and feel of the Forks and City of Winnipeg. Particular highlights include:

-'Spirit Fish', a skateable sculpture designed to represent the nearby rivers and the mystical 6000 year old catfish that used to inhabit their waters - painted by local artist Pat Lazo
-'Magic Carpet', a super elevated and perfectly skateable concrete ribbon track referencing the railway lines that met at Winnipeg's main terminal within the Forks until 1923
-Numerous granite capped benches, ledges and blocks
-Wire cut stone and acid etched concrete accents
-Original Forks brick inlaid on pedestrian walkways

Figure 3.15 Successful Development Project - The Forks

The Plaza at the Forks, Winnipeg MB - continued...

Bowl Complex: Separate and adjacent to the Central Plaza, lies an 8,500 sqft. bowl unit combining traditional pool and modern coping lines. Walls begin at 5 feet and progress through a series of hips, elevators, extensions, and a pump bump to a massive 17 foot cradle and 13 foot over-vert pocket. Ridden by beginners through to the likes of Tony Hawk (who recently touted the park as 'amazing'), the bowl can often become the center of activity with hundreds of spectators in the surrounding informal viewing areas.

Our team finished the park off with unique lighting, a network of 'safe' pedestrian walkways and viewing areas, and consultation on the creation of an 'Ambassadors' program designed to educate visitors on skateboarding etiquette and ensure an enjoyable experience be had by all.

The entire project is built on state of the art construction and engineering designed to withstand the difficult ground conditions and dramatic temperature fluctuations characteristic of the region. Proven cold weather skatepark construction techniques developed by New Line Skateparks were matched with innovative void forming and reinforcement technology implemented by PCL and local engineers. Over 200 precast piles, highly specialized concrete mix designs, and an expansive grade beam system will ensure maximum surface integrity over many decades to come.

Figure 3.15 Successful Development Project - The Forks

Chinook Winds Skate Plaza Airdrie, AB
City-Wide Park

The City of Airdrie's much anticipated Chinook Winds Skate Plaza is now a reality! Situated in the newly established Chinook Winds Park, the highly integrated Skate Plaza features approximately 22,000 sqft of carefully detailed plaza and bowl terrain for all ages and abilities. The skate plaza compliments a variety of surrounding recreation opportunities (multiuse sport court, children's playground, splash park, athletic fields, passive green space) and showcases a number of skateable sculpture/artistic elements developed in conjunction with local youth and the Airdrie Extreme Athletics Association.

Project Budget: ~ $900,000
Timeline: Opened Spring 2010
Client: City of Airdrie

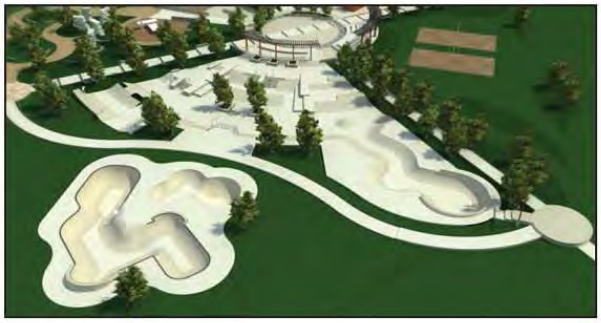


Figure 3.16 Successful Development Project - Chinook Winds Plaza

Brandon Skate Plaza *Brandon, MB*
City-Wide Park

Located in the heart of Downtown Brandon, the Kristopher Campbell Memorial Skate Plaza consists of ~25,000 sqft of modern skateable terrain built directly over the original foundation of the City's historic King Edward Hotel. Alongside a diverse collection of world-class urban skate features, columns along the plaza perimeter mirror those of the original building while major areas contained within the park take on the names of key rooms once housed inside the hotel. Now open and busy with youth and spectators from all walks of life, the completion of the project illustrates a compelling model for urban renewal based on an understanding of where Brandon has come from and how the challenges of the past may be turned into opportunities for the future.

Project budget: ~$900,000
Timeline: Opened Fall 2010
Owner: City of Brandon

Figure 3.17 Successful Development Project - Brandon Skate Plaza

Taber Youth Park *Taber, AB*
Community Park

After 7 years of fundraising and planning, the busy Southern Alberta community of Taber is now home to the region's newest modern concrete skate facility. Located in the Town's beautiful Confederation Park, the park consists of over 12,000 sqft of custom skateable terrain set within a nearly 18,000 sqft footprint. Along with the unique hard surface configuration, the project also includes a network of new walking paths, planting areas and informal spectator seating designed to improve park access and allow for comfortable viewing by the park's high volume of users.

Project Budget: ~$450,000 (retail - park was developed with the aid of significant 'in-kind' donations)
Timeline: Opened Spring 2008
Owner: Town of Taber

Figure 3.18 Successful Development Project - Taber Youth park

Thomas Haney Youth Park *Maple Ridge, BC*
Community Park

The Thomas Haney Youth Action Park features approximately 17,000 sqft of unique modern plaza and bowl terrain tied directly into a busy British Columbia Public schoolyard. In addition to serving the local skateboarding and BMX community, the park also doubles as an outdoor 'amphitheatre style' performance space and casual socializing area. The project is the first active schoolyard skatepark development in Canada and has captured the attention of cities around the world attempting to incorporate progressive public space for youth in non-traditional settings.

Project Budget: $517,803
Timeline: Opened Spring 2008
Owner: City of Maple Ridge

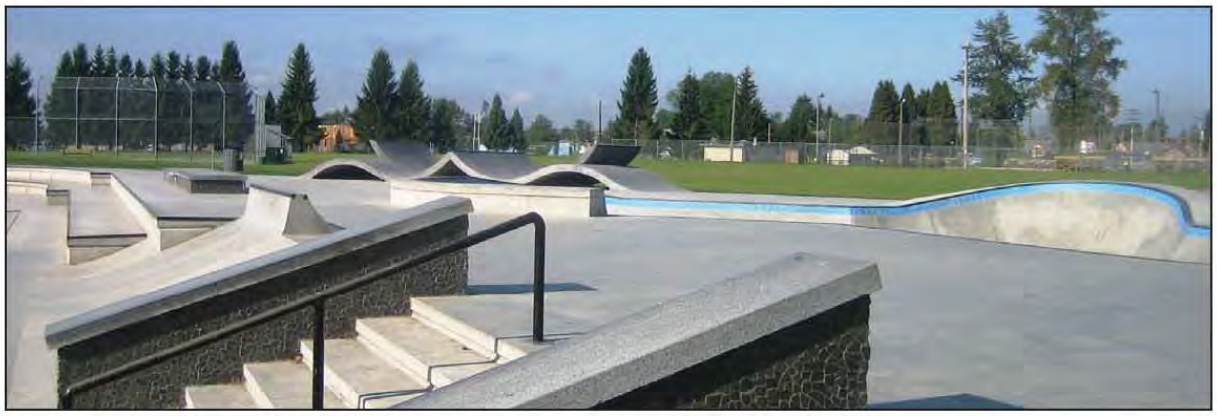


Figure 3.19 Successful Development Project - Thomas Haney Youth park

Olds Skate Plaza *Olds, AB*
Neighbourhood Park

The vision for the proposed Centennial Park Skate Plaza and Splash Park is to create a unified space that not only becomes a draw for youth, but a truly outstanding public space that everyone in the community of Olds can enjoy. With the addition of an authentic skate plaza and a unique spray park, the site transforms to provide two facilities that promote positive youth recreation and community interaction. Both the skate plaza and the splash park have taken influences from the town's rich history as a railway hub, giving them a character that is unique to the region and allows each space to compliment the other through style, form and function.

Project Budget: $375,000 (Skatepark Only)
Timeline: Fall 2009 - Summer 2010
Client: Town of Olds

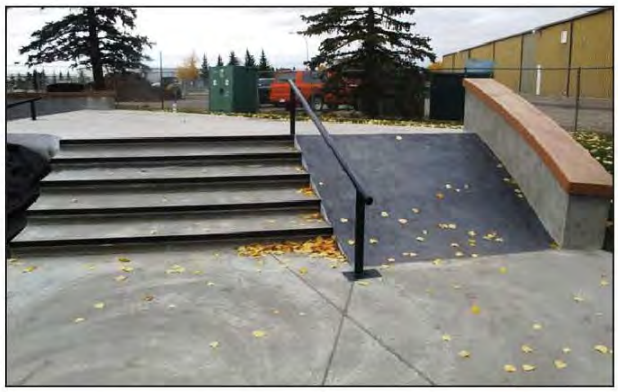


Figure 3.20 Successful Development Project - Olds

Section 3.4 General Site Selection Guidelines

In considering land or developable space for a potential skatepark facility, a number of significant criteria must be addressed. A site criteria matrix is a sound way to approach site identification and scoring. An advisory group, made up of staff and community stakeholders, is a good way to ensure that balanced scoring and site selection takes place. Some key issues to consider in the selection of sites throughout the city include: public vs. privately owned land, should both be considered? Planning and land-use criteria such as zoning, adjacent uses, distance to commercial opportunities or residential populations, Site specific criteria, including geotechnical conditions, prevailing microclimate, or existing vegetative cover or mature trees.

All criteria should be considered and organized for each property. *See Appendices for a sample site criteria scoring matrix.* Once stakeholders and municipal staff have reviewed each site and scored them on a sliding numeric scale, all sites can be evaluated for their suitability to support a skateboarding opportunity. Even if a particular site is deemed to be a strong candidate for supporting a skatepark development, consideration must be given to future development potential of the site, competing interests in the development of that land, and any related public interest that may not fall neatly within the confines of the site selection matrix.

The results of the matrix evaluation will provide a strong basis from which priorities for park development can be based. Combining the results of this exercise with principles of 'compact, walkable communities', and pedestrian safety, a skatepark network will emerge. By giving careful consideration to linkages along city sidewalks, greenways, or community trails, user safety is promoted. As with playgrounds, or other recreational venues offered by the community, skateparks should be developed with the goal of providing the opportunity to recreate in close proximity to the users home or school. Reducing the distance that a user group will have to travel to reach a facility, will improve community connectivity, and promote individual health through more compact, walkable neighbourhoods.

Section 3.5 Anticipated Development Costs

Construction Costs

A general survey of various municipalities throughout Western Canada shows base construction costs of site-built concrete municipal skateparks typically ranging from $430 – $535/sq mts. These figures consider full construction services for the facility hard surface and basic landscape remediation. Costs for optional amenities (lighting, washroom facilities, water fountains) and elaborate landscaping schemes are often highly variable (depending on design parameters) and would be additional to the base costs just outlined.

Design costs

Design costs for municipal concrete action sports facilities typically range from 8% - 10% of the estimated project construction budget. These fees will cover a full service design program consisting of site evaluation, community design consultation, creation of the concept design, production of construction drawings and technical specifications, and a standard construction administration program.

For planning purposes, it is recommended that municipalities use an overall figure of $480/sq. mts. (45 per sq. ft.) plus design fees when budgeting for future project developments.

MAINTENANCE
Chapter 4

Drainage

Water can potentially cause a great deal of problems on an outdoor facility. Careful monitoring and maintenance can help avoid some common issues:

- Since small-grated drain covers are often used, you may find that a relatively small amount of debris can plug them and create ponding issues. Since this is a common issue at leaf-fall and after wind-storms, we recommend diligent monitoring of drain covers during potential ponding times.

- Trapped silt and debris in catch-basins should be cleared out regularly, and drain lines should be flushed every two to three years, depending on sediment build-up.

- Although we make every effort to avoid them, depressions in the concrete surface may lead to ponding. Most ponding should evaporate at a rate that is acceptable for the use of the facility, but extreme cases may require further attention. Since yearly movement of the concrete is to be expected, this will need to be reviewed every spring.

- Weeping occurs when water pressure builds up beneath the concrete surface and pushes through the natural capillaries in the concrete. This may be most noticeable during or after a rainstorm or high-water event, and may be accompanied by a white mineralization. In most cases, installed drainage preparations have been sufficient to resist these issues, or the weeping rate is less than what would affect the use of the facility. A more effective diversion of sub-surface water may be required if weeping is affecting facility use.

Joints, Cracks, and Slabs

Many skatepark facilities are built as ‘floating slab’ concept which allows for seasonal flexing of the slab from winter heaving and summer settling. This makes it possible to avoid expensive slab engineering and structural preparations, but leaves the potential for cracking to develop over its lifetime. Here is a brief overview of common cracks:

Crazing: This web-like pattern of tiny micro-cracks, which will usually only be visible if the concrete is wet, are only about one millimetre deep, and are caused by surface moisture loss during the scrubbing of the concrete surface during placement. These cracks do not extend through the depth of the concrete, and are not large enough to allow enough moisture penetration to cause problems.

Section 4.1 Maintenance

Controlled Cracking: Where saw cuts have been used to encourage slab cracking, expect ongoing seasonal shifting of slabs to relieve underlying pressure. This is as practical an application as sidewalk slab movement between cracks, but in a larger application, happens in a more unpredictable manner.

Uncontrolled Cracking: Controlled cracking in the right areas is often impossible to predict or difficult to accommodate for a possible stress point in the concrete and random cracking of the concrete surface may occur. Careful monitoring of these cracks is recommended, and yearly spring 'check ups' are preferable. It is recommended that a flexible joint filler in cracks between two to five millimetres wide. Larger cracks, or cracking with odd deformation of the concrete surface may require additional review.
Control Joints: Panel joints, pour joints, and joints between different types of concrete are unavoidable, and it is expected that the most shifting in the concrete should occur at these locations. It is not uncommon to see regular seasonal differences in the openings at these locations, and regular maintenance and review of these locations is considered part of the regular upkeep of the facility. As with uncontrolled cracking, these gaps should not exceed 5 millimetres in width without further investigation, and smaller openings can be treated with flexible joint compound.

Surface issues: Concrete slab surfaces should be polished to a smooth finish, but random rough zones and dimples are to be expected. Deterioration of a concrete surface should be brought to attention.

Steel

The steel edging on skatepark applications is treated with a premium zinc coating and then field treated with "Tremclad" Rust paint. In most cases, it is intended to be scraped by the action of regular skateboarding use, which is somewhat localized to the exposed edge. Since this action will expose the raw steel and make it susceptible to rusting, we recommend yearly touch up to exposed steel with rust paint in the spring.
We do not recommend the use of wax on steel or concrete surfaces.

Something to keep in mind when steel edging is attached to concrete applications is that steel and concrete expand and contract at different rates with temperature shifts. This may result in gaps that allow moisture entry which can lead to ice jacking of the steel, and should be closely monitored and maintained. As with uncontrolled cracking, a flexible joint filler is an excellent solution for gaps up to 5 millimetres, and we are available for advice on anything larger.

Section 4.1: Maintenance

Gaps between concrete and steel coping on quarter pipe elements MUST be sealed before wintering, as water penetration can lead to potential ice-jacking.

General items

It is common to see the pockmark effect produced by the protruding axles of skateboards at high impact zones such as the landing zones of rails and up-gaps. In most cases, this does not affect the overall usability of these zones, but in extreme cases may require some surface grinding to repair. It is considered normal and part of regular wear.

Since bicycles of all types are much larger and heavier than skateboards, skatepark installations that allow bicycles should be aware that pedals and pegs have the potential to cause massive damage to concrete and steel regardless of design. Steel and concrete gouging is to be expected, and may require maintenance.

In some park designs, the joint between two concrete panels comes to a point and may be exposed to grinding by the axle of skateboards. This is a deliberate design element, and may result in some minor roughening of this concrete edge. A regular review program should monitor these zones, and flexible joint compound is the best treatment option in most cases.

Section 4.2 Vandalism and Graffiti

To prevent vandalism and graffiti in the skatepark will involve the development of planning, signage, lighting, volunteers and law enforcement. As the park is beginning to be designed is the perfect opportunity to have a discussion about how to limit the amount of vandalism and graffiti in the skatepark. This will need to involve the skatepark designers, city staff, law enforcement and skateboarders to come together to develop some strategies.

The development of a sign that states the park rules and acceptable behaviour in the skatepark should be developed. The rules should be simple and straight forward. Provide a contact number that the skateboarders can call to report any vandalism and graffiti.

Adding lighting to the skatepark will also help to reduce potential vandalism and graffiti. The lighting can run on timer so that the lights turn off during the day and are on at night. The lights at night should be all on until the park is to be closed. Once it is time for the park to close, only a few light should stay on just for visibility and not for the ability to skate board all night.

Arrange for volunteers to observe the park throughout the day. A park that is empty may attract vandals. The volunteers should mostly be the skateboarders as they will have the most pride about the facility and do not want to see it closed down. The skatepark survey supports this with 64.9% in favour of volunteering to keep the park clean and safe.

Speak with local law enforcement to make the skatepark part of their night patrols. These nightly checks should not be regularly scheduled. The police officers can take a look into the park and make sure no one is in there after hours.

Arrange for volunteers to observe the park throughout the day. A park that is empty may attract vandals. The volunteers should mostly be the skateboarders as they will have the most pride about the facility and do not want to see it closed down.

Speak with local law enforcement to make the skatepark part of their night patrols. These nightly checks should not be regularly scheduled. The police officers can take a look into the park and make sure no one is in there after hours.

Section 4.3: Monitoring and Supervision

Many skatepark owners employ monitoring and supervision as tools to help create a safer environment.

Liability is the most important consideration when discussing this topic. In most American states, legislation that identifies skateboarding as part of a list of hazardous activities exists. "This classification is intended to let participants know that there is an inherent risk in skateboarding similar to most other athletic activities. Limited liability laws and hazardous activity lists prohibit claims against public entities that operate public spaces such as softball fields, basketball courts, and skateparks.

This allows municipalities to create positive spaces for recreation without the fear of lawsuits" (Wixon, 2009, p. 152).

Once appropriate legislation has been established, skatepark owners must determine the extent of monitoring and supervision.

Skatepark owners have adopted a range of approaches, from fenced-in facilities with full-time attendants to open-access and attendant-free operations. Despite the differences, the need for adult presence and high visibility levels is common to every skatepark (Wixon, 2009).

The use of formal supervision does increase liability. Formal supervision requires that a skatepark be attended to and monitored during operating hours, and that attendants carefully monitor activities and enforce all rules for safety equipment and skatepark usage (Wixon, 2009). This approach requires policies and procedures to be followed that are at once enforceable and documentable.

Section 4.3 Monitoring and Supervision

The other significant consideration when discussing the topic of monitoring and supervision at skateparks, is skateboard culture. Many skateboarders consider the act and culture of skateboarding as an alternative to the experience of institutionalized sport. As with the requirement of helmets and pads, the presence of supervision may also dissuade some users from using the facility (Whitley, 2009). Subsequently, if formal supervision is employed, risk of injury increases for some individuals since they will likely skateboard elsewhere.

Section 4.4: Programming

In formally supervised skateparks, positive adult presence occurs, as adults are typically present supervising. With unsupervised skateparks, programming can be used to ensure positive adult presence, which helps to offer a safe and positive environment for all users.

Programs are created with the intention of helping to educate less experienced users, and encouraging older experienced skaters to assume leadership roles. Park programming can be as informal as free informational clinics facilitated by park stewards, or as formal as skateboarding lessons and camps incorporating structured coaching and camp activities.

Section 4.5 Establishing Ownership and Mentoring Stewardship

It's best to develop a relationship with the skateboarders in the community. "If children are introduced to skateboarding at a young age through training classes, they will associate skateboarding positively as they grow into teenagers. In addition, if teenagers and young adults are given the opportunity to mentor beginning skaters, they are most likely to take ownership of their community and the sport of skateboarding" p121 (Bradstreet, 2009).

Section 4.6 Etiquette

Skatepark etiquette are customary rules of conduct that have developed over decades to help control traffic and add safety to the otherwise unstructured practice of skateboarding in groups. In a skatepark environment where often many users are using the same space, these rules become significant for control and mitigation of collisions.

These rules can be learned through formal programming, or trial and error. Understanding these rules before hand, can help prevent collisions and create a safer environment for all users.

Park Etiquette – The Freestyle nature of Skateparks has led to the need for a simple form of respect and courtesy amongst users. The basic principles are allowing each user to take turns, being aware of surroundings, avoid cutting people off and being pleasant to fellow users regardless of skill levels. Other courtesies include showing local users respect and avoid 'one upping' other users. Park etiquette should be practised regularly and allows for an enjoyable experience.

Padless – It is worth observing these strange phenomena of the majority of 'hardcore' users, specifically BMX and skateboarding wearing little or no protective equipment when practicing these sports. Nearly all professional skateboarders and a large portion of BMX professionals never wear a helmet, knee or elbow pads. Young riders have often mimicked these trends and are rarely seen using safety equipment.

Section 4.7: Sustainability

There are several measures and techniques that can be incorporated into the skatepark to make it sustainable. These include:

- Treating the stormwater run-off with environmentally sustainable methods.
- Incorporating 'fly ash' in the concrete mix. Fly ash is a by-product of coal combustion that is typically considered a waste product. However, when added to concrete mixes, it makes for stronger concrete end product with tighter consolidation.
- Using recycled crushed concrete for a base rock under the concrete.
- Use of Forest Stewardship Council certified wood products for framing of concrete forms.
- Balanced cut and fill to reduce off-site hauling which will save energy and landfill space.
- A desire to incorporate reused or recycled materials – jersey barriers, wheel stops, steel, non-perfect granite, etc.
- Use of locally produced or manufactured materials – locally harvest wood, etc.
- A requirement for separation of recyclable materials from construction waste.
- Use of native vegetation for stormwater treatment and shade.
- Inclusion of interpretive signage to explain these measures.

Section 4.8 Skatepark Rules

Below is an example of what the skatepark rules can be. The key is to be direct and simple

- Skate at your own risk. This park is a non-supervised facility. Permitted equipment includes skateboards, inline skates, scooters, and BMX freestyle bikes. Other equipment must be approved by the city.
- Protective gear (helmets, knee pads, elbow pads & wrist pads) is strongly recommended.
- No profane or abusive language allowed.
- Alcohol, tobacco products, and drugs are prohibited.
- Inspect the park before using. Stay off when wet, icy or other hazardous conditions exist.
- Look before you go … don't drop in on others …wait your turn.
- Check bad behaviours at the gate including foul language, glass containers, tobacco & alcohol.

Section 4.9 Hours of Operation

The suggested hours of operation can be as listed below. Having set hours will prevent loitering after hours. Recommended hours of operation are as follows:

November 1 through February 28:
8:00 a.m. to 10:00 p.m.

And

March 1 through October 31:
8:00 a.m. to 11:00 p.m.

Section 4.10: Lighting

A skatepark with adequate lighting will allow use of the facility during the evening. During the winter this will help to attract older, working skateboarders who may otherwise not have recreational options. Depending on the intensity of the lights, even skateparks placed within residential zones can be lit until the park closes without any impact to the other park visitors or nearby residents.

Lights should be configured so that they do not abruptly turn off. Rather, they should turn off in stages with a few seconds in between to allow those skaters in the middle of a run to stop skating. It's easy to imagine the feeling of things going pitch black while one is in the middle of a difficult trick.

The lights can be set on a 20-minute timer that is reset with a button so that the facility does not consume power when it's not being used.

APPENDICES

Appendix A: Public Open House

The chart below shows the results from the initial open house held in Lethbridge.

RESPONSE#	DEMOGRAPHIC		RESIDENCY		DO YOU PARTICIPATE IN ANY OF THE FOLLOWING ACTIVITIES?				DO YOU SUPPORT THE CREATION OF ADDITIONAL ACTION SPORTS FACILITY OPPORTUNITIES WITHIN THE CITY?			GENERAL COMMENTS / SUGGESTIONS
	AGE	GENDER	LETHBRIDGE	IF LETHBRIDGE WHAT AREA?	SKATEBOARDING	FREESTYLE BMX	AGGRESSIVE INLINE	ROLLERSKATING	YES (one centralized)	YES (smaller, disbursed)	NO	
1	50	M	✓	West						✓		Locations are the key
2	24	F	✓	West					✓			
3	40	M	✓	West					✓	✓		a few smaller node facilities and 1 centralized. Please encourage council to proceed
4	40	F	✓	South		✓			✓			(parent) a true "feature" park with all the elements discussed here tonight. Trees, gras, benches, etc... would be amazing.
5	34	F	✓	South	✓				✓	✓		we love the idea of multi-use facilities. We have 3 small children who ride their bikes/skateboards. We like to go to one spot where everyone can play.
6	34	M	✓	South	✓					✓		I feel high visibility locations to showcase action sports will help dispel the stereotype that skaters are 'bad' citizens (inline and bmx too). Looking forward to the recommendations of the skatepark master plan. I'm a parent of a second generation skater. my 8yr old daughter has started too. Great opportunity to bond with her!
7	31	M	✓	North	✓					✓		smaller, more variety.
8	11	M	✓	South					✓			(Scooter). A couple waves here and there. Rideable art for skaters, bikers etc. Skateable glass, bencha that people sit on and skaters can grind on too.
9	10	M	✓	South	✓					✓		magic carpets, BIG ramps, down hill ramp, flat space
10	26	M	✓	South	✓	✓			✓	✓		Much needed, let's make this happen
11	37	F	✓	South				✓	✓	✓		a hub that provides space for all roller sports would be ideal. Rollerskating/roller derby, roller hockey, aggressive inline, roller skating etc etc. Also a part that would accommodate all levels of roller sports would be fantastic so I could roller skate with my son who is learning how to board. Great Presentation!
12	32	F	✓	South	✓		✓	✓		✓		integrated rollersport accessibility in other city developments. Partnerships with other groups. Incorporate skate opportunities, future non skatepark related development.
13	26	M	Coaldale			✓			✓	✓		Either centralized or smaller (whichever meets needs best). Great presentaton, Professional. Need a roal good bowl and should be in an open, visible area in the community.
14	23	M	✓	South	✓				✓	✓		first and foremost, cut the roller derby chicks. They can ride someone elses coat tails. You already know who to talk to in town, (LSA, B-Line, or the locs). Also, youi could just talk to Brent Eftoda
15	23	M	✓		✓	✓			✓	✓		
16	23	F	✓	South				✓	✓			An indoor sportsplex for a variety of sports including minor hockey, rollerskating, etc. as well as an improved multi-purpose outdoor facility
17	33	F	✓	South				✓	✓	✓		As part of the 'Lethbridge Roller Derby Guild' and a huge fan of roller skating (and bicycles) I would, along with all my associates, greatly appreciate a public space, a smooth concrete area that would be suitable for improving my skating. Through the Women's Flat Track Derby Association website you can learn about our sport and our track requirements. thanks so much
18	36	F	✓	South				✓	✓			to begin with, a centralized facility that can accommodate several types of alternative wheeled sports. Information regarding rollerderby- WFTDA- Women's flat track derby association. Not only do women skate- we welcome men as refs and are hoping to start a junior league.
19	21	M	✓	Fairmont	✓	✓			✓			
20	60	M	✓	West						✓		I have approx. 30yrs exp. In development of programs for youth. One of the KEY issues in community-based programs for youth is to carefully consider their linkage to other services, especially those that will encourage growth, development and maturity in the adults of tomorrow. Specifically, how will the project be structured to encourage contact with schools, positive adult role models, jobs, etc. These considerations will make the difference between a program that is just a 'standalone' one-off vs. one that provides an enduring social benefit for all whether they directly participate in skateboarding or not. Location and proximity to these other agencies is key. Tom Anderson. (403-320-6072)

Appendix A: Public Open House

The chart below shows the results from the initial open house held in Lethbridge.

21	21	M	✓	Henderson Lake	✓	✓			✓			
22	21	M	✓	South	✓	✓			✓	✓		
23	18	M	✓	North	✓				✓			Build It!
24	24	M	✓	North		✓			✓	✓		Lethbridge is in dire need of youth development programs and I am excited
25	40	M	✓	South				✓	✓	✓		One central to meet immediate demand, followed by smaller parks to
26	29	F	✓	Downtown				✓	✓			Whatever the city council will support. Ideally an outdoor spot for derby, ball hocky, tennis court, basketball court etc. - we NEED space for roller derby. Not necessarily a full flat track but at least flat space of a decent size to practice drills and fine tune our skills. an ideal solution would be a full court/flat track like at the Forks in Winnipeg.
27	18	M	Diamond City			✓			✓			One bigger facility
28	24	M	✓	South	✓					✓		No Roller Derby! It's a different facility altogether.
29	18	M	✓	North	✓				✓			Galt Gardens location is Perfect!
30	18	M	✓	North	✓	✓			✓			Galt Gardens
31	18	M	✓	West		✓			✓			Build It. Galt Gardens is a perfect place, right across from the mall. It's current use if for drunks and homeless people. Clean up our sity and put a dunk park in there homie!
32	28	M	County of Lethbridge						✓			Fantastic idea, please pursue further.
33	21	M	✓	South	✓	✓			✓	✓		
34	16	M	LA	West	✓	✓			✓	✓		Skate 4 Life
35	21	M	✓	West	✓					✓		Small ones, opposite sides of the city. Have a lot of street influenced obstacles like stairs and rails
36	32	M	✓	South				✓		✓		Smaller ones as to make up the travel difficulties in Lethbridge, as most users are Youth. Transit is wretched in this city. A Large park on the westside would be difficult to access by people on the North + South sides and vice versa.
37	20	M	✓		✓	✓	✓		✓	✓		street plaza, marble ledges.
38	19	M	✓		✓					✓		Would love to see two small parks on both sided os the city. In a developing area and popular spot - street course - plazas
39	17	F	✓	West	✓					✓		
40	26	M	✓		✓				✓	✓		
41	40	M	✓	North				✓		✓		Would like to see a derby track integrated (100'x65') for outdoor practice
42	38	F	✓					✓	✓	✓		Whatever is found to suit the city. Please really consider and do some research into Roller Derby. It is a fastly growing sport and we too need a place to skate.
43	25	F	✓	North				✓	✓	✓		Please consider the needs of the Lethbridge Roller Derby Guild in planning process and building.

Appendix B: Current Space Provided for Similar Recreational Pursuits

Using the statistics from the Alberta Recreational Survey we compared the current facilities provided to similar sports in Lethbridge. Note: This document uses overall percentages for the skateboard community and will not match the percentages used in Section 2.

- BMX Racing
- Soccer
- Tennis

Comparing other recreational pursuits and the current park space allocation within the city of Lethbridge, helps to illustrate how the sport of skateboarding is being addressed at present time.

Alberta Recreation Survey, 2008
Summary of Results
Alberta

Outdoor Activities

Activity	Participating Households		Participating Respondents		Participating Household Members
	Number	%	Number	%	Number
Archery	116	5.1	60	2.7	179
ATV/off-road vehicles	381	16.9	333	14.8	808
Birdwatching	430	19.1	423	18.8	813
BMX racing	27	1.2	20	0.9	50
Day hiking	833	37.0	831	36.9	1891
Fishing	620	27.5	538	23.9	1246
Gardening	1461	64.8	1383	61.4	2586
Golf (other than driving range or mini golf)	982	43.6	874	38.8	1699
Horseback riding/trail riding	243	10.8	179	7.9	425
Hunting	183	8.1	151	6.7	253
Moto-cross	30	1.3	27	1.2	45
Motorized trail biking (i.e., dirt biking)	103	4.6	77	3.4	175
Mountain biking (off-road)	260	11.5	223	9.9	458
Mountain climbing	138	6.1	128	5.7	239
Orienteering	66	2.9	53	2.4	102
Overnight backpacking	134	5.9	118	5.2	230
Overnight camping	894	39.7	838	37.2	2271
Shooting (trap/skeet/target)	150	6.7	140	6.2	225
Other outdoor activity	52	2.3	52	2.6	117

BMX Racing

User Rate
BMX racing was used for our initial comparison as both skateboarding and BMX are typically referred to as "action sports". In Alberta, the average user rate for BMX(as per the Alberta Recreational Survey) is 1.2% over the total households within Lethbridge.

Facilities Provided
There is one main BMX facility located at Dave Elton Park complex. This park is a dirt track of about 7,000 square meters used by many of the local BMX riders. Calculated below is the average square meters per total users:

Area Provided per User
Total Square Meters per User
Total Sq. Mts. provided = 7,000 sq. mts.
74,460 x 1.2% = 894 BMX Riders in Lethbridge
Total Sq. Mts./Total Users = Sq. Mts. per user
7,000 / 894 = **7.8 sq. mt. provided per user**

Appendix B: Current Space Provided for Similar Recreational Pursuits

Squash	13	5.6	10	4.3	18
Swimming (e.g., in lakes, rivers, ponds)	89	38.0	85	36.3	224
Swimming (in pools)	108	46.2	96	41.0	260
Table tennis	22	9.4	21	9.0	48
Tennis	18	7.7	16	6.8	36
Track and field	16	6.8	4	1.7	27
Walking for pleasure	188	80.3	188	80.3	410
Wall climbing	23	9.8	13	5.6	33
Weight training	87	37.2	69	29.5	120
Other physical activity	6	2.6	5	2.1	12

Group Activities

Activity	Participating Households		Participating Respondents		Participating Household Members
	Number	%	Number	%	Number
Basketball	30	12.8	15	6.4	48
Bowling/lawn bowling	57	24.4	57	24.4	132
Curling	19	8.1	13	5.6	28
Football	14	6.0	5	2.1	26
Ice hockey	33	14.1	19	8.1	46
Ringette	4	1.7	2	0.9	7
Rugby	6	2.6	2	0.9	8
Soccer	36	15.4	18	7.7	58
Softball/baseball	25	10.7	19	8.1	48
Volleyball	26	11.1	17	7.3	46
Other group activity	7	3.0	4	1.7	12

Tennis

Tennis was used as a comparison sport as it requires a similar amount of terrain per user as skateboarding. This helps us to determine if the terrain provided in Lethbridge for similar sports is currently adequate. A second reason tennis was chosen is that it is typically a hard surface that is only used for that specific activity (similar to skateboarding).

User Rate

The current user rate in Lethbridge for tennis players is 7.7% of the total households within Lethbridge.

Facilities Provided

Lethbridge has many public tennis courts throughout its parks system. Some of these courts include Lethbridge Tennis Club, Gyro Tennis Courts, and Kinsmen Park Tennis Courts. Adding up the square meters for all public tennis courts within Lethbridge the total comes out to approximately 6,622.5 square meters.

Area Provided per User

4,750 sq. ft.(441.5 sq. mts.) per court(average court size)

74,460 x 7.7% = 5,733 tennis players

Total Courts in Lethbridge x Square Meters per court) = 15 Courts * 441.5 = 6622.5 sq. mts.

Total Sq. Mts./Total Users = Sq. Mts. per user

6,622.5/5,733= 1.15 sq. mts. per user

Soccer

The third comparable sport used was soccer. This sport was chosen as its user group is typically similar in age to that of skateboarding with peak user rates between the ages of 5 and 24. The second reason soccer was chosen is due to the fact that both sports are typically seen as “emerging” in parks and recreation.

Appendix B: Current Space Provided for Similar Recreational Pursuits

Facilities Provided
There are several full size and mini fields provided for soccer players around Lethbridge. Sites like Agnes David School have a combination of mini and mid level fields, while certain sites like Fleetwood Baldwin School only house smaller fields. For the purpose of this document mini and mid level fields were considered "1/2 fields" so that two mini or mid level fields will equal one full size field.

Area Provided per User
Total Soccer fields in Lethbridge
(1 mini field = ½ full size field)
19 Full Size Fields+37 Half Size Fields =
309,375 sq. mts. (8,250 sq. mts. per field)

74,460 x 15.9% = 11,839 soccer players in Lethbridge

Total Sq. Mts./Total Users = Sq. Mts. per user
309,375/11,839 = **26.13 sq. mts. per user**

Physical Activities

Activity	Participating Households		Participating Respondents		Participating Household Members
	Number	%	Number	%	Number
Aerobics/fitness/aquasize/yoga	109	46.6	85	36.3	174
Badminton	18	7.7	13	5.6	32
Bicycling	121	51.7	103	44.0	257
Figure skating	3	1.3	2	0.9	5
Gymnastics	17	7.3	5	2.1	27
Ice skating (not hockey)	34	14.5	32	13.7	88
In-line skating	23	9.8	15	6.4	36
Jogging/running	74	31.6	64	27.4	129
Martial arts (e.g., Judo, Karate)	11	4.7	6	2.6	16
Racquetball	6	2.6	2	0.8	9
Skateboarding	16	6.8	3	1.3	22
Squash	13	5.6	10	4.3	18
Swimming (e.g., in lakes, rivers, ponds)	89	38.0	85	36.3	224
Swimming (in pools)	108	46.2	96	41.0	260

Skateboarding

Facilities Provided
There is one large skate facility currently in Lethbridge. The total skatable area of this park is approximately 19,900 sq. ft. (1,850 sq. mts.). This current facility is approximately 10 years old and is actively used by the local skateboard community.

User Rates
Total Sq. Mts. in Lethbridge = 1,850 sq. mts.
74,460 x 6.8% = 5,063 Skateboarders in Lethbridge
(Utilizing only Alberta Recreation Survey statistics only)
Total Sq. Mts./Total Users = Sq. Mts. per user
1,850 / 5,063 = 0.3 sq. mt. provided per user

Appendix C: Glossary

Various Components

Portable Skatepark – small skate elements constructed of steel, wood, or composite materials. These objects are easily transported and stored. They are suitable for recreation programs on a short-term basis. Long-term use of portable equipment can result in rapid degradation. Resulting maintenance can be costly. This type of park is recommended in a supervised recreation program environment.

Permanent Skatepark – Site built, concrete parks are the best value in a municipal setting. Development fees can be costly, however, the long-term durability, and integrity of the facility will prove cost-effective in the long-run. Users widely express greater satisfaction with a permanent facility. The construction of a permanent facility also indicates to youth that they are being accommodated for the long-term. This is validating to all skateboarders. Costs per m2 for concrete, site-built parks, remain the most inexpensive option for community development. For the purposes of this skate opportunities strategy, we will be referring to 'permanent facilities'.

Modular Skatepark – large, semi-portable skate objects constructed of wood, steel, lightweight concrete or composite materials. Despite significant advancements in the development of modular systems, they are still extremely expensive on an m2 basis. In addition, the ability to move these objects is significantly hampered by available equipment. Damage caused by moving the objects are common, and regular maintenance must be performed to protect users. In some cases, improper lifting techniques causing damage to the equipment will not be covered by warranty. These systems are useful in remote communities without the local expertise to construct a permanent facility. Modular systems are also preferred for staged events as a temporary set-up.

Street skating – Widely regarded as the dominant style of skateboarding today. Board trac survey indicates that 78% of all skaters classify themselves as 'street skaters'. Street skateboarding emerged through the lack of publicly funded, accessible facilities. Youth created their own recreational opportunities by taking their skateboards to the streets. The existing urban fabric provides a wealth of hard surfaces and obstacles. Street terrain has lead to the creation of a variety of tricks that are 'street specific' and can only be performed on street infrastructure: rails, ledges, banks, stairs, benches, medians, etc.

Park skating – With the re-emergence of sanctioned skate facilities, a new type of terrain was popularized. This terrain was not necessarily a replication of the urban environment but rather a close facsimile of the 'real thing'. Rails and stairs are altered to become more 'skate-friendly'. Dimensions are optimized to ensure that users can safely attempt a trick on any given feature. In addition, new obstacles conceived in the minds of park designers offer new challenges to the user group. Park skating includes tricks on and over items such as funboxes, up-gaps, pump-bumps, and wall-rides. Park skating is relatively safe with fewer injuries reported than football or soccer. (NSGA website: www.nsga.org).

Appendix C: Glossary

Various Components

Bowl/Pool skating – Widely referred to as 'old school' skateboarding, bowl and pool skating emerged as a recreational pursuit in Southern California in the 1970's (The Concrete Wave). The use of empty swimming pools as makeshift skateparks, allowed surfers to both practice their skills and innovate on a smaller, skinnier, board. The practice of Pool skating evolved into sanctioned municipal bowl skateparks. With the closure of many skatepark bowls throughout the late 1970's and 1980's, many riders turned to street skating as an alternative. With Skateboarding's resurgence, many 'old school' skaters, and many younger riders are returning to Bowl and Pool skateboarding. Because of the need for a larger, concrete facility, this type of skating is most commonly supported in a municipal park setting.

Freestyle – During the 1980's a style of skateboarding, consisting of fl at-land tricks on a skateboard, emerged. Three-sixties, nose manuals, kickflips, and even the 'Primo Slide' were all performed in coordination to music. If there was a synchronized swimming of skateboarding, this was it. Freestyle could be performed anywhere a smooth fl at surface could be found. Closely preceding the emergence of 'street style' skateboarding, Freestyle involved artistic and free movement on a smaller board and was a very competitive art form throughout the '80's. With the development of larger boards and other changes to skateboard equipment, Freestyle diminished in popularity. This style continues to attract enthusiasts and competitors around the world, but is more of a 'niche' style of skateboarding today. (Thrasher Magazine, Joe Hammeke, April 2004). It should be noted that many of the professional freestyle skateboarders from the late 1970's and 1980's are industry leaders, and successful entrepreneurs within the sport i.e.: Steve Rocco – World Industries, Pierre Andre – owner of Etnies, eS, Emerica, Kevin Harris-Universal distribution. The skateboard industry, comprised of clothing, boards, associated parts, decals, and accessories generates in excess of $1.2 billion per annum (board trac 2003).

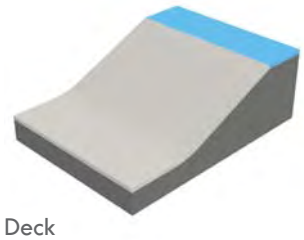
Vert – Vertical skateboarding or 'vert' as it is commonly referred to, is accommodated on a large constructed 'halfpipe' ramp. Practitioners of this style of skateboarding achieve a sense of weightlessness as they reach the vertical section of the half-pipe. Vert skateboarders perform a variety of ariel manoeuvres above and below the lip of the half-pipe. This style of skateboarding has been popularized by X-games, and Gravity games. It is a highly televised style of skateboarding and is currently being considered for Olympic status in 2008. It is not common to accommodate vert skateboarding within a municipal facility.

Downhill – Also known as slope skateboarding, downhill requires a rider to stand (as opposed to street luge – where riders lay on their boards) on a skateboard while going down an inclined slope. Skateboarders normally utilize a longer board, and seek out varied terrain, with most favouring a low traffic, high gradient slope. The International Gravity Sports association (IGSA) sponsors international downhill skateboarding contests worldwide.

Appendix C: Glossary

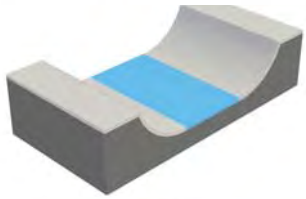
Feature Definitions

Riding Surface – The top layer that comes into contact with the user – can be concrete, wood or dirt / clay for BMX and MTB uses. t is imperative to the success and safety of a ramp that the surface is smooth and not slippery.



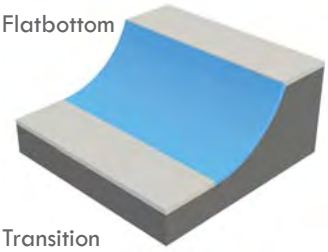
Deck

Deck / Platform – A Flat area on top of a ramp providing a waiting area for users and spectators. A larger deck is better to allow for traffic circulation.



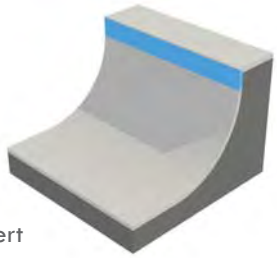
Flatbottom

Flat Bottom – The flat riding surface between various features. Decreasing the length of flatbottom brings obstacles closer and 'tighter' together.



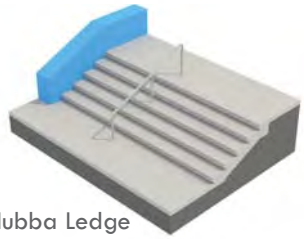
Transition

Transition/Radius – Curved or concave section of a ramp profile, running from horizontal. Transition size is defined by the radius of the circular curve. Smaller transitions create steep, fast ramps while larger ones create a mellow, steady ride.



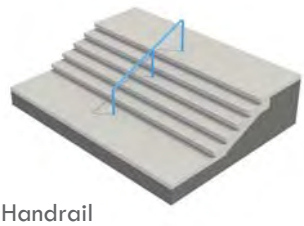
Vert

Vert - The vertical face of a ramp, near the top of a large obstacle. A vertical quarter pipe reaches 90 degrees.



Hubba Ledge

Ledge – A flat, elevated obstacle such as a concrete bench that can be waxed and grinded. Traditionally found in street skating or street courses.

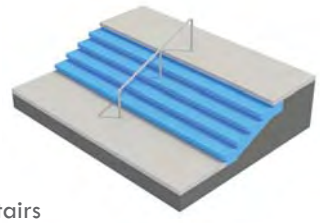


Handrail

Rail – An elevated steel rail running down the length of a staircase such as a pedestrian handrail. Rails can also be freestanding such as a Flat Bar.

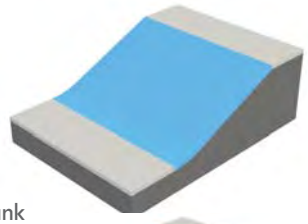
Appendix C: Glossary

Feature Definitions



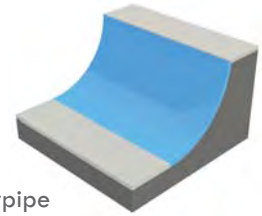
Stairs

Stairs – Concrete stairs connecting various elevations. Simple staircases are a street skating staple.



Bank

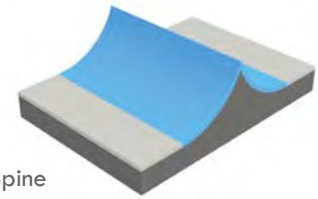
Bank - Any sloped 'flat wedge' type obstacle, with no curved transition.



Quarterpipe

Quarter Pipe – A vertical or near vertical concave ramp used to turn around 180 degrees. Quarter pipes area a transition park must-have.

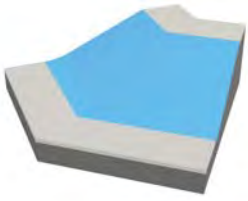
Spine - Where two quarter pipes are connected back to back to form a volcano shaped obstacle. Spines can be placed in between two mini ramps to form a 'spine mini' ramp combo for technical users.



Spine

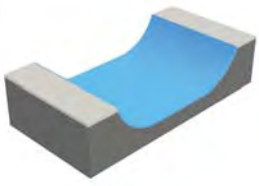
Roller – A simple rolling 'bump' that can be used to carry momentum. A simple, low lying obstacle.

Box Jump – A concave or transitioned launch ramp with a sloped landing connected by a flat deck area. This obstacle is used to catch big air and perform tricks.



Hip

Hip – Two ramps connected off –axis and forming a bend from 10 - 90 degrees. Users change direction mid-air and land travelling in the new direction or line. Hips are a fun and versatile option that can be applied to a variety of terrains and ramps.



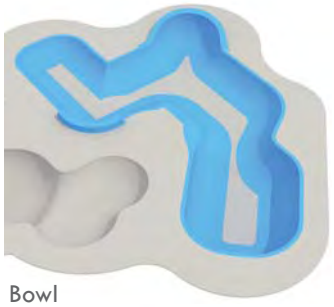
Miniramp

Mini Ramp – A scaled-down half pipe with smaller transitions, not reaching vertical. Mini ramps are ideal solutions for public parks offering the potential to learn basic skills on a smaller ramp, and are popular amongst all Action Sports.

Appendix C: Glossary

Feature Definitions

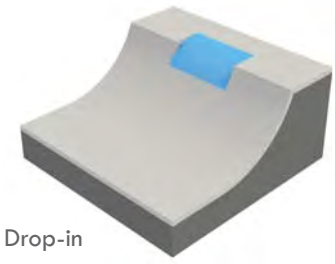
Vert Ramp / Half Pipe - The largest and most challenging of all ramps, and is often the signifier of a fully equipped skatepark. Vert ramps are 2 wide, opposing quarter pipes separated by a flatbottom. Vert ramps are designed with large transitions to enable big air tricks. A full size vert ramp has an elevated deck height of 10' or more, and is generally wooden construction. Vert has been a contest staple for BMX, inline and Skateboarding since their inception.



Bowl

Bowl – A fully or partially enclosed 'pool' shaped feature. Bowls are typically built below grade and offer multiple options for riding due to their unique shape.

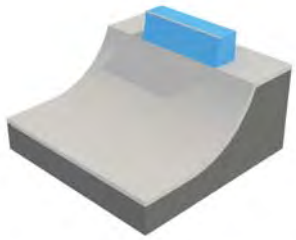
Drop in – An elevated starting platform used to produce momentum. This can also be used to describe the starting of a run in a park – ie - "I am dropping in next."



Drop-in

Extension - Additional elevation of a quarter pipe or launch ramp that is usually designed to give advanced users more air.

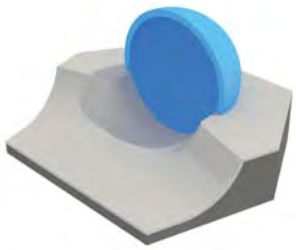
Sub Box – An elevated box at the top of a quarter pipe or wedge that is used to stall or grind on.



Stubbox Extension

Wallride – An elevated wall at the top of a quarter pipe or wedge that is used to ride across horizontally – primarily a BMX obstacle. When used correctly, riders 'stick to the wall' when riding across at speed.

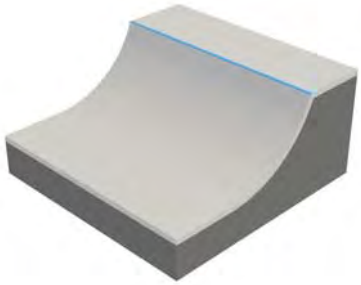
Curved Wall Ride – An elevated, curved wall at the top of a quarter pipe or wedge that is used to ride across horizontally – primarily a BMX obstacle.



Cradle

Cradle – An over-vertical quarter pipe extension that is rounded to connect bowl or pool corners. An advanced feature that allows users to go nearly upside down when used properly.

Appendix C: Glossary



Coping

Feature Definitions

Coping – Steel bar running along the top edge of a quarter pipe or ledge. This durable edge enables grinding and sliding tricks to be performed, while protecting the concrete underneath.

Pool Coping - manufactured masonry produce similar in shape and function to that typically manufactured for swimming pools.

In-Ground Concrete Skatepark - a permanent, concrete structure built in ground that is to be used for Action Sports such as skateboarding and BMX.

Prop - sections of the skate surface, which is level, inclined, declined or curved surface on which the user can manoeuvre.

Protective Edge – A durable material that protects accessible edges of intersecting and terminating planes on the riding surface or props for the purpose of reducing wear.

Glossary of Skateboard Tricks

Air - riding with all four wheels off the ground; short for aerial.

Backside - when a trick or turn is executed with the skater's back facing the ramp or obstacle.

Caballerial - a 360-degree turn performed on a ramp while riding fakie (backwards) named after skater Steve Caballero.

Carve - to skate in a long, curving arc.

Fakie - skating backwards—the skater is standing in his or her normal stance, but the board is moving backward (not to be confused with "switch stance."

Frontside - when a trick or turn is executed with the front of the skater's body facing the ramp or obstacle.

Goofyfoot - riding with the right foot forward, the opposite of "regular foot."

Appendix C: Glossary

Glossary of Skateboard Tricks

Grind - scraping one or both axles on a curb, railing, or other surface, such as:
Crooked grind: grinding on only the front truck while sliding
50-50 grind: grinding on both trucks equally
Nosegrind: grinding on only the front truck
5-0 grind: grinding on only the back truck

Kickflip - a variation on the "ollie" in which the skater kicks the board into a spin before landing back on it.

McTwist - a 540-degree turn performed on a ramp, named after Mike McGill.

Mongo-foot - a style of pushing where the back foot is kept on the board and pushing is done with the front foot.

Nollie - an ollie performed by tapping the nose of the board instead of the "Tail Nollie."

Noseslide - sliding the underside of the nose end of a board on a ledge or lip.

Ollie - a jump performed by tapping the tail of the board on the ground; the basis of most skating tricks.

Railslide - a trick in which the skater slides the underside of the deck along an object, such as a curb or handrail.

Regular foot - riding with the left foot forward, the opposite of "goofyfoot."

Shove-it - a trick performed by spinning the board 180 degrees beneath the feet while traveling forward.

Switch stance - riding the board with the opposite footing than usual, i.e. "goofyfoot" instead of "regular foot."

Tailslide - sliding the underside of the tail end of a board on a ledge or lip.

Appendix D: Site Selection Criteria

Planning Criteria

Good Transportation Access

Transporation is an essential component for bringing skateboarders from all around the surrounding community.

Proximity to Pedestrian Routes

Sidewalks, park trails, and bike pathways are key ways that the skateboard community access skateparks. When consider a skatepark location, the proposed park should have access to one of these three forms pf pedestrian routes. It is also important to consider interaction between these pedestrian routes and vehicular traffic.

Compatibility with Current Site Users

Ensuring the skateboard community feels welcome in their new facility helps to ensure the skatepark will remain popular throughout its lifespan. Possible compatible users include: other action sports facilities, playgrounds, basketball courts, and urban plazas. These uses are often used in conjuction with the skatepark and will not conflict with the skateboarders or other users enjoying the park.

Compatibility with Adjacent Uses

The skatepark must also be compatible with the surrounding properties. Skateparks tend to be more successful in urban settings. This typically includes mixed-use developments and smaller commercial areas. Skateboarders have a large contigent of passive observers typically involved in their activity which lends itself to increased commercial activity for the surrounding businesses.

Setback or Buffer from Residential Areas

Ensuring the skatepark location has a proper buffer helps to reduce the possibility of local resident conflict with the park. Although skateparks are generally well-maintained, safe features within a park the increased traffic in what may have been previously a passive park can be a shock to some homes around the park. With that in mind, a setback from backyards and homes across the street should be considered when locating the skatepark.

Proximity to Parking

Parking has a direct correlation to the transportation access portion of the evaluation matrix. With access to transportation comes the demand for on-site parking. These parking requirements will vary depending on park size, but most parks larger than a neighborhood park will require some form of parking area.

Appendix D: Site Selection Criteria

Public Transit Accessibility

The final piece of the transportation puzzle is access to public transit. Skateboarders come from all backgrounds and all parts of the city. Some of these users may not have access to a vehicle and may live a significant distance from the park site. Ensuring these users are provided a public transporation option is an important component in making the skatepark accessible to every user.

Social/Economic Impact

This evaluation criteria is especially important to local business owners. As state in the adjacent users section, skateboarders are typically passive and active users. While waiting between skateboarding runs, observers may shop at a local retail center, convenience store, or restaurant. This activity is especially prevelant in the larger scale skatepark facilities. Other social impacts may include a change in demographic within the park. The average age of the user will most likely be pushed downward, this may help to increase the use of different structures within the park.

Site Specific Criteria

Park or Urban Setting

Whether the skatepark is in a passive open park or an urban setting will have a great effect on the overall park proposed. High traffic areas require different design elements then skatepark elements that will be used solely by the skateboard community. An example of an urban setting park can be seen on the left.

Adequate Site to Accommodate Anticipated Program Elements

Providing adequate space within the park will help the skatepark fit in with the surrounding landscape. These spatial considerations also need to consider the program elements that may be needed outside of the park itself (i.e. drinking fountains, shade structures, signage).

Ease of Development

This section takes into consideration any issues that may arise during the locating of the skatepark. Some of these issues may include various required permits, utility conflicts, and unforeseen political issues. It is important when selecting the skatepark site that the location chosen is seen to benefit from the skatepark itself.

Appendix D: Site Selection Criteria

Visibility from Exterior/Interior Roads and Pathways

For safety of both the skateboarder and local residents it is important the skatepark be visible from all areas of the park and surrounding community. This ensures the skatepark remains a safe and secure site for all users.

Impact on Existing Landscape

Skateparks need to fit into the surrounding landscape.

Potential for Viewing Areas and Informal Seating

Creating seat for the skatepark is an important part of user participation. Passive viewers may also be incorporated into plaza areas to encourage nontraditional viewers.
Proximity to Shelter and Existing Amenities

Ensuring the skatepark location has a proper buffer helps to reduce the possibility of local resident conflict with the park. Although skateparks are generally well-maintained, safe features within a park the increased traffic in what may have been previously a passive park can be a shock to some homes around the park. With that in mind, a setback from backyards and homes across the street should be considered when locating the skatepark.

Lighting

A skatepark with adequate lighting will allow use of the facility during the evening. During the winter this will help to attract older, working skateboarders who may otherwise not have recreational options.

Appendix E: Site Selection Matrix

			SAMPLE PARK A	SAMPLE PARK B	SAMPLE PARK C	SAMPLE PARK D	SAMPLE PARK E	SAMPLE PARK F	SAMPLE PARK G	SAMPLE PARK H	SAMPLE PARK I	SAMPLE PARK J	SAMPLE PARK K	SAMPLE PARK L	SAMPLE PARK M	SAMPLE PARK N	SAMPLE PARK O	SAMPLE PARK P	SAMPLE PARK Q	SAMPLE PARK R
	Planning Criteria		6	8	3	4	6	7	2	4	4	6	5	2	9	4	2	10	8	6
	Good Transportation Access Transportation is an essential component for bringing skateboarders from all around the surrounding communities	Scale of 1 to 10	7	6	4	4	7	7	2	5	5	6	5	2	9	5	2	8	8	8
	Proximity to Pedestrian Routes Sidewalks, park trails, and bike pathways are key ways that the skateboard community access skate parks. When consider a skate park location, the proposed park should have access to one of these three forms pf pedestrian routes.	Scale of 1 to 10	6	8	5	5	6	5	5	5	4	6	7	2	8	5	2	7	6	5
	Compatibility with Current Site Users Ensuring the skateboard community feels welcome in their new facility helps to ensure the skate park will remain popular throughout its lifespan.	Scale of 1 to 10	6	6	3	4	6	6	4	6	4	7	7	3	9	3	2	8	5	5
	Compatibility with Adjacent Uses The skate park must also be compatible with the surrounding properties. Skate parks tend to be more successful in urban settings. This typically includes mixed-use developments and smaller commercial areas.	Scale of 1 to 10	6	8	4	5	7	8	2	6	6	8	7	3	8	3	1	9	8	8
	Setback or Buffer from Residential Areas Ensuring the skate park location has a proper buffer helps to reduce the possibility of local resident conflict with the park.	Scale of 1 to 10	7	8	3	3	7	4	4	5	4	5	7	1	8	5	1	8	6	6
	Proximity to Parking Parking has a direct correlation to the transportation access portion of the evaluation matrix. With access to transportatio comes the demand for on-site parking.	Scale of 1 to 10	6	8	2	3	7	8	2	5	5	7	5	1	8	5	1	8	7	6
	Public Transit Accessibility The final piece of the transportation puzzle is access to public transit. Skateboarders come from all backgrounds and all parts of the city. Some of these users may not have access to a vehicle and may live a significant distance from the park site.	Scale of 1 to 10	6	6	2	3	7	4	2	5	5	8	5	1	8	1	1	8	8	5
	Social/Economic Impact This evaluation criteria is especially important to local business owners. As state in the adjacent users section, skateboarders are typically passive and active users. While waiting between skateboarding runs, observers may shop at a local retail center, convenience store, or restaurant.	Scale of 1 to 10	6	8	2	2	5	2	4	4	2	8	4	1	8	4	1	8	8	5
	Site Specific Criteria		6	6	5	5	5	3	4	5	5	5	8	1	8	6	5	6	5	5
	Park or Urban Setting Whether the skate park is in a passive open park or an urban setting will have a great effect on the overall park proposed.	Scale of 1 to 10	6	8	2	2	6	6	2	3	2	8	6	1	8	1	1	7	8	6
	Adequate Site to Accommodate Anticipated Program Elements Providing adequate space within the park will help the skate park fit in with the surrounding landscape.	Scale of 1 to 10	5	8	2	6	6	4	3	6	0	4	8	2	9	5	3	5	6	8
	Ease of Development This section takes into consideration any issues that may arise during the locating of the skate park.	Scale of 1 to 10	6	8	3	4	6	5	2	6	6	4	6	1	8	5	2	7	5	6
	Visibility from Exterior/Interior Roads and Pathways For safety of both the skateboarder and local residents it is important the skate park be visible from all areas of the park and surrounding community. This ensures the skate park remains a safe and secure site for all users.	Scale of 1 to 10	5	6	0	2	5	4	0	2	3	6	2	0	8	0	0	5	6	4
	Impact on Existing Landscape Skate parks need to fit into the surrounding landscape.	Scale of 1 to 10	4	8	2	6	4	3	2	5	1	4	7	0	9	5	1	7	5	6
	Potential for Viewing Areas and Informal Seating Creating seat for the skatepark is an important part of user participation. Passive viewers may also be incorporated into plaza areas to encourage nontraditional viewers.	Scale of 1 to 10	2	8	2	5	2	3	0	0	2	4	7	1	9	5	0	5	5	4
	Lighting A skate park with adequate lighting will allow use of the facility during the evening. During the winter this will help to attract older, working skateboarders who may otherwise not have recreational options.	Scale of 1 to 10	8	8	5	6	7	6	10	3	6	3	6	5	5	4	1	3	8	6
	Total Score		**98**	**126**	**49**	**69**	**99**	**85**	**50**	**75**	**64**	**99**	**102**	**27**	**139**	**66**	**26**	**119**	**112**	**99**

List of Figures