RETHINKING THE LANDSCAPES OF LEARNING:
THE POWER OF PLACE ON CHILDREN'S IDENTITIES.

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ABSTRACT

This practicum outlines a conceptual design proposal for the École Lorette Immersion schoolyard, in Lorette, Manitoba. The goal of the proposed schoolyard is to provide students with high quality outdoor learning spaces that help to connect students with their local identity and enable the development of self-concept. The design of the École Lorette Immersion schoolyard is an attempt to align educational goals within an environment that provides for various types of play, while reconnecting children to nature.

The practicum investigates the role of landscape architects in identifying and understanding the development of place identity in children with application to schoolyard design. Design principles are developed to reflect place identity, as well as enable outdoor learning experiences, cognitive development, and provide long-term community investment in the success of the project. To provide support and expand on these ideas, schoolyard case studies that use research and design principles related to place identity and enhanced learning were explored.

The design process of this practicum follows the strategies determined through a body of theoretical research. Community engagement became integral to the design process, providing the community an opportunity to voice their opinions. Students, staff and members of the community were invited to participate and share their opinions about Lorette, the current schoolyard and suggestions for the future schoolyard. This participation process helped guide the design process to include schoolyard features that were suited to the wants and needs of the community. The design integrates elements representative of local culture and history, all the while emphasizing connecting children to naturalized outdoor spaces, bringing learning outdoors and providing children with places to play.

There was a child went forth every day,
And the first object he look'd upon, that object he became,
And that object became part of him for the day or a certain part of the day,
Or for many years or stretching cycles of years.

The early lilacs became part of this child,
And grass and white and red morning-glories,
and white and red clover,
and the song of the phoebe-bird,
And the Third-month lambs and the sow's pink-faint litter,
and the mare's foal and the cow's calf,
And the noisy brood of the barnyard or by the mire of the pond-side,
And the fish suspending themselves so curiously below there,
and the beautiful curious liquid,
And the water-plants with their graceful flat heads, all became part of him.

- Walt Whitman
(Whitman, 1995, pp. 332-334)

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PREFACE

The connection between people and place is a topic that has become of great personal interest in my academic career. I am interested in the role of a landscape architect in engaging communities and fostering healthy connections between people and the environment, especially those relationships with children. I have always been interested in the social aspects of landscape architecture – why do people use a space in a certain way? What is a landscape's story or narrative? How can a landscape architect interpret this narrative and build upon it through design? These questions have directed the focus of my school studio projects as well as several professional decisions.

I believe that my childhood greatly influenced the path I follow today. I grew up in Old St. Vital along the Seine River, where as a child I spent much of my time playing with my neighbourhood friends. We explored, experimented and tested our limits of fear and of courage. We built forts, caught frogs, tobogganed, and let our imaginations run wild. We even spent several weeks in the springtime collecting garbage from the paths, restoring 'our forest' to the pristine image of 'nature' that we envisioned. Now that I am studying landscape architecture, I often look back to periods of my life that may have influenced my career path. When I visit that section of the Seine River, I understand why I have such a strong connection to nature and why I want to pass this gift on to society.

I am the daughter of an early years teacher who has a passion for her craft. She has always been an advocate for creating learning environments that enhance pedagogical opportunities. To this day, we have a summertime ritual where we set up her classroom for the next year with seashells, plants, driftwood, woven baskets, and other earthy items she has collected over the years. Unexpectedly (and possibly even unwillingly) her enthusiasm for education has rubbed off me.

I entered the Environmental Design undergrad program at the University of Manitoba with very little knowledge of my identity or of my talents and interests. When reflecting upon my experience, a theme appears in much of my academic work – place identity. This theme emerged especially through studio designs, including a mobile dwelling for residents to explore their spirituality, a series of community gardens for people who came from agrarian-based countries, or a park that encourages different opportunities for spirituality or remembrance. Each of these projects involved analysis of how local people connect with their exterior environments and how to interpret these connections into landscape design features.

Following my undergraduate degree in Environmental Design at the University of Manitoba, I had the opportunity to work with a construction company, J&D Penner. They received a contract to build custom play structure features for the Variety Heritage Adventure Park at The Forks, designed by HTFC Planning and Design for Parks Canada. My job was to create digital construction drawings, operate a CNC (computer numerical control) Hot Wire Foam Cutter machine to cut out styrofoam pieces, and to construct, sculpt and paint the features. The design of this playground was intended to encourage active and imaginative play while educating children about local history. This experience taught me so much about the opportunities and also the responsibilities when designing for children and youth.

I continued my academic journey into the Master of Landscape Architecture program at the University of Manitoba, where I resumed my exploration in place identity. After the completion of my first year of the program, I landed the opportunity to design the schoolyard for École Lorette Immersion in Lorette, Manitoba.

My connection to Lorette and this project is linked to my childhood story. An adventurous friend from my childhood recently married a teacher, started a family, and moved to Lorette to be closer to nature. The school of choice for this teacher was École Lorette Immersion, where he volunteered for the schoolyard revitalization committee. They offered me an opportunity to contribute to the design process, and they graciously accepted my request to incorporate the project in my practicum.

1 RESEARCH CONTEXT

Framing the Research

Access to nature has become limited and undervalued in urban environments. Children are given fewer opportunities for active, imaginative play, and to connect with nature (Louv, 2008, p. 2). This means the time children spend in the schoolyard may be increasingly important for satisfying physical and developmental childhood needs. Unfortunately, schoolyards do not always provide children with high quality outdoor learning environments. Many schoolyards have become overly programmed, restricted and regulated, and time allotted for outdoor active play has been reduced (Freeman & Tranter, 2011, p 58). In addition, the lack of satisfactory outdoor learning environments in schoolyards has led to educators not wanting to take their students outside during their lessons. This is unfortunate as it is becoming widely understood that play can greatly increase cognitive function, which can increase academic performance of children (Freeman & Tranter, 2011, p. 63).

Children are greatly shaped by their surrounding social and physical environments. These environments may influence how children develop physically, mentally, intellectually, morally and socially. When children are not provided with environments that encourage stimulating, active and imaginative play, their development may be significantly effected (Gamson Danks, 2010, p. 24). When considering the design of developmental environments for children, it is essential to understand how children develop, learn, interact, and play. It is also important to determine the nuances of the community, and the local histories that have shaped the children involved in a project. In addition, children use and view their environments

in unique spatial ways, which can be very different from use by adults. That being said, children are rarely included in the design or construction process of their environments. When children are allowed the opportunity to participate in the process, the project may end up more suitable to the scale and interests of children.

Community engagement can enrich any community use project, especially the design of schoolyards. When engaging the community in the process, a narrative may be built of local culture, which can be interpreted and used to create comfortable and enjoyable spaces. When children feel a sense of familiarity and safety in their environments, they are more likely to engage in activities, allowing further cognitive development. Engaging the community can also increase the sustainability and longevity of a project, due to higher interest in seeing the project through and maintaining it long term.

Research Purpose and Objectives

The purpose of this practicum is to examine the role environments play in the development and education of children, and the portrayal of community identity. Emphasis is situated upon the "power of place", as in the human connection to physical places, and the application in schoolyards to facilitate active and imaginative play, enhancing cognitive development. The role of the landscape architect in engaging the community and fostering healthy connections between people and the environment is identified.

The practicum explores the environment-behavior relationships present in Lorette, Manitoba, specifically those pertaining to the École Lorette Immersion schoolyard. Within this context, an objective is to understand these environment behavior relationships and their affects on the ways residents of Lorette, Manitoba use and view their local environment. To achieve this, students and staff at École Lorette Immersion and community members in Lorette, Manitoba are to be engaged in the design process. Based on this data, how best to foster beneficial learning environments and place identity through design will be determined. Finally, a conceptual design plan for the schoolyard at École Lorette Immersion will be developed.

Methodology

Introduction

Following a qualitative research methodology, which is an approach for collecting and analyzing data used for "exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2013, p. 4), this practicum involved a concise review of schoolyard design for enhanced learning.

Various methods of data collection and analysis were conducted in this practicum, including a review of literature, case study analysis, student, staff and community surveys, site analysis study and community design consultations. Data collection was concerned with "achieving deep engagement with participants to achieve authentic accounts of how they construct their social reality" (Gray, 2009, p. 167). The role of the researcher in this study was to be perceptive and insightful. It was important to be responsive to sensitive situations, to perceive what was important and what was not, and to reflect on how bias of personal background and system of beliefs may influence the data (p. 183).

Research Methods Overview

The review of pertinent literature was conducted regarding the role of a landscape architect in understanding the development of place identity in children. The literature was chosen through a targeted literature search including "publications relevant to a given research problem, concept, or question", which in this case is place attachment in children (Deming & Swaffield, 2011, p. 146). The goal of this literature review was to develop a baseline of knowledge about this topic and synthesize the information in order to direct further research for this practicum (p. 146). The findings of the literature review highlighted the importance of providing children with spaces that are active, challenging and educational, enabling development and healthy play. In addition, engaging the community in the design process ensures longevity of the site and a sense of local pride.

The literature review is followed by an exploration of schoolyard design principles and features that provide students with enhanced learning opportunities through connection to nature, integration of local identity, outdoor learning spaces and features and play everywhere. This exploration was developed out of the findings of the literature review and built the framework for the comparative case studies in the following chapter.

Next, in order to review community engagement process and design features for enhanced learning opportunities, four comparative case studies were utilized. The case studies were based on landscape architecture projects that built upon my knowledge of place identity through design and engaging children in the process of landscape design. A case study is "...an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Groat & Wang, 2002, p. 346). These case studies were descriptive, exploratory analyses of projects relevant to my area of research. They were chosen according to specific criteria that were determined as an outcome of the literature review and the exploration of design principles and features.

A further method of research included community consultation using surveys, which were distributed to students, faculty, parents and community members at École Lorette Immersion. The surveys were designed to orient the responses toward a discussion about schoolyard design that suits the needs for a maximum amount of the community members as well as to find out what the participants use the current schoolyard for. These answers also helped determine what the place identity pertaining to the community is, so it could be incorporated into the design of the schoolyard. Surveys were differentiated according to participant groups, including students, teachers, and parents/community members.

Site analysis research using observation methods were then utilized to gain insight into the physical site features, character, and use of the École Lorette Immersion schoolyard. Locations of activity was noted in relation to the physical environment, documented through mapping and section description. This form of documentation built a narrative of the local place identity, describing the relationships between the people and the physical environment. The data collected was analyzed and represented in a parametric approach, identifying stories of use through the layering of data. Historical analysis of Lorette, Manitoba was also explored so to build upon the present day narrative of the community. Historical settlement documentation, including stories and maps, were analyzed in an effort to understand the evolution of the community.

The final method of qualitative research is the site design, which was conducted through various iterations of conceptual design for École Lorette Immersion schoolyard. These iterations provided analysis for the functionality of the design concept and helped improve the final outcome of the practicum research. Design iterations began using references from previous literature and case study research, then were developed further using the feedback from participants. At this stage community design consultations were used to help guide the design process further. Participants were invited to discuss their questions, comments or concerns regarding the design of the schoolyard. Data collected from all of the community consultation methods was interpreted and used to inform the design of the École Lorette Immersion schoolyard.

The purpose of this qualitative research is to understand and explain how to utilize place identity data to enrich learning opportunities for children. This research is relevant to the landscape architecture profession due to the necessity to provide children with opportunities to connect with nature and with their communities. Currently, many communities do not have adequate provisions to accommodate children with these goals, leading to developmental, health and social issues. I believe that landscape architects have the ability to make a positive difference to children's lives, and could consider the principles determined through this data when designing spaces for children.

Relevance and Conclusions

This research aims to build trust in the community of Lorette, Manitoba, through participation, while considering the human ethics of the process. Residents of Lorette have detailed knowledge about their land, heritage and amenities, and are considered as key resources for this practicum. By listening to the narratives about Lorette and École Lorette Immersion, the research questions developed and evolved. Depictions of place identity emerged from the data, with reflection upon the surveys, conversations and consultations. The application of information focused the design process, in conjunction with case study and educational theory research.

Through this process I learned the value of articulating a concise research framework, including outlining my system of beliefs, role as a researcher and objectives. I found that the local constituents have extensive knowledge that can often be more advantageous than any other data source. Finally, I have learned to constantly reflect upon the research as it grows and evolves through a qualitative research system.

2 LITERATURE REVIEW

Introduction

Research in environmental psychology indicates that children's experience with their environments has major impact on the development of identity and self-concept (Spencer & Blades, 2006, p. 1). A child's experience with the environment is very different from an adult's experience, yet adults often design environments for children with no consultation with children, creating spaces that do not meet the expectations and needs of children regarding their experience with the environment (Day, 2007, p. 3; Spencer & Blades, 2006, p. 1). Having children participate in the design process for their environments can create urban neighbourhoods that are culturally vibrant (Sutton & Kemp, 2006, p. 257; Goodnow, Miller, & Kessel, 1995, p. 43). Children participants can benefit from "such inclusion and can make valuable contributions to playful, transformative thinking" (Sutton & Kemp, 2006, p. 256). I believe that the essence of landscape architecture is to "create, reproduce or mold the identities of places through manipulation of the activities, feelings, meanings and fabric that combine into place identity", therefore participation with local residents and stakeholders allows the landscape architect to build a narrative of place identity, contributing to or creating places that suit the needs and desires of the people who use them (Hague, 2005, p. 8; See also: Kirk, 2005, p. 139).

Thesis Statement

The focal theme of place identity in children was chosen for this literature review due to the relevance to this practicum, which is a study about designing learning environments for children. Landscape architects could identify and utilize place identity in children when designing learning environments. This is significant when aiming to provide children with spaces that are familiar or comfortable, which can enable enhanced learning capabilities and self-concept growth (Spencer & Blades, 2006, p. 1). Identifying with a place, for example a schoolyard, encourages use, ownership and sense of pride, encourages active play and provides healthy learning (Derr, 2006, pp. 108-110). The importance of place identity research focused on children will be defended in this literature review by discussing why and how people, especially children, develop place identity. The role of landscape architects in identifying place identity through participatory action, the benefits of participation on design and project longevity, as well as understanding how children develop through experience with nature will be explored. The aim of this paper is to review and synthesize the selected literature and defend the thesis stating that landscape architects could identify and utilize place identity in children when designing learning environments. The expected outcome of this literature review is to create a background of knowledge that may direct further research in the practicum, and aid in the goal of designing learning environments for children.

Background

Environment-behavior research is an interdisciplinary field of research developed out of the psychology and sociology fields that became prominent in the 1960s (Vernez Moudon, 1992, p. 447). The researchers in this field were interested in the relationships between peoples' experiences and behaviors within the built environment (Nickerson, 2003, pp. 1-2; Russell & Ward, 1982, p. 652). From the field of environment-behavior research came the concept of place identity (Casakin & Neikrug, 2012, p. 108). Research on place became prevalent in the 1970s when phenomenological geographers and scholars "realized the need to explore the topic in terms of its everyday lived dimensions" (Seamon, 2012, p. 3; See also: Tuan, 1974; Relph, 1976; Buttimer, 1976; Buttimer & Seamon, 1980). Environment-behavior research was mainly focused on relationships with the built environment, until the 1980s, when the field of research evolved to include peoples' experiences with the natural environment (Clayton & Opotow, 2003, p. 7; Seamon, 2012, p. 4). The concept of place identity was introduced and made famous by Harold Proshansky and several of his environmental psychology colleagues (Bernardo & Palma-Oliveira, 2012, p. 36; Proshansky, 1978; Proshansky, Fabian, & Kaminoff, 1983; Proshansky & Fabian, 1987). This concept currently has applications across various disciplines, including landscape architecture and planning (Clayton & Opotow, 2003, p. 7; Vernez Moudon, 1992, p. 447). Research focused on place identity in relation to the natural environment is important for successful, sustainable design, and will be the focus of this literature review.

Definitions of Pertinent Terms

To begin this review of literature, definitions of terms common to the themes will be summarized and compared. The terms to be discussed in this section include place, identity, nature, and environment. These terms were chosen not only for their relevance to this study, but also because they were identified as terms that are contested among authors of the literature.

Place

The term place has multiple definitions or meanings and seems to be highly contested among researchers depending on their focus of study. Many of the definitions focus on geographical categorization; however, many are also concerned with social, or sensorial organizations of space. When used in reference to place identity, place can indicate "fragments of human environments where meanings, activities and a specific landscape are all implicated and enfolded by each other" (Relph, 1992, p. 37). Rose (1995) identifies place as "infused with meaning and feeling" (p. 88). Jenkins (2005) adds that place can be perceived as a "social-geography", which indicates a "predominantly socio-cultural perception and definition of space" (p. 20). Based on these definitions in reference to place identity, place suggests a combination of experience, narrative, memory and/or interpretation (Hague, 2005, pp. 4-5). When individuals, groups or societies receive similar meaning from experience with a localized place, "centres of meaning constructed out of lived-experience" may be formed (Goličnik Marušič & Nikšič, 2012, p. 122; Relph, 1976). In this review, place will be defined in terms of place identity, meaning a socially perceived organization of space that has specific associated meanings and feelings.

Identity

The definition of the term identity is quite complex and has broad meanings and varying applications. Due to the complexity of the term, it will be defined based upon the concept of place identity, which comes from the psychology and psychiatry fields of research (Hague, 2005, p. 5). The term identity stems from the Latin word idem, meaning 'the same', indicating components of self that are central and definitive (p. 5). Identity in relation to place identity is noted to be "what is central, real and typical to something or someone" (Amundsen, 2001, p. 5). The term is "linked with self-concept and involving beliefs about who we are and who we want to be" (Clayton & Opotow, 2003, p. 5). In addition, identity is often "described as a way of organizing information about the self" (p. 45). This concept of organizing information indicates that identity "involves consciousness, knowing and acting on that knowledge" (Hague, 2005, p. 7). Identity in relation to place has many contributing factors, "formed as it is by citizens organizing their own life in their own interests, however within a common legal framework of society" (Groth, 2002, p. 17). The characteristics of identity "must be social and contractual" because it is "about the relation between individuals, groups and other" (Hague, 2005, p. 7). The term identity in this review will be considered according to the concept of place identity, and will be defined as a group's collective and individual categorization of self.

Nature

As landscape architects are responsible for the design of exterior spaces for children, it is important for landscape architects to consider how children develop place identity due to experience with natural environments. The definition of nature will first be determined because it is a term that is often contested among scholars and is used in a multitude of contexts. In the literature focused on psychology and place identity, nature is described as a Jungian archetype in which people connect with, as matter that has not been altered by human influence, and as environments that do not appear to have been altered greatly by human influence (Foster, 2011, p. 10; Wohlwill, 1983, pp. 6-7; Clayton & Opotow, 2003, p. 6). As noted by Kahn and Kellert (2002), components of nature may include "plants, objects (such as rocks), events (such

as storms), and of course animals" (xiii). Nature in terms of place identity and landscape architecture is a concept based upon visual perception and physical experience, and is often described as environmental identity (Verbeek & de Waal, 2002, p. 5; Clayton & Opotow, 2003, p. 8). In this paper the term nature will be defined according to the definitions indicated by the literature in this review, as environmental features that have been minimally changed by humans. The stance in this literature review should be made clear, that landscape architects cannot recreate nature but can create models of nature with the appearance of minimal artificial change.

Environment

The specification of the term environment was chosen in this literature review because of the frequent use in place attachment theory, especially when concerned with outdoor environments, which are the focus of this practicum. The term will be defined according to place identity or environmental identity, especially concerning experience with the environment. The environment can be classified according to physical environmental information, which can include weather conditions and topography "at varied spatial and temporal scales", and biological environmental information, including vegetation (Heerwagen & Orians, 2002, p. 30). Environments can be defined as "not only physical spaces of all sorts, but also sociocultural contexts, neighborhoods, institutions, and organizations – essentially any context in which people can find themselves" (Nickerson, 2003, p. 2). In terms of children's place identity, environments can include "classrooms, playgrounds, homes and yards, towns, communities, countryside, natural environments and the wider world" (Spencer & Blades, 2006, p. 3). In this literature review, the term environment will be defined according to the examples of the authors noted, to be a single place that is classified by complex organizations of scale, physical land features and socio-cultural hierarchies.

Place Identity

When place identity is analyzed and understood by landscape architects, spaces can be designed to suit the needs of the people who use the space. When considering children and their needs in a schoolyard, it can be extremely beneficial to determine their place identity in order to provide engaging learning environments that promote active, safe and imaginative play (Day, 2007, p. 11).

Definition

The term place identity will be defined before continuing further in this exploration in order to assert a clear stance on a term that often lacks clarity or consistency in environment-behavior research. Place identity can be a characterization of self-concept, which is formed by a process "whereby people living in or otherwise associated with a place take up that place as a significant part of their world" (Seamon, 2012, p. 17); See also: (Hernández, Martin, Ruiz, & Hidalgo, 2010, p. 281; Maryland State Department of Education, 2012). The concept acknowledges "those dimensions of the self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment" (Proshansky, 1978, p. 155). Individuals each interpret and characterize self-concept differently according to the "ideas, feelings, attitudes, values, preferences, meanings and conceptions of behavior and experience which relate to the variety and complexity of physical settings that define the day-to-day existence" (Proshansky, Fabian, & Kaminoff, 1983, p. 59; Bonaiuto, Breakwell, & Cano, 1996, p. 160). In this literature review, place identity will be defined according to the definitions noted previously, as the self-concept of a group or individual in relation to their surrounding context.

Concept of Place Identity

Place identity is a notion that is based on self-concept pertaining to a group, which is viewed in comparison to other groups, "and as it is about the relation between individuals, groups and other, the nature of identity must be social and contractual" (Hague, 2005, pp. 6-7). The combination of the knowing and acting occurs in specific contexts, which together establishes a group's identity (Groth, 2002, p. 17). Place identity also involves a tension, where an identity pertaining to a group "is depicted as something that cannot be changed" (Hague, 2005, p. 6). Changes in the characterization of identity can occur due to factors of globalization, including "changed social and political institutions, and innovations linked to technology, for example in communications and transport" (Taylor, 2010, p. 2). Every era has a different sort of place identity reflective of the contemporary society and the technologies of the time (Giddens, 1991, p. 186). For these reasons, it is important for landscape architects to consider current place identities when designing for a new locality in order to enrich any landscape architecture project.

Place identity may be classified according to regional determinants, including climate, design aesthetic, or popular culture, based upon collective individual identities. When multiple individuals of a specified area are considered collectively, they are characterized by perceived social constructs (Hartsen, Groote, & Huigen, 2000, pp. 2-3). When considering children, place identity can be developed through interaction with social contexts, for example, with other children (Myers & Russell, 2003, p. 69; Clayton & Opotow, 2003, p. 5). When children interact, they experience "reflected appraisal", allowing for a "realization of 'who I am' in relation to the other" (Myers & Russell, 2003, p. 69). Place identity can also be classified according to individuals. Identities of individuals can be developed in reflection of both personal and social experiences in an environment (Opotow & Brook, 2003, p. 250). Individuals who develop place identity through experiences influenced by social constructs may "view themselves as situated within potent social categories, in which political realities, activism, and social conflicts are prominent" (Clayton & Opotow, 2003, p. 10). It is evident that experiences with social mediation may inform how the individual interprets the experience according to what is socially acceptable or significant (Linneweber, Hartmuth, & Fritshce, 2003, p. 230). As landscape architects often create the outdoor spaces where children interact and experience the environment, it is important for landscape architects to understand how to provide children with the opportunity for positive outdoor experiences.

Formation of Place Identity

The formation of place identities occurs simultaneous with many "feelings, meanings, experiences, memories, and actions that, while ultimately personal, are substantially filtered through social structures and fostered through socialization" (Hague, 2005, p. 7). Place identities are formed "in relation to other people, other places and other identities for that place" (p. 7). Identity that is formed in a social context "is not stable, but is layered, complex, and changing as it is negotiated in social interactions and conflicts" (Clayton & Opotow, 2003, p. 5; Carbaugh, 1996). Children's place identity is very closely related to the place they live and "how its transformation is perceived by the self and others" (Austin & Kaplan, 2003, p. 224). Landscape architects must interpret "how narratives of place identity are constructed and contested in the context of spatial planning" (Hague, 2005, p. 8). Due to the illusiveness of place identity, landscape architects must also determine the authenticity of a place identity, including "whether place identities have been imposed or negotiated", by consulting a diverse group of inhabitants (p. 8).

Place identity can be formed or reinforced by strong memories of childhood environments and experience with place (Cooper Marcus, 1992, pp. 87-88). Responses to childhood memories with place can be "indicative of the founding role of those places in our narratives about ourselves and the establishing of our sense of self-identity" (Malpas, 1999, p. 182). In this paper

the term memory will be defined as "the process of remembering and contextualizing the past by individuals" (Morel-Edniebrown, 2012, p. 216). Place-based memories are usually very visual and spatial representations of experience, where the experiences are remembered with a visual backdrop (Casey, 1987, p. 183). Fond memories of place are often remembered in an idealized form, enhancing or exaggerating the memories as people age (Malpas, 1999, p. 182). When the places from childhood memory are visited by an individual, the experience may be extremely intense due to the "emotional geographies of the self" that are remembered (Jones, 2005, p. 213; See also: Cooper Marcus, 1992, p. 89). Memories of place can also be shared by groups or societies, which are classified according to "traditions, cultural transmissions and the motivation to discover the past" (Akkurt, 2012, p. 65).

Nature

Place Identity and Nature

Studies based on children's experience with place and nature have increased in prevalence within the last two decades, especially research based on the outcomes shaping children's "learning, social development, and place (Derr, 2006, p. 108). People can develop a sense of their self-concept through connections with "some part of the nonhuman natural environment" (Clayton, 2003, p. 46; Clark & Uzzell, 2006, p. 185). When children do not have adequate access to and contact with nature, they are subjected to negative physical, intellectual, emotional and moral impacts (Pyle, 2002, p. 315). Children from different environments, but also within the same environment, may have very different experiences, because children can significantly shape their own experiences with a physical environment (Derr, 2006, p. 108). This concept of action influencing development of children and adolescents, or the 'development as action in context theory' has become a focus of study in the place identity field of research in the last few decades (Coleman, 1979; Silbereisen & Eyferth, 1986; Noack & Silbereisen, 1988; Schiavo, 1988; Lieberg, 1995, Lieberg, 1997; Clark & Uzzell, 2006, p. 182). Clark and Uzzell (2006) note that children and adolescents can "either attempt to change internal conditions or the external contexts (i.e., the environment itself) in order to achieve their developmental goals", especially if there is a difference between how they want to develop and what is actually occurring (p. 182). Through experience with place, children can learn many things including "a sense of freedom, control, and self-sufficiency" as well as "creativity, imagination" and "responsibility, respect, and empathy toward other living things" (Derr, 2006, p. 119). Regarding a child's development of intellect, the "breadth of awareness, facility of reasoning, acuity of observation, and the kinds of associative skills that enhance cerebration may all sharpen as a direct result of biological and geological exposure" (Pyle, 2002, p. 315). When children do not have adequate contact with nature,

they may experience loss of creativity and emotional well-being, and they may not test their moral or ethical boundaries (p. 316).

Experiences With Nature

Children's experiences with nature can result in the formation of "identity and may help form attachments to place" (Derr, 2006, p. 119). These experiences with nature can be described as "a revelatory sense of continuity – an immersion of [their] whole organism in the outer world of forms, colours, and motions in unparticularized time and space" (Cobb, 1977, p. 88). Children's experiences with nature of this sort represent an aesthetic process, where "inner and outer worlds are sensed as one in these moments of form-creating expansion and self-consciousnesss", leading to the development of identity (p. 110). A child first learns how to differentiate themself from both the human and nonhuman environments (Searles, 1960, pp. 29-30). Next, the child may experience conflict when they realize the disconnect between themselves and the natural environment (p. 114). Emotions felt as a result of experience between children and nature may be complex and diverse, including "wonder, satisfaction, joy, for sure, but also challenge, fear, and anxiety" (Kellert, 2002, p. 128).

Kellert (2002) classified children's experiences with nature "in three ways – direct, indirect, and what may be called 'vicarious' or 'symbolic experience'" (p. 118). Direct and indirect experience will be discussed in this paper due to the relevance to landscape architecture and schoolyard design. Vicarious or symbolic experience will be left out because the concept refers to virtual mediums, which are not directly relevant to schoolyard design. Direct experience refers to "actual physical contact with natural settings and nonhuman species" (p. 118; See also: Kellert, 1996). The natural settings indicated in this framework are assumed to be settings that are not influenced by humans in significant ways, and are experienced by children in non-structured or organized manners (Clayton & Opotow, 2003, p. 7; Kellert, 2002, pp. 118-119). An example of direct experience with nature when I was a child is when I would play near the Seine River close to my parents' house. The play was not structured or planned, rather it was purely exploratory and inventive, including building forts, digging holes, and catching frogs. When considering schoolyards and experience with nature, direct experience with nature can be achieved by providing a garden, marsh or treed area for children to explore (Day, 2007, p. 181). Indirect experience involves "actual physical contact but in far more restricted, programmed, and managed contexts", which occurs in settings where human intervention has occurred, including parks, museums, etc. (Kellert, 2002, p. 199). An example of my indirect experience with nature is when I played soccer for an organized team. The fields were programmed and manicured specifically for soccer, though our team was subjected to elements of nature, including sunlight, heat, wind or rain. Soccer fields and other programmed activities are common to schoolyard design, which may be enjoyable but do not necessarily encourage imaginative, natural play (Day, 2007, p. 181).

Children's Development

Age Range

During childhood, people begin to develop their self-concept. Children develop layers of this self-concept at different stages of childhood, "which is based on specific interactive abilities" (Myers & Russell, 2003, p. 69; Stern, 1985). The beginning stages of identity development occur around the age of 3 months, when the infant begins to perceive the self and "other continuity possess agency, bodily coherence, and affect" (Myers & Russell, 2003, p. 69). As the infant ages, they can learn to share their "attention, affect and intention", which become part of their self-concept (p. 69). Once an individual is conscious of their self-concept, they can begin to form connections with their surrounding environments and form place memories (Cooper Marcus, 1992, p. 89).

Experience and Development

The formation of children's character is learned through these three levels of experience linked with "varying modes of learning in childhood development – cognitive, affective, and evaluative (values related) maturation and development" (Kellert, 2002, p. 120).

Cognitive development. Cognitive development is a mode of childhood learning that emphasizes the "formation of thinking and problem-solving skills", that includes six stages of maturation, as noted in Table 2-1 (Kellert, 2002, pp. 121-122; Bloom et al., 1956; Maker, 1982). Cognitive development occurs during middle childhood through experience with nature, which is "a critical period in the development of the self and in the individual's relationship to the natural world" (Sobel, 1993, p. 159). This is explained by empirical data noted by Kellert (2002), which suggest that "identifying, naming, classifying, and learning about the natural world can greatly facilitate the developing capacity for sorting and retaining information and ideas" (p. 122).

Affective development. Affective development refers to children's development of affective and values-related traits during middle childhood and adolescence (Krathwohl, Bloom and Masia, 1964; Kellert, 2002, p. 125). Krathwohl, Bloom and Masia (2002) breaks this form of development into five stages, as noted in Table 2-2 (pp. 125-126). Formation of emotional concept is key to affective development, allowing children to develop attachments to places (Verbeek and de Waal, 2002, p. 9).

Evaluative (values-related) development. Evaluative (values-related) development considers "the relation of values of nature to childhood development" (Kellert, 2002, p. 129). When children begin to develop their values in relation to nature, they begin to form their environmental morals, including care for animals, nature and other children (Myers, Jr. and Saunders, 2002, pp. 165-166). They also become more aware of environmental threat and "action becomes more acute and ever present" (Kempton and Holland, 2003, p. 331). Kellert (2002) breaks this form of development into nine types, as noted in Table 2-3 (pp. 130-131).

Stage	Description	Relevance
Knowledge	Remembering and recalling information.	Learn about the natural environment and local community.
Comprehension	Understanding and interpolating information.	Comprehension of physical and social regional characteristics.
Application	Applying knowledge in a new situation.	Ability to relate school lessons to environmental characteristics.
Analysis	Organizing data into categories.	Differentiation between environmental features or organisms.
Synthesis	Understanding relationships in data and identifying patterns.	Understanding of natural relationships, such as habitats or ecozones.
Evaluation	Making judgments about the significance of data.	Valuing of the natural environment.

Table 2-1: Cognitive development stages.

Stage	Description	Relevance
Receiving	Acknowledging information.	Willingness to learn about the natural environment.
Responding	Participation in the learning process.	Response to lessons about the natural environment.
Valuing	Justifying the importance of ideas.	Demonstration of sensitivity to the natural environment and cultural differences.
Organizing	Arranging and classifying values.	Acceptance of individual responsibility for environmental issues.
Characterizing	Behaving according to a value system.	Display of environmental consciousness when interacting with nature.

Table 2.2: Affective development stages.

Stage	Description	Relevance
Aesthetic	Attraction to the appearance of nature.	Perception of surroundings spatially and development of curiosity for nature.
Dominionistic	Feeling of control over nature.	Perception of safety allowing for exploration and risk taking.
Humanistic	Connecting with nature emotionally.	Development of social skills including giving and sharing.
Moralistic	Connecting with nature spiritually.	Development of morals and ecological consciousness.
Naturalistic	Exploring nature.	Development of confidence and spatial awareness.
Negativistic	Fearing nature.	Development of caution and respect toward nature.
Scientific	Understanding nature.	Enhancement of appreciation for nature through critical thinking.
Symbolic	Conception of imagination through nature.	Communication development through use of imagery and symbolism of nature.
Utilitarian	Perceiving nature as a source of reward.	Skilled interaction with nature increase self-confidence.

Table 2-3: Evaluative development typologies.

Identifying Place Identity

Narrative

Place identity can be determined by identifying "how narratives of place identity are constructed and contested in the context of spatial planning – i.e. through practice and participation in the social sphere – rather than exploring the cognition of an individual" (Hague, 2005, p. 8). The characteristics of place identity can be identified and interpreted according to visual or aesthetic appeal, functionality, social arrangement or use (Goličnik Marušič and Nikšič, 2012, p. 121). Though the process of determining inhabitants' true feelings about their local environment can be very difficult to research, there are some analytical techniques that can be successful (Hague, 2005, p. 8). Questionnaires mixed with analysis of "'cultural or popular indicators' such as paintings, advertisements, television and other media" are the most successful means of identifying social identity (Hague 2005, p. 9; Haartsen, Groote and Huigen, 2000, p. 13). When identifying place identity, it is useful to build a narrative of the place "by asking the basic questions: what, who, how and why", which are summarized in Table 2-4 (Amundsen, 2001, pp. 13-14; Hague, 2005, p. 13).

Figure 2-1: Place identity identification questions.

What. The 'what' question aims to identify the contents of identity, for example, determining what the architecture looks like in a locality (Hague, 2005, p. 13). This can be achieved through analysis of "spatial qualities that distinguish the place from others – e.g. location, but also infrastructure, communication and architecture" (Amundsen, 2001, pp. 10-11). This can also include identification of existing environmental qualities of the place, "including topography, geology, weather, flora, fauna, and natural landscape as well as any human-made elements, including constructions and their spatial configurations" (Seamon, 2012, p. 10).

Who. The 'who' question aims to identify the narrator and whether they represent the average opinion in the locality (Hague, 2005, p. 14). During this stage the "natural attitudes of the place, including actions, routines, events, and understandings, whether unself-conscious or conscious, in which individuals and groups involve themselves in relation to their place" can be determined (Seamon, 2012, pp. 10-11).

How. The 'how' question refers to the location and means by which narratives of place are identified (Hague, 2005, p. 14). This can include identifying social conditions, cultures and traditions specific to a locality, as well as the genius loci, which is the "unique ambience, atmosphere, and character of the place" (Seamon, 2012, p. 11). Jane Jacobs (1961) states, "only intricacy and vitality of use give to the part of a city appropriate structure and place", indicating that the identity of a place is based upon the people and the way they utilize their environment (p. 24; Goličnik Marušič and Nikšič, 2012, p. 120). It is important for the landscape architect to decipher which narrative information is relevant to a locality, while weeding out irrelevant material (de Certeau, 1984, p. 95).

Why. Finally, the 'why' question can be used to identify the link between narrative and local values (Hague 2005, p. 16). Amundsen (2001) explained that "all narratives, all public messages are related to intentions – open and hidden, internal and external, conscious and unconscious, functional and structural" (p. 18; Hague, 2005, p. 16). Inhabitants should then be analyzed for specific characteristics

Question	Description	Relevance
What	Identifying special qualities of a sample area.	Identification of the physical contents of place identity.
Who	Identifying narrator(s) of a sample area.	Interpretation of the representational voice of a narrative, including potential bias.
How	Means for identifying the place identity of a sample area.	Use of data collection methods deemed best suited for observation of place identity.
Why	Interpreting data collected from a sample area.	Identifying links between narrative and cultural values.

Table 2-4: Place identity identification questions.

or values that differentiate them from other places (Seamon, 2012, pp. 10-11). As landscape architects, it is important to develop these narratives of place when attempting to understand a place identity. This can allow for design that is considerate of a community's needs, creating space that is harmonious in its function and "inner characters" (Noormohammadi, 2002, pp. 30-31).

Participation

Participation will be considered in this literature review due to the relevance to my practicum based on schoolyard design that considers regional identity, children's development and education. Participation, in the transformation of local places, can "enhance personal identity through an increased sense of connection and ownership, as well as through receiving the respect of the community" (Austin and Kaplan, 2003, p. 224). Participation refers to "local communities being actively involved in decisions that affect them" (Driskell, 2002, p. 32). It is used in planning and design projects because the residents have the most knowledge about their area and they are the people who will be most affected by the outcome (p. 32).

Community engagement or participation in design was introduced in the 1960s and has since been utilized by landscape architects when building narrative about a locality's place identity (Smith, 2005, p. 52). Research has become more prominent about children's participation in planning and design of urban environments in the last two decades (Rissoto and Giuliani, 2006, p. 84; Hart, 1997; Paba, 2000; Matthews, 2001; Alparone and Rissoto, 2001; Chawla, 2002). When considering schoolyard design, the participatory process allows for consensus on project goals, builds a sense of community and ensures that participants have pride in the project (Gamson Danks, 2011, p. 3). This process has the power to turn school "stakeholders into stewards of the school grounds who agree to nurture and care for the enriched environment they collectively create" (p. 3). Though children are often not included in the design or construction process of a schoolyard project, as they are considered "too inexperienced, too unrealistic, [or] too unqualified", their involvement can greatly enrich the process (Driskell, 2002, p. 11). Participation may include "both formal and informal dimensions", which are interdependent for children (Heft and Chawla, 2006, p. 200). The informal dimension of participation "involves freedom to move about and explore natural and built environments, to gather with others, and to observe and try out roles in public places" (p. 200). When children are involved in this informal dimension, "they come to understand issues discussed in the formal arena of environmental planning, such as traffic flow, green space, watersheds, crime or 'eyes on the street'" (p. 200).

Children can learn or contribute many skills by taking part in the planning and design process, including: "a knowledge of the spatial physical characteristics, their function and hence their worth; the ability to evaluate the condition of the environment and its potential; the ability to formulate a dynamic representation of the environment and to understand the systematic relationships between different spaces and between components of an environment" (Rissoto and Giuliani, 2006, p. 85). Spencer, Woolley and Dunn (1999) worked with a group of ten- to twelve-year-old children in an experiment with design participation, learning that "the children express strong civic values… have strong aesthetic and sensual appreciation of the cityscape, whilst being out-spoken critics of poor design and maintenance" (p. 16; Rissoto and Giuliani, 2006, p. 85). They also noted that children "can give vivid accounts of perceived threats to their well-being and safety: from some adults on the street, from older adolescents, and often from groups from out of town" (Spencer, Woolley and Dunn, 1999, p. 16). In addition, Cosco and Moore (2002) conducted a study with fourteen-year-old boys, where the participants were asked to give a description of their neighbourhood (p. 42). The boys were capable of providing "reliable and clear information, both on the physical space of the neighbourhood and on the community dynamics", based mostly on how the boys identify with the place (p. 43).

Figure 2-2: Participatory design process considerations.

In order to conduct a beneficial participatory design process, several considerations should be made, including: locality, transparency, inclusiveness, interaction, responsiveness, education, reflection, transformation, sustainability, personal interaction and voluntary participation, which are summarized in Table 2-5 (Driskell, 2002, pp. 33-34).

Locality. Locality refers to including local residents in a design process because the project should be focused on their needs or concerns (Driskell, 2002, p. 33). This is important to a participatory process because "people who share localities are particularly well qualified to evaluate the impact of decision on themselves and their surroundings, and that this 'local expert knowledge' extends to children" (Heft and Chawla, 2006, p. 200). Children have the ability to identify "physical and social features of their communities that make these places alienating and forbidding, or places where young people feel that they can thrive" (p. 200). A landscape architect should consider the insights of the local participants in order to build upon relevant data that will best suit the needs of the area (Driskell, 2002, p. 34).

Transparency. Participatory projects should be transparent to all participants, ensuring that limitations and expectations are clear and open (Driskell, 2002, p. 34). This could include "bringing the agendas of multiple stakeholders together: the institution or organization funding the project, the local authority, and the local community" (Toker, 2012, p. 41). The landscape architect must analyze the relationships of the parties involved, listen to their interests or concerns, and ensure that no stakeholder's voice is lost (p. 41).

Inclusiveness. The process should be inclusive or "accessible to all members of the community, regardless of age, gender, race or ethnic background, religion, disability or socio-economic status" (Driskell, 2002, p. 34). Once a project's parameters are set and the preliminary analysis is achieved with a focal group of participants,

the landscape architect can identify participant groups that could enhance the community design project (Toker, 2012, p. 156). Though it is important to be inclusive in the participatory process, it is also beneficial to narrow the range of participants to people who will be impacted by the project (p. 156). When children and adolescents are involved in the design process of their schoolyard, they experience "pride in creating, and being listened to", which "increases pupils' sense of respect for their environment and stimulates a sense of community which in turn creates a sense of well-being and enhances potential for learning" (Horne Martin 2006, p. 100; OECD 1988). "Children's knowledge is not only extensive and articulate, it is also specific" (Rissotto and Giuliani, 2006, p. 85).

Interaction. Participatory projects should also be interactive, creating an ongoing dialogue between participants and allowing them to have a voice (Driskell, 2002, p. 34). Interaction with the community can occur early in the project, where the landscape architect can consult the community about "issues, concerns, wishes, and examples of what the community likes" (Toker, 2012, p. 15). The types of interactions that may occur between the landscape architect and the community include "community meetings, surveys, workshops, and other methods" (p. 15).

Responsiveness. As a landscape architect in a participatory process it is important to be responsive to the different needs or conditions that are present in each different project, changing approaches or courses of action depending on what is needed (Driskell, 2002, p. 34). This may occur during a community consultation where the landscape architect provides concept drawings for the project, allowing the members of the community to "respond to the sketches and provide input on ideas, which enables the community designer to refine, develop, or edit the concepts" (Toker, 2012, p. 15).

Education. Education is essential in order for a project to be successful; "all participants must be willing to learn, change attitudes and forge new ways of understanding" (Driskell, 2002, p. 34). Landscape architects specifically have a great opportunity to learn from the participatory process, tapping "into an endless source of knowledge and expand the skills they acquire in formal training (Toker, 2012, p. 13). This is especially made possible because every project is different and will likely have completely different design solutions, which landscape architects can learn from (p. 13). Children can also learn exciting new skills from the participatory process, including an understanding of the environment and a deeper knowledge of their community (Driskell, 2001, p. 35).

Reflection. Participants should also reflect upon any progress that has been made in order to maintain a high quality standard for any project (Driskell, 2002, p. 34). When a project is reflected upon by the participants, the project can evolve and "keep pace with the ever-changing needs of the school community, so that it remains as an important part of the school's identity as individual teachers, parents, and students come and go" (Gamson Danks, 2011, p. 3).

Transformation. Transformation of the local community can be profound, especially for children and adolescents, "helping to shape their personal value system and developing their expertise as informed, active and responsible citizens" (Driskell, 2002, p. 34). The participatory process benefits from "the gradual building consensus and ownership that creates a sense of community and shared intentions" (Horne Martin, 2006, p. 100). Through the participatory process, children can "develop a sense of environmental stewardship and civic responsibility", as well as learn about being inclusive and taking part in a democratic system (Driskell, 2002, p. 35).

Sustainability. Sustainable development can occur through the participatory process because if "local residents support a project and feel that it responds to their needs, they are more likely to participate in its implementation and ongoing management, thereby supporting project sustainability" (Driskell, 2002, p. 34). When people take part in the planning and design process of an environment, they feel more connected to it, and will likely "manage and maintain it better, reducing the likelihood of vandalism, neglect and costly replacements in the future (p. 100; Architecture

Foundation, 2000; Lackney, 2000). In addition, a schoolyard that is designed through a participatory process is likely to have a master plan that can "guide the project's gradual implementation over a period of many years" (Gamson Danks, 2011, p. 3).

Personal interaction. The participatory process can be extremely personal, meaning when youth are involved in the participatory design process, the adults "need to be genuinely concerned about the interests of young people, and committed to working with them to make positive changes in their lives" (Driskell, 2002, p. 34). When children are involved in a participatory design process, they may develop "confidence in their abilities to accomplish the goals they set", as well as make new connections with people in both their school and their community (p. 35).

Voluntary. Participation in design projects should always be voluntary, where people "appreciate the importance of the issue, understand the ways in which they can be involved, and believe that their participation will make a difference" (Driskell, 2002, p. 34). When community members choose to participate in a design project due to high levels of interest or benefit, they have the potential to enhance their personal identity, enhance their connection to their community, and form a sense pride and respect for having been involved (Austin and Kaplan, 2003, p. 224).

Consideration	Description	Relevance
Locality	Including local residents in a design process.	Enhancement of site analysis through local expert knowledge.
Transparency	Clearly communicating with participants about the design process.	Clarity of participation ensures limitations and expectations are clear and open.
Inclusiveness	Allowing all community members to participate in the design process.	Inclusiveness builds trust with the community and respect for the environment.
Interaction	Interacting with the community on an ongoing basis.	Ongoing communication provides the community with a voice.
Responsiveness	Responding to specific nuances in any design process.	Acknowledgment of different needs, conditions or feedback to enable suitable design decisions.
Education	Willingness of the participants to learn during the design process.	Education throughout the design process allows participants to expand their skills and knowledge of the community.
Reflection	Reflecting upon the design process by participants.	Participant reflection during and after the design process ensures positive progress and longevity.
Transformation	Building ownership and ecological consciousness through participation.	Environmental value systems may develop in participants due to investment in the project.
Sustainability	Sustainable development through the participatory process.	Connection of community members to a project may encourage long-term investment and management.
Personal interaction	Working with children participants in a positive and personal manor.	Consideration of the interests of young participants can ensure positive experience, aiding in the development of self-confidence and respect.
Voluntary	Ensuring participation is optional.	Giving community members the choice to participate may enhance pride and respect for the project.

Table 2-5: Participatory design process considerations.

Conclusion

Going to elementary school at Lavallee School in Winnipeg, Manitoba was a community experience that shaped who I am today. The students at the school came from diverse backgrounds, but the majority was from poor to middle-class working families. The children lived within short walking distances from the school, which meant there was no need for school bus service. I lived two blocks away, which was close enough to walk to school in seven minutes, five if I jogged part of the way (which I often did). Our classrooms were small, and split into multi-age. Our class would become a community for three years. Leaders were formed, alliances established and friendships evolved in all shapes and forms. We took pride in our classrooms and treated them like a home. On the playground we watched out for each other and spent every minute possible in imaginary worlds, exploring every corner of the schoolyard. I believe that childhood narratives like this can be powerful analysis tools for achieving successful schoolyard design. Landscape architects should engage children and the community in a participatory design process in order to build these narratives of identity, which can strengthen a community's values and respond to their needs. When community members participate in a local design project, they can share their knowledge and understanding of the area, interact with other community members, and learn from the experience. These processes help the landscape architect identify the identity of a place and use the knowledge to preserve and add to the unique structure, culture and characteristics. When these traits are preserved or enhanced, the local residents are more likely to take pride and ownership of the site, and ensure longevity in the management. Table 2-6 summarizes the elements of place identity that were discussed in this literatures review, and the relevance to landscape architecture.

Part of creating a schoolyard that has longevity is creating a play environment that encourages interactive, active, and imaginative play that keeps children stimulated and engaged. Providing children with direct physical access to nature can help achieve these goals, but also aid in childhood development and the formation of self-concept. In summation, this literature review demonstrated that the more community members are involved in a design project, the more their identities may be represented and the more satisfied they would be with the result. Children should be involved in this participatory design process because, by understanding and utilizing a child's identity, there is potential for successful spaces with enhanced learning opportunities. This is a topic that should be considered by all landscape architects, as they are key players in the shaping of spaces for learning, engagement, and development of self-concept.

Element	Description	Relevance
Concept of Place Identity	Place identity refers to the self-concept pertaining to a group.	Place identity data can be used for design that suits the needs of people who use the space.
Formation of Place Identity	Place identity occurs through physical and social experiences in place.	Understanding of how place identity is formed may aid in the identification of the identity pertaining to a place.
Connection with Nature	Experience with nature can create connections between people and nature, which may influence the development of self-concept, and environmental consciousness	Understanding the impact nature has on the formation of place identity could encourage landscape architects to design with natural features.
Childhood Development	Physical and educational experiences during childhood greatly affect the ability for people to connect with place.	Opportunities for experience with the natural environment could be considered by Landscape Architects to enable healthy connections with place.
Identification of Place Identity	Place identity may be identified through building a narrative of a community through observation and participation.	Identifying place identity could enable design that is considerate of a community's needs, encouraging longevity of a project and further place identity formation.

Table 2-6: Elements of place identity summary.

3 DESIGN PRINCIPLES

Introduction

This set of design principles is concerned with making outdoor educational spaces effective for maximum potential of childhood development. The design principles were determined while considering the conclusions drawn from the literature review. A series of criteria determined the success of an outdoor learning environment: participatory design process, community engagement, opportunity to learn, connection to nature, opportunity for play, and connection to local identity.

Currently, children do not always have adequate access to nature, which means fewer opportunities to play, learn and grow. Natural environments offer opportunities for more stimulating, diverse and creative play, which in turn can enhance cognitive development, health and education. In the past decade, research about the effect of the environment on children has become extremely prevalent. Landscape architects are becoming aware of the importance for school grounds to be designed to be inclusive allowing children of all skill-levels, developmental periods, ages, genders, cultures, and interests, opportunity to play and be active.

Design Principles

Community Engagement and Participation

Students, teachers, staff, parents and community members can be involved in many stages of the schoolyard design process, including research, design consultations or workshops, reviewing the master plan, implementation planning, construction and maintenance. By engaging the students and community in the design process, the project may have more longevity due to increased stake and interest. Community engagement is an effective strategy for designers to build a narrative of the identity pertaining to a community. Designing spaces that incorporate community identity can help build a stronger sense of community and pride, which can increase quality of life. The designed spaces will feel personal and relevant to the students, which can encourage them to engage in their environment and expand potential for learning and growth. Designing for local identity will be discussed further in the next section. People of all ages may be involved in the project, especially students. When students are given the opportunity to participate in the design process of their schoolyard, students may have feelings of ownership and become more motivated to learn. The participatory process is a great learning experience for students, where they can learn about their community, the environment, democracy, environmental stewardship and design. They can also develop their self-esteem, pride in their community, identity, and some new skills. Children can be involved in the design process of a schoolyard through talking and listening, drawing, mapping, or molding.

Outdoor learning

Outdoor learning environments are great tools for enhancing childhood cognitive development potentials at schools. Social development can occur in spaces that invite collaborative play and are calming, such as stages or large seating areas. Physical development may be provided by hills, paths, or materials intended for molding or digging. Individual or spiritual development may occur in areas that are designed to be quiet, calming and private. Outdoor learning spaces may be enhanced by enclosures or barriers that shelter students from noise or weather elements, such as wind, sun or rain (Day, 2007, p. 177). This may be achieved through the use of roofed structures, amphitheaters, dense plantings or other structures, and seating. Curriculum can be considered in the design of a schoolyard, allowing teachers to use the schoolyard as a part of their lessons, thereby increasing potential time spent in nature by the students. This may be achieved through varying use of rocks, plants, ecosystems, animal habitats, or gardens. Curriculum may also be incorporated through programmed features to educate about the solar system, the senses, math, language, poetry or art.

Play

During childhood, people begin to develop their self-concept through interactions with people and with their environments. Childhood development is complex, requiring multiple experiences and opportunities to grow and learn. Building relationships with other students or community members can be extremely beneficial for the development of self-concept and cultural identity. Children will begin to get a sense of themselves compared to others and learn about their place in the world. Play is one of the best ways children can interact with other people and with their environments. Children can explore their surroundings, challenge themselves, be active and spontaneous, make friends and use their imaginations.

Opportunities for play are not always available in today's busy, urban environment. Over the last few decades, play spaces have become fewer, smaller or less exploratory than ever before (Freeman & Tranter, 2011, p. 10). Schoolyards have ample opportunity to provide children with great places to play, and should be used to their fullest potential whenever possible. Schoolyards should be designed with spaces and opportunities for various types of play, including active, social, imaginative, and

challenging play. Play should be enabled to occur in all areas of the schoolyard, making the entire experience beautiful, fun and safe. Most importantly, schoolyards "should delight the senses and capture the imagination of the children who play and the adults who spend time with them" (Gamson Danks, 2010, p. 24).

Active play. Active play is physically and intellectually beneficial for children. When children are active, they develop finer motor skills, creativity, greater attention spans and alertness, and physical fitness. Physical activity also helps with the development of social skills, communication, friendships, patience, teamwork and courage. When children are given more opportunities for active play they can learn how to be active and healthy for life.

Active play can be provided in a schoolyard through paths, sports areas, hills, challenging structures or equipment, and loose material for building, balancing or digging. Features should vary in function and skill level, and should flow into one another allowing unrestrained active play.

Social play. Social play is an important part of development and contributes to the formation of social identity and self-concept. Children can learn how to interact with other children and how to cooperate with each other. Through these means, children can develop social skills, learn how to be considerate, and take turns with other children. Social play is most likely to occur in spaces that are calming and comfortable. This may include enclosed seating areas that are sheltered from harsh weather conditions. Informal seating such as logs or rocks are more comfortable socially than formal seating. Transition spaces or thresholds that are unavoidable can also be great social play areas. Activities that require cooperation or elements that can be manipulated will encourage social play. This can include equipment that must be operated by more that one person, such as water pumps or see-saws, sports games, such as soccer or baseball, loose materials, such as sand or rocks, and relational games, such as role-playing, chasing, hiding or acting.

Imaginative play. Imaginative or fantasy play occurs when children invent scenarios and act them out alone or with other children. This type of play can enhance development of creativity, problem solving, social skills and self-expression. Children learn how to express themselves, both positively and negatively, how to play cooperatively, and how to communicate their ideas through language and action. Opportunities for imaginative play in the schoolyard can be achieved by providing spaces and materials that are not over designed, which encourages open-ended play. For example, loose materials, such as sand, rocks or water, can be used for molding or manipulating. Play equipment or features can have elements that may be improvised so children can make up their own games. When elements overlap or are in proximity, imaginative play is more likely to occur.

Challenging play. Challenging play is an essential part of childhood development of self-concept and independence. This type of play involves taking risks, challenging physical and emotional limitations, overcoming fears and exploring. Children who do not experience a certain amount of risk in their daily lives may become developmentally stunted. In a schoolyard setting, challenging play can provide children with reasonable risk essential for development without being unsafe. This can be achieved by creating spaces that give the perception of risk or by changing the landscape to provide new challenges. Design features that allow challenging play include structures with ropes, ladders, swings or slides, hills or other landscape forms, or loose material for building or climbing. The perception of risk can be achieved through the strategic use of sightlines, moveable parts, climbing surfaces, or hidden spaces. These features should be accessible to all age ranges and skill levels, but also hold children's interests as they grow.

Winter play. Winter play is an exciting type of play that people in cold places, such as Lorette, Manitoba, get to experience. In Manitoba, children spend a large portion of their school year in winter. This means that landscape architects in regions like this should consider winter landscapes when they are designing schoolyards. Winter provides children with a variety of new landscape features, such as snow, ice, and slush, as well as a

variety of textures, colours, tastes, smells and sounds. Winter materials are generally malleable, allowing children to manipulate the landscape and play imaginatively. Winter features are likely to be temporal, meaning landscape architects must strategically design with materials that work with or react with the elements. Materials can be used to absorb the heat of the winter sun, coniferous trees can provide wind protection through needle retention, or water bodies can be turned into skating rinks. Winter materials can also be used in organic ways, such as creating play hills for climbing or sliding, wind barriers for quiet or calm areas, skating rinks, ice formations, structures or sculptures. Using winter features in a schoolyard can help connect students and community to the identity of the area. Children can learn about local winter heritage, including activities, festivals, sports or even survival techniques. These cultural histories can be incorporated into the schoolyard design through features or signage, and can be used in the school lessons to engage the students in their education.

Nature

Recently an increasing concern about children lacking connections and interactions with nature has encouraged researchers, designers and educators to rethink schoolyard design. Nature provides children with opportunities for active and imaginative outdoor play, which may aid in the development of physical skills, social skills, cognitive function, and taking and managing risks. Children can also develop their ecological identity, which refers to attitudes and connections to the natural environment. If children are educated about the importance of the natural environment they are more likely to care for it in the future.

When children do not have adequate access to nature, they may experience developmental issues such as nature-deficit disorder. Nature-deficit disorder "describes the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses" (Louv, 2008, p. 36)

Identity

As mentioned in the previous section, local identity can be considered in the design of a schoolyard, in order to promote sense of pride, ownership and familiarity for the students and the community. Place identity is complex, and can be difficult to determine. Landscape architects can discover the identity pertaining to a school and a community by interacting with the community members to learn about the needs, cultures, and traditions of the community. This may be achieved through surveys or interviews, where participants are allowed the opportunity to voice their ideas, concerns, interests, wants, needs, likes and dislikes. Schools can have their own social culture within the larger context of a community. People whom directly use the schoolyard should, therefore also be consulted about the existing schoolyard, to learn about areas that are utilized, loved, or unused. The landscape architect should then interpret the data according to a predetermined framework, which builds a narrative of place identity, while attempting to minimize any bias or preconceptions. Data collected through surveys or interviews will likely concern a community's environmental and social context, including landforms, climate, cultural traditions, heritage, languages, current events and daily life. Once the designer has an idea of the identity pertaining to a community, it can be used in the design features or principles in the schoolyard. This can include using local materials, native plants, native landforms, language, cultural traditions and history. For example, communities with agricultural heritages can incorporate landforms representative of farms, such as gardens, prairie grasses, water features or animal habitats.

When schoolyard features are linked to the student's own cultural heritage or environmental surroundings, they can make connections in their education, grounding the lessons and keeping students engaged. These features can also provide "opportunities to make connections to a larger order in the community, to history and ecology of the territory, and to the imaginations of the immediate community" (Lyndon, 2009, p. 82).

Memory. Place identity is not only something that may be incorporated into a schoolyard design based on existing local identity, it can also be planned for future development in children. Children form memories through experience with their physical environment, which can lead to the formation of self-concept and place identity. Memories can come from association with materials, including manipulation, position or situation. For this reason, it is useful for landscape architects to consider the aftereffects associated with the features and materials that are used in a schoolyard design project. Features can be used to instill environmental responsibility, including sustainable water features, gardens, tree preservation, animal habitat protection and others. Schoolyards can also emote the evocative importance of a community, teaching students to respect their heritage and let it be a part of their self-concept. Heritage can be represented through art, landscape forms, storytelling (signage) or memorials.

"It is memory, whether that of a single person or a social group, that invests a particular location with singularity and significance, and thus separates place from the undifferentiated sameness of space."

- Esther da Costa Meyer (da Costa Meyer, 2009, pp. 179-180)

The River. Place identity can be reflected in various forms, including the river, which has been a great influence on human life. Rivers are constantly moving and changing, dynamically shaping the landscape, and reflecting memory. As they are part of a larger network, they are extremely powerful and difficult to contain. In fact, the "form of our cities, built along rivers, reflects the fluvial processes that have shaped those alluvial landscapes" (Kondolf, 2009, p. 117). Humans have relied on rivers for transport, power, water, and food, shaping the settlement according to the rivers due to the necessity for the resource. Rivers can change drastically, however, due to natural disasters, landforms, changes in climate or from movement of sediment or debris. Due to the power of the river and the dependence placed upon by humans, rivers have become key symbols of many community identities.

Design Materials and Features

Schoolyard features can provide spaces for social, physical, intellectual and spiritual development and can incorporate school curriculum. Place identity can also be represented or developed through the use of materials, features or design principles.

Vegetation. Use and preservation of vegetation in a schoolyard can benefit children by both creating learning spaces and by providing educational content. To create learning spaces, vegetation can be planted in clusters to provide shelter form sun, rain and wind, and to reduce noise from other areas of the schoolyard or neighbourhood. Vegetation also has a calming effect on children, so they are better able to focus on activities.

Native vegetation may be used for educational content to teach children about plants while connecting them to their local environments. This connection can enhance learning capabilities because the children may be more interested in the content and are more likely to retain the information. Animal habitats can also be created using vegetation, which can be used to educate students about nature, habitats, and food chains, and instill ecological consciences. For example, creating a model of a prairie grassland habitat or of a woodland habitat can be used to inform the student about their local natural environment.

Gardening. Gardens are great resources for enhanced learning opportunities in schoolyards. Such gardens can be implemented using in-ground planting, raised planting beds or container gardens, such as barrels, tubs or boxes. Students can be given hands-on lessons about the natural environments that sustain us. Lessons can include planting seeds, care and maintenance, and cooking and eating the produce. Native plants may be used to

teach students about their local environments, which can connect the students to the local identity, especially in areas with agricultural histories. Gardens can also create natural gathering or exploration spaces for students and the community.

Loose material. Children can learn much about themselves and their environments through manipulation of material in the schoolyard. Loose material provides children with varying stimuli, which allow them to engage in imaginative and active play. The material can be manipulated in many different ways, enabling children to use their imagination to invent new ways of using the material. Such material may include sand, rocks, gravel, mud, mulch, logs, seeds, or sticks. Moveable parts on structures that can be manipulated will also stimulate imaginative play. Large materials or parts can encourage social play if they require collaboration to be manipulated.

Landscape forms. Landscape forms can be used to represent the identity of the local natural environment. They can also be used to encourage active play, challenging play, or exploration. Forms may be used to delineate spaces with specific uses, including outdoor classrooms, quiet spaces or active spaces. Such forms may include hills or berms, swales, riverbeds, retaining walls or steps.

Building materials. Natural building material can enrich a schoolyard by adding interesting textures and colours. The materials can be locally found or manufactured, adding to the representation of the local identity. Various natural building materials may be used, including wood, bamboo, hay, clay, sand, rock, water and even snow. Salvaged or reclaimed materials may also be used in a schoolyard design, which reduces waste and can significantly reduce building costs. These materials may include concrete, metal, tile, wood, or tires. Fallen logs can be a great material addition for teaching students about habitats or decomposition, and can be used for active play.

Enclosure. Spaces within the schoolyard should be clearly defined according to intended programming. This technique can create comfortable play spaces for children, which may enhance opportunities for active play and cognitive development. Spaces can be differentiated according to open or active use, quiet or calm use, or for use by different age ranges or classes. Definition may be achieved through borders or transition features such as paths, shrubs, trees, rocks, fences or walls. Enclosure should also be used around the edges of the schoolyard to provide the students with a sense of safety, allowing them to freely play and learn. The edge boundary can also be used to define the extents of the play space, so children know the limitations of their play.

Pathways. Varying types of pathways should be considered when designing a schoolyard in order to cater to differing ages, skill levels, and functions. The objective of a successful path system is enable comfortable and convenient movement through the schoolyard. Pathways can be differentiated according to primary circulation paths, secondary paths, and maintenance paths. The primary paths should be wide, flat and more direct, and should support the daily movement of students, staff and families. Secondary paths can be narrower, winding and even constructed out of stepping-stones, and should encourage slower, exploratory movement by users.

Outdoor classrooms and seating. Outdoor classrooms are gathering spaces that provide opportunities for outdoor learning and connections with nature in a schoolyard. These areas should be clearly defined spots that entire classes or small groups can utilize simultaneously for informal or formal instruction or discussion. Such spaces can be clusters of seating, amphitheaters, stages, or covered gazebos. These spaces should also have potential for community uses, such as gatherings, events or play. Seating is an important part of any schoolyard design, and should be provided in the outdoor classroom space as well as in several other locations around the schoolyard. Seating provides students with opportunities to relax, work on assignments or activities, read, or socialize. These areas can be implemented with a variety of seating materials, such as benches, large rocks, straw bales, picnic tables, retaining walls, or logs. These materials should be set at a variety of heights so children of all ages, sizes and abilities

may find a comfortable place to sit. Writing or work surfaces can also be added to the seating areas, such as tables, stumps, or boulders.

Educational tools. Educational tools may be incorporated into the schoolyard design to be used as teaching or curriculum aids. These tools can enable teachers to bring their lessons outdoors, connecting students to the natural environment and making the lessons more enjoyable or active. A variety of educational tools may be used in a schoolyard, which can teach students about science, math, the solar system, language, the senses, and/or time. Such tools could include wind chimes, thermometers, sundials, wind gauges, or instruments.

Signage. Signage can be used to help students and community members understand and engage with the space around them. Local culture and history can be incorporated into the schoolyard both through the content on the signs and by designing them according to a relevant and consistent theme. Student work can be displayed using signage for parents and visitors, engaging the community into the school culture. Signs can also be a means for educating students about their environment, such as a site map, plant species identification, rock type identification, animal habitats, or history.

Water. Water features should be used in schoolyard design for outdoor learning or functionality. Any existing water features on a site should be retained as much as possible, due to the value of the resource. Functionally, water can provide irrigation for gardens and plantings. Plants should therefore be designed to be close to the water source for ease of use. Educationally, water can teach students about ecosystems, habitats, the water cycle and sustainability. Students can also learn how to properly take care of plants or how to collect rainwater. Water features that could be used in a schoolyard design include rainwater harvesting and treatment facilities, ponds, water retentions, ditches or dikes, riverbeds, wells, or pumps.

Sustainability. Sustainable features may be used in schoolyard design to lower the school's ecological footprint and to educate students about sustainability. Development of self-concept including environmental identity and consciousness occurs in childhood. Sustainable features in a schoolyard can expose children to good environmental practices and can teach children to have an ecological conscience. Features that can be used for sustainable action in the schoolyard include composts, recycling bins, rainwater harvesting and treatment facilities, leaf cages, solar panels or edible gardens.

Habitats. Animal habitats may be designed into a schoolyard for educational purposes and to increase biodiversity. Habitats may be created with plant clusters, rocks, edible gardens, butterfly gardens, rain gardens, decomposing wood, or water features. Teachers can use these sites as educational tools to teach children about animals, insects or birds and their habitats and life cycles.

Design principles and features can be used to great advantage in schoolyard design, especially in the conceptual design of the École Lorette Immersion schoolyard. Schoolyards can be used as supplementary learning space, which can enhance learning opportunities for children, while connecting them to nature and to the identity of the area. Children of all ages, genders, sizes, abilities and traditions should be given opportunities to play, learn and explore in nature. The schoolyard can be used in so many ways and it should be used to the fullest potential, allowing children to play and learn everywhere. Landscape architects should get to know the community associated with any schoolyard design project to develop a sense of the local identity. When students are provided with familiar play and learning environments, they are better capable of engaging in their academia. These design principles and features will be considered in the upcoming Case Studies section of this practicum.

Principle	Description	Relevance	Examples
Community engagement and participation	Engaging local residents in the design process.	Design that suits the needs of the community and promotes longevity.	Surveys, interviews, and design consultations.
Outdoor learning	Providing students with outdoor learning environments.	Enhance childhood cognitive development potentials at schools.	Enclosures, shelters, or barriers create comfortable learning environments. Curriculum.
Play	Providing areas that encourage various types of play for students and the community.	Encourage social interaction, physical activity and learning.	Structures, land forms, enclosures, varied features, and malleable material.
Active	Areas for physically stimulating play.	Development of social skills, creativity, attention span, and physical fitness.	Paths, sports areas, hills, challenging structures or equipment, and loose material for building, balancing or digging
Social	Spaces that enable cooperative play.	Development of social skills and cooperation, and contributes to the formation of social identity and self-concept.	Enclosure, shelter, and cooperative play features.
Imaginative	Areas and features that stimulate inventive play.	Enhance development of creativity, problem solving, social skills and self-expression.	Spaces and materials that are not over designed, open-ended play features.
Challenging	Spaces that allow for risk-taking in a safe environment.	Development of self-concept and independence.	Structures with ropes, ladders, swings or slides, hills or other landscape forms, or loose material for building or climbing.
Winter	Winter elements used as a play space or tool.	Development of creativity, place identity and connection to local heritage.	Temporal, malleable features out of snow or ice. Tobogganing, skating, building.
Nature	Connections and interactions with nature	Provision of active and imaginative outdoor play, development of physical skills, social skills, cognitive function, and ecological identity.	Various plantings, especially native, of different size, shape, colour or season.

Table 3-1: Design principles.

Identity	Cultural connections with features.	Promote sense of pride, ownership and familiarity for the students and the community.	Local materials, native plants, native landforms, language, cultural traditions and history
Memory	Response to experience with place.	Formation of self-concept, place identity or environmental responsibility.	Sustainable water features, gardens, tree preservation, or animal habitat protection.
The river	Cultural connection with river features.	Promote sense of familiarity and identity.	River replication such as water features or tree lines.
Design materials and features	Use of materials, features or design principles.	Education. Connection to place. Social, physical, intellectual and spiritual development.	Various plantings, land forms, materials or features.
Vegetation	Use and preservation of vegetation.	Education about plants, wind and sun shelter, or noise reduction.	Various plantings.
Gardening	Use of edible or decorative gardens.	Education about growing and harvesting plants.	In-ground planting, raised planting beds or container gardens, such as barrels, tubs or boxes.
Loose Material	Use of loose material or moveable parts.	Learn about environment and self-identity. Engage in imaginative, social and active play.	Sand, rocks, gravel, mud, mulch, logs, seeds, sticks or moveable parts on structure
Landscape Forms	Use of varied landscape forms.	Represent the identity of the local natural environment. Encourage active play, challenging play, or exploration.	Hills or berms, swales, riverbeds, retaining walls or steps.
Building Materials	Use of various building materials.	Representation of local identity. Education about sustainability or habitats.	Wood, bamboo, hay, clay, sand, rock, water, snow, concrete, metal, tile, tires, or fallen logs.
Enclosure	Clearly defined spaces according to programming.	Comfortable play and learning spaces. Enhance opportunities for active play and cognitive development.	Borders or transition features such as paths, shrubs, trees, rocks, fences or walls.

Outdoor classrooms and seating	Gathering spaces for learning and community use.	Opportunities for outdoor learning, community relationships and connections with nature.	Clusters of seating, amphitheaters, stages, or covered gazebos. Seating materials, such as benches, large rocks, straw bales, picnic tables, retaining walls, or logs.
Educational tools	Outdoor educational tools.	Outdoor learning opportunities and connection to the environment.	Wind chimes, thermometers, sundials, wind gauges, or instruments.
Signage	Use of signage about space, features or culture.	Education about the environment, engage in local identity.	Site map, plant species identification, rock type identification, animal habitats, or history.
Water	Use or preservation of water features.	Education about water cycles or habitats. Functional uses.	Rainwater harvesting and treatment facilities, ponds, water retentions, ditches or dikes, riverbeds, wells, or pumps.
Sustainability	Use of sustainable features or practices.	Education about sustainable practices. Reduce ecological footprint.	Composts, recycling bins, rainwater harvesting and treatment facilities, leaf cages, solar panels or edible gardens.
Habitats	Use of materials or features that may form animal habitats.	Education about life cycles. Increase biodiversity.	Plant clusters, rocks, edible gardens, butterfly gardens, rain gardens, decomposing wood, or water features.

Conclusion

Design principles and features can be used to great advantage in schoolyard design, especially in the conceptual design of the École Lorette Immersion schoolyard. Schoolyards can be used as supplementary learning space, which can enhance learning opportunities for children, while connecting them to nature and to the identity of the area. Children of all ages, genders, sizes, abilities and traditions should be given opportunities to play, learn and explore in nature. The schoolyard can be used in so many ways and it should be used to the fullest potential, allowing children to play and learn everywhere. Landscape architects should get to know the community associated with any schoolyard design project to develop a sense of the local identity. When students are provided with familiar play and learning environments, they are better capable of engaging in their academia. These design principles and features will be considered in the upcoming Case Studies section of this practicum.

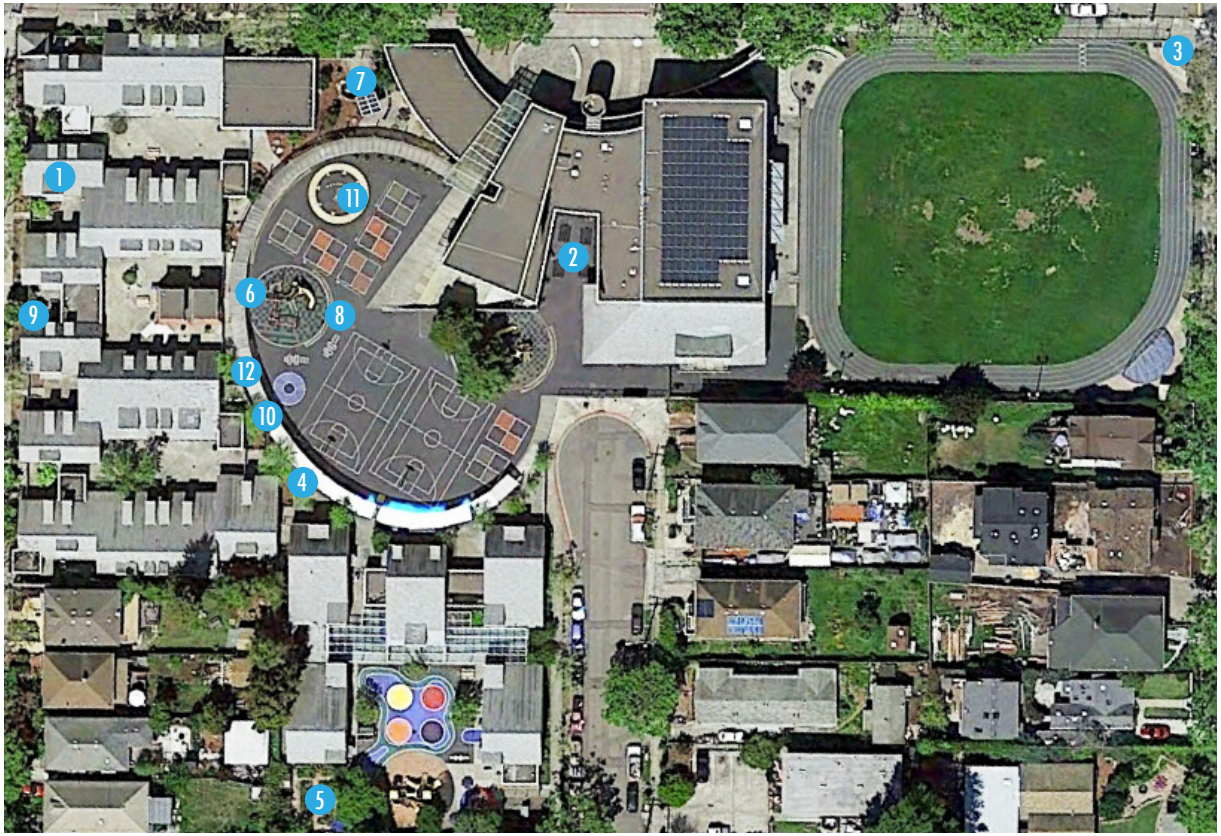
4 CASE STUDIES

Introduction

This chapter is an exploration of four landscape architecture case studies based on ideas about place identity in the schoolyard from the literature review in Chapter 2, and the design principles discussed in Chapter 3. Four precedents were selected and compared according to a selection process, which was based on a series of criteria, including the use of naturalized play features that promote imaginative, challenging or active play, features that represent the identity pertaining to the local community, and the use of community engagement or participation, especially with children, as part of the design process. The intention of these case studies was to build upon the findings from the previous chapters, and to highlight important principles that may be used when designing a schoolyard that celebrates local identity and natural play. The case studies follow a descriptive analytical framework, and are organized into sections including description, analysis, design principles and implications for design.

Rosa Parks Elementary School

Location: Berkeley, California, USA
Building Completed: 1997
Playground Completed: 2009
Designers: The Ratcliff Architects, Sharon Danks



1. House-like classrooms.
2. Courtyard.
3. Public entrance.
4. Outdoor classroom.
5. Food Garden
6. Orchard and berry patch.
7. Solar panels.
8. Boulder seating.
9. Sitting logs.
10. Weather observation station.
11. Plant tunnel.
12. Geology study area.
13. Entry arch and wood fencing.

Figure 4-1: Rosa Parks Elementary School site plan.

Description

Rosa Parks Elementary School is situated within a diverse, mixed-income neighbourhood, located along a light-industrial area of Berkeley, California. The school was built to replace Columbus School, which was destroyed by the Loma Prieta Earthquake in 1989. At the time of the earthquake, Columbus School was the only public building and play area for the residents of the community within the constraints of busy arterial boundaries. Due to the devastation of the earthquake, which left the neighbourhood without ample public gathering space, the community became divided. The main goal of this project was therefore to reconnect the local residents through the strategic design of Rosa Parks Elementary School.

The physical design of the school was intended to fit with the local design aesthetic, where classrooms designed house-like and positioned in clusters around a central courtyard. This layout would offer private spaces for the school children, but also open up to the community for public use. The public entrance, public park and athletic fields were positioned to be easily noticeable and accessible to community residents.

Several years after the completion of the school buildings, the schoolyard project was initiated. The goal for this addition to the project was to create enhanced outdoor learning opportunities for the students at Rosa Parks Elementary School. Emphasis was on getting children back into active and challenging play, teaching them about their natural environment and connecting them to their local environment. The goal was also to create an inclusive public space that empowers the community and encourages them to be invested in their futures.

Analysis

This project was chosen as a case study in this practicum because it provides insight into how to design a schoolyard that is effectively integrated into the surrounding context, in an area that is in desperate need of more community space. Analysis of the design principles in the project will be used to understand the benefits of an inclusive design process, how to design for outdoor learning, connection to nature, various types of play and strengthening the local and school identity. The École Lorette Immersion schoolyard design project can benefit from the case study due to the similarities in community needs and project scales.

Design Principles

Design principles that were used in the project include participation, outdoor learning, play, connection to nature, and place identity. Rosa Parks Elementary School has had an extensive participatory process involved in the design of the building and the playground. Many people had ties to the school and therefore the involvement was extensive, including parents, staff, students, social workers, police officers, libraries, and parks staff. Five public bilingual workshops were held so the architects could get a sense of the area, the people, and the desires for the new school. As participation was so great, the community was able to raise $1.3 million for the project, which helped fund enhanced community space. Contributions to the playground included labour, such as handcrafting wooden fences, building mosaics and many other construction tasks. Materials were also donated, such as the Redwood trees used for seating or fencing.

Outdoor learning was an important part of the Rosa Parks Elementary School playground design. The designers and educators wanted to extend learning opportunities out of the classrooms and into nature. An outdoor classroom was incorporated into the design so teachers could bring their lessons outdoors. This provides students with a more vibrant learning environment and even improved teaching quality. Teachers can do hands-on ecology lessons in the edible garden or geology lessons with the igneous, metamorphic and sedimentary rocks. Additionally, sustainable features, including solar panels can be used to teach student about renewable energy.

Opportunities for various types of play were valued in the design of the Rosa Parks Elementary School playground. The creative use of natural materials was intended to encourage imaginative and active play, in a beautiful and rich play environment. Edible gardens became areas for children to explore, while nibbling on the edible plants. Large rocks were installed for seating, but were also used for climbing and learning about geology. Logs were partly embedded into the ground to be used as benches or seats, and also used for climbing. Tall bushes were turned into quiet and relaxing huts for children to explore. Areas of the playground were separated by enclosures, such as natural wood fencing or plantings, to create new destinations and activities.

With the goal of connecting children to nature, vegetation and natural materials were used throughout the schoolyard. These materials connect the students to their local environment and also encourage imaginative and active play. Students can also learn about natural processes, such as plant growth or decay.

Place identity was considered in the design of the playground, especially through the use of local materials and community engagement. Local plants and building materials were used, such as Redwood trees, Monterey Cypress trees and local edible plants. Local identity was considered in an interesting way when it was discovered that a historic waterway was buried under the existing schoolyard. The design team decided to create a mosaic on the ground depicting the historic creek to raise awareness about what once existed.

Implications for Design

Through this exploration I have learned the potential benefits of engaging the school and the community in the schoolyard design process. The children were more excited about playing and learning in this improved and comfortable environment, community members were proud of the project and enjoyed using it, which contributed to the maintenance and longevity of the site. Also, by incorporating local identity into the design, including simple representation of a historical creek or using local plants and building materials, children can engage with their cultural histories and situate their learning in something familiar. Finally, one of the most important lessons from this study has been that learning can be active, creative and fun, and can happen anywhere.

Clemson Elementary School

Location: Clemson, South Carolina
Completed: Ongoing
Size: 36 acres
Cost: $174,800
Funding: Parent-Teacher Association, donations from the community, fundraisers.
Designers: Clemson University professors and students

Figure 4-2: Clemson Elementary School site plan.

1. Caroline Fence Garden.
2. Arbor sitting garden
3. Art garden
4. Playground for grades 1, 2
5.Playground for K-4, K-5
6. K covered play area
7. Alice in Wonderland courtyard garden.
8. Peter Rabbit courtyard garden.
9. The Secret Garden courtyard garden.
10. Harry Potter courtyard garden.
11. Interior courtyard for native plants.
12. Greenhouse and experimental gardens
13. Nature trail.
14. Outdoor Classroom.
15. Adventure play area.
16. Amphitheater.
17. Fossil dig.
18. Music exploration garden.
19. Environmental exploration area.

Description

Clemson Elementary School is located in the small city of Clemson, South Carolina. The school was built to replace two existing elementary schools that were inadequate for the needs of the community. The existing site selected for the project housed 25 acres of open pasture, 11 acres of deciduous forest, and a stream running through. A task force was created who decided upon walking the extensive site to create the Clemson Elementary Outdoors, which was to be an outdoor learning laboratory.

The schoolyard at Clemson Elementary School was intended to provide the students with unique and challenging learning experiences in ecologically diverse settings. The task force believed that children could expand their learning potential and social skills in these environments, rather than in traditional and more confined settings. Research on the relationships between children and their learning environments was used in this project, especially those focused on the benefits of interaction in outdoor environments.

Analysis

This project was chosen for this study because of the emphasis on creating ecologically rich outdoor learning environments for children, while encouraging children to develop respect for the environment, for their peers and for themselves. Analysis of the design principles in this project will be used to appreciate the value of using available resources in community projects, including people with different skills or backgrounds, and natural resources. This project also demonstrated how children could participate in the design and construction process of a schoolyard project, as well how they can benefit from this participation. The École Lorette Immersion schoolyard design project can benefit from this study due to similar community involvement desires and needs, as well as similar educational goals.

Design Principles

Participation in this project was extensive due to the small and inclusive nature of Clemson. Students were invited to take part in the design process, where they could learn how to research, communicate, design, collaborate, share, reflect, evaluate and connect to their community and school. Initially, students were asked to share their views on what they would like in their new schoolyard. Several hundred children participated by writing or drawing their visions, which were analyzed by the design team. A short list of ideas was generated, including playgrounds, athletic fields, courtyard gardens, special interest gardens, barn, greenhouse, nature areas, outdoor classrooms, amphitheater, and other significant areas. Students also were given the opportunity to help design and construct courtyard gardens, which were themed according to books they had read as part of their curriculum. Themes included Secret Garden, Pizza Garden, Wizard of Oz Garden and Harry Potter Garden.

The Clemson Elementary design team wanted to incorporate learning into the outdoor environment so children could have more enjoyable learning experiences. Part of the outdoor learning experience was intended to educate the students about environmental problems, encouraging the students to think critically about the world and learning how to take action and affect change. An outdoor classroom with wood benches was built within the nature trail, providing students with a stunning setting for lessons. Other learning opportunities were organized through the implementation of flower gardens, edible gardens, a greenhouse, and a barn, to teach students about their natural environment. Sustainability was also considered as a educational tool, including natural resource preservation, using local plants and planting shade trees to reduce building heating and cooling needs.

The design team at Clemson Elementary created various types of play opportunities within the schoolyard. A variety of spaces were designed for the children to play creatively and imaginatively, including courtyards, gardens, and seating areas. Local natural materials were used to create calming play environments for

children to explore. The existing deciduous forest was preserved so children could explore in a natural setting and test their limits of courage and physical play. Closer to the school, play structures were installed for preschool and public use. All of the play areas were separated according to grade levels, so children of all ages, sizes, and abilities could find something exciting and challenging to do during recess.

Connecting students to nature was of great importance to the design team at Clemson Elementary. To ensure that the most suitable plants were chosen for the site, the vegetation was designed and planted by a horticulture class at Clemson University. A major goal of the team was to preserve as much existing plant life as possible on the site, as it was already quite rich with biodiversity. The large existing deciduous forest with creek became the perfect setting for a nature trail, which was guided by interpretive signage pointing out significant forest features. An outdoor classroom was also built into the deciduous forest, which can be used to connect student's education to the natural environment.

Place identity was considered in the design of Clemson Elementary, especially in the plant choices and preservation. Native plants were utilized wherever possible so children could understand their local environment. A garden called the Carolina Fence Garden was designed to honour the local culture of the State of South Carolina, which includes the state's official flower, stone, bird, butterfly, wildflower and grass. A split-rail fence constructed out of local black locust wood, to represent the local agricultural history, contains the garden. Place identity was also considered when the students were asked to participate in the design and construction process of the schoolyard. Students were given the opportunity to share their opinion, see their ideas come to life, and contribute to the longevity of the site. This made the schoolyard more personal to the children, who could connect to their surroundings and their outdoor education.

Implications for Design

This exploration has taught me how important it is to utilize your community and natural resources. By engaging the community, and especially the students, the people involved became invested and excited about the project. Students should be given places that allow for investigation through play, where they may learn about themselves and their environment. This project also demonstrates the value of teaching children to have an ecological consciousness in a time when the condition of our environment worsens.

Coombes CE Primary School and Nursery

Location: Arborfield Cross, Reading, Berkshire, UK
Completed: 2008/Ongoing
Designers: Susan Humphries MBE MA, Students

Figure 4-3: The Coombes CE Primary School site plan.

1. Boardwalk.
2. Ponds
3. Basketball court
4. Main entrance.
5. Swimming pool.
6. Maze.
7. Painted games.
8. Tires filled with cement.
9. Infant playground.
10. Small field.
11. Junior playground.
12. Forest.
13. Trail.
14. Labyrinth
15. Garden.

Description

The Coombes CE Primary School and Nursery is located within the village of Arborfield, Reading. The school supports over 600 students who come from the villages of Arborfield, including Arborfield Garrison, and Barkam. The development of the school grounds is an ongoing process, beginning over 40 years ago, and is constantly evolving with the students. This process of constant development is used as an educational method, as well as a means to connect the school to the community. The schoolyard at The Coombes CE Primary School and Nursery was built with the intention of providing students with experiential learning opportunities, largely focused on lessons about the natural environment. The development of this project coincides with the academic philosophy for this school, where the outdoors is considered a vital part of daily education. Curriculum was therefore considered in great detail when designing the features of the school grounds. The goal for this project was to engage all students in the evolving design and maintenance processes for the present and future of the site.

Analysis

This project was chosen for this study due to the core values based on environmental learning and student participation. Education was of great importance to this project, providing students with "multi-sensory, active and real life lessons" (The Coombes CE Primary School, 2014). Analysis of the design principles in this project will be beneficial to the design of the École Lorette Immersion schoolyard, due to the comprehensive environmental education foundation that could be of great benefit to residents of Lorette, Manitoba. Furthermore, information about how to engage in ongoing participatory practices with students will be of great importance to the École Lorette Immersion schoolyard project, due to the similar desires regarding participation and longevity of the project.

Design Principles

Participation with children was considered in the construction and upkeep of The Coombes CE Primary School and Nursery. Furthermore, children are encouraged to take part in the continuous improvements of the school grounds, as the project is ever evolving. This participation in such an organic process teaches children about the impact they will have on the future of the site and the future users. Children can also learn about how previous students at the school may have shaped the current state of the schoolyard that they use in their every day lives. Supplementary participation includes parent and local army volunteers who help with upkeep of the school grounds.

Outdoor learning provisions were of the greatest importance to The Coombes CE Primary School and Nursery. Almost all subjects within the curriculum were incorporated into the outdoor environment, including math, science, history, ecology, geography, and geology. Lessons in the outdoor spaces were planned to occur daily, especially in the allocated outdoor classroom space, which could be used for a multitude of subjects. By connecting students to their lessons through hands-on learning, education becomes more enjoyable and personal. Students can then produce more inspired work when they have the opportunity to do their lessons in rich and imaginative settings. The design of the school grounds offers many different learning opportunities that are both hands-on and multi-sensory. Large vegetated areas provide opportunities to teach students about ecosystems, food production and biodiversity. For example, fruit trees are planted as educational tools for teaching students about pollination, blossoming, and harvesting. In addition, edible gardens are planted and managed by students, providing opportunities to learn about the world that sustains them. Science is considered in the design, including the geology trail that displays different varieties of stones local to the United Kingdom, including sandstone, granite, slate, gritstone and limestone. Other educational features incorporated into the design of The Coombes CE Primary School and Nursery include ponds, a tree house, and barn with livestock.

Play is considered to be of importance in the development of children at The Coombes CE Primary School and Nursery. There are a variety of play spaces throughout the schoolyard, including nooks, sitting areas, exploration areas, challenging play areas and play structures. Parts of the play areas are separated into two age groups, so children of different ages, sizes or abilities could find something enjoyable to do during recess. Areas that encourage exploration or challenge include woodchip paths that wind throughout the site, ponds, logs, concrete blocks, tires filled with cement, and treed areas. Group play is encouraged in areas, such as story circles, the enchanted story chair, amphitheater, group sitting areas and the tree house.

Connecting children to their natural environments is an important part of the educational philosophy at The Coombes CE Primary School and Nursery. Children are encouraged to spend much of their time in their outdoor environment, in hopes of enhancing their learning opportunities, and allowing them to grow as an individual and social being, and develop environmental consciousness. Natural features used in the design of this project include, fruit trees, plant and animal ecosystems or habitats, ponds, vegetable crops, and a large treed area.

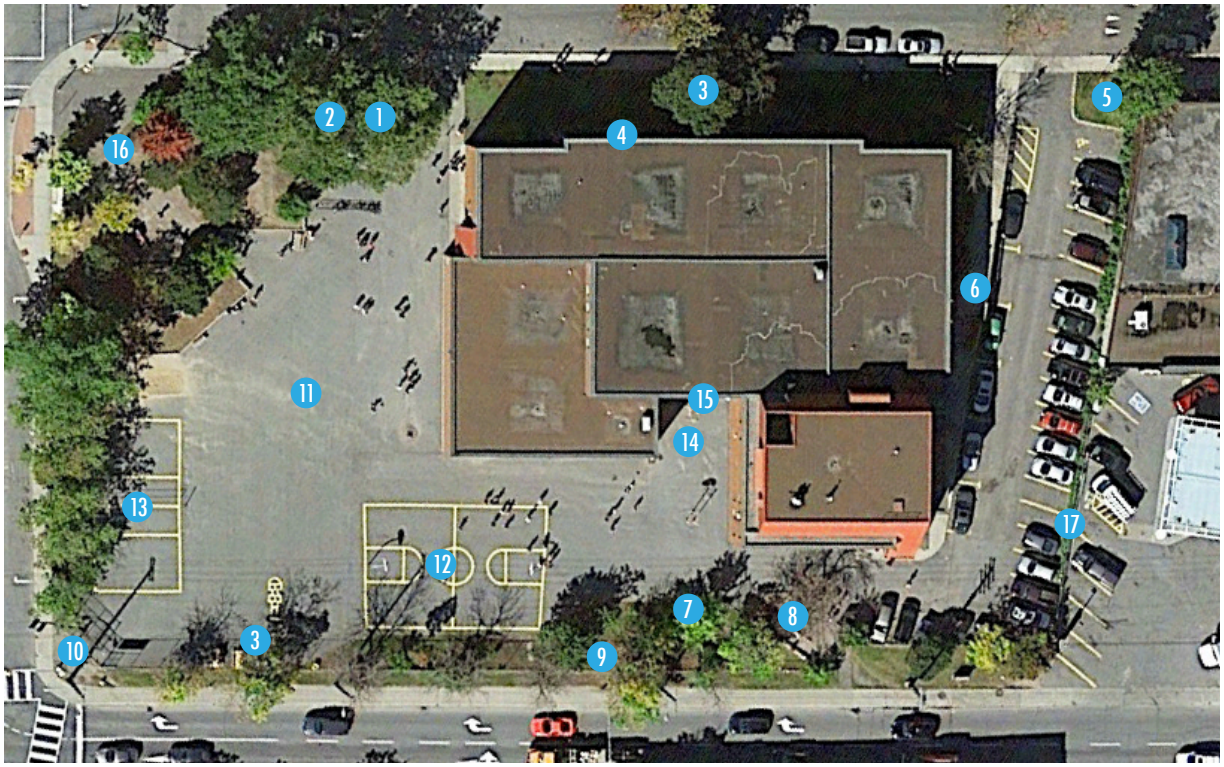
Place identity pertaining to students and community members at The Coombes CE Primary School and Nursery was considered in the choice of plantings and the integrated curriculum in the design features. The goal for the design was to provide students with a link to local history, a sense of their own identity and their spirituality. Students were able to connect with their schoolyard further though the ongoing participatory design and maintenance process.

Implications on Design

This exploration has introduced many possible schoolyard design considerations that may be used for enhanced learning opportunities. In the design principles section of this thesis, it was determined that outdoor learning environments can be great tools for providing opportunities for cognitive development. By bringing the students outdoors for their lessons, they may become more engaged in the materials and are more likely to produce more creative work. In addition, when children are involved in the constant evolution and upkeep of their school environment, they develop ownership and respect for that space that could stay with them for life.

Glashan Public School

Location: Ottawa, Ontario
Completed: Ongoing
Cost: Fundraising goal $250,000.00
Funding: Donations from the community, fundraisers.
Designers/Partners: Glashan School Council, Glashan School and the Ottawa-Carleton District School Board, Ecology Ottawa, Evergreen, Hidden Harvest Ottawa, City of Ottawa, Forestry Services Branch, Studio Bison Lou



1. Climbing structures
2. Boulder climber.
3. Seating clusters.
4. Mural.
5. Naturalized winter garden.
6. Entrance canopy.
7. Orchard.
8. Quiet seating area.
9. Boulevard trees.
10. Public entrance.
11. Asphalt play area.
12. Basketball court.
13. Volleyball court.
14. Sculpture garden.
15. Green wall.
16. Raised deck performance space.
17. Vine screens.

Figure 4-4: Glashan Public School site plan.

Description

Glashan Public School is located in the urban center of Ottawa, Ontario at the busy intersection of Catherine and Kent Streets. The school is one of the oldest in Ottawa, dating back to 1888. In 1979, a new building was constructed, which is the current home of close to 400 grades 7 and 8 students from mixed socio-economic and ethnic backgrounds. The Glashan Green Team was established in September of 2013 to initiate the Glashan Schoolyard Greening Project. The project is extremely community driven, with support from community donations, grants, volunteers, The City of Ottawa, expert consultants, including Ecology Ottawa, and many others.

The Glashan Schoolyard Greening Project is intended to provide the students with unique learning opportunities through participation in the design process, and outdoor learning facilities. The Glashan Green Team believed that the students could be an integral part of the design process, while honing their math skills, critical thinking and teamwork. Their goal was to provide the students with healthy, natural places to play and learn, where children may increase their appreciation for nature, learn the importance of environmental stewardship and form a sense of belonging with their school and community.

Analysis

This project was chosen for this study due to the emphasis on engaging the community and the students in the design process, and providing students with naturalized outdoor play and learning spaces. The amount of support from the community for the Gleshan Schoolyard Greening project was outstanding and can be an important lesson about the potential for community outreach. The project was also chosen because of the similarity in climate to the study site for this practicum, École Lorette Immersion. Both sites experience harsh winter conditions that affect design decisions and use. Analysis of the design principles in this project can be applied to the design process for École Lorette Immersion, specifically the community engagement techniques, student involvement, winter design features and outdoor learning opportunities.

Design Principles

Community engagement and participation in this project was extensive, including fundraising initiatives, design consultations, expert collaborations and volunteer construction. Community engagement was used at the beginning of the project to determine a list of wants, needs or concerns for the new schoolyard. The participants wanted a schoolyard that is safer, more enjoyable for the students and the community; has less asphalt, more natural features, noise pollution, more colour, and encourages environmental stewardship. Students were heavily involved in the design process, including with advertising the project for fundraising, including taking part in a funding video. Students also assisted in developing design ideas and were invited to take part in an outdoor classroom design competition. Finally, students, staff and community members helped with the ongoing construction process at Glashan Public School.

The Glashan Green Team aimed to provide outdoor learning environments for the students to expand their learning opportunities in an enjoyable format. The naturalized outdoor learning features were planned to educate students about environmental stewardship, increase their appreciation for nature, and help build a sense of school and community belonging. Seating areas with log benches or stone seats surrounded by trees were planned to provide students with comfortable learning spaces that are sheltered from wind or sound. An outdoor classroom was planned to host class lessons for large groups of students to use at one time. This space was designed to be sheltered by plantings and is filled with seating. A winter garden is planned using native shrubs and groundcover, which may educate students about their local environment.

Various types of play opportunities were considered in the design of the schoolyard at Glashan Public School. Courtyards, gardens, an outdoor classroom, enclosed seating areas, and programmed sports areas were incorporated into the schoolyard design. These features allow students to engage in a variety of play activities that challenge imagination, physicality and social

skills. A climbing structure was designed to challenge students, while connecting them to the natural environment. Quiet and active play areas were separated so different frequencies of play could occur within the small limitations of the urban setting. As all of the students are within a two-year age range, all play features and spaces are available to each student simultaneously, the result was a design for multiple differentiated play spaces.

Connecting students to nature was an important goal for the Glashan Public School, especially due to the urban positioning of the school. The neighbourhood surrounding Glashan Public School has an acute shortage of green space, which has increased the desire to connect the students to nature. The existing ash trees on the site were all devastated by an emerald ash borer infestation, which made decisions about planting an important part of the design process. To ensure the most suitable plants were used for the site, the Glashan Green Team acquired the help of Ecology Ottawa Community Network, who assisted in the naturalization and schoolyard greening process. Trees and vines were planting along the border of the schoolyard to provide students with a beautiful, natural play environment, while blocking sound pollution and wind. A naturalized winter garden was planted, which provides students with connection to nature even in winter months when other plantings are barren.

Place identity was considered in the design of the Glashan Public School schoolyard through the participatory process. Students and community members were allowed the opportunity voice their opinions about the new schoolyard design, which enable local culture to be embedded into the design. The participatory practice encourages students to connect to their schoolyard and take part in the upkeep and longevity of the site. Native plants, including a naturalized winter garden, were utilized in the design so students could connect to their local environment.

Implications for Design

This case study exploration of Glashan Public School taught me the importance of utilizing community resources, including volunteers, donors, specialists and students. By engaging students and the community, participants became invested and excited about the project. The students learn how to be responsible for their surrounding environment and take interest for the development and longevity of the project. The Glashan Schoolyard Greening project also demonstrates the potential for creating useable outdoor environments in harsh winter climates.

Principle	Relevance	Examples
Community engagement and participation	Design that suits the needs of the community and promotes longevity.	Fundraising, surveys, student design seminars, consultations, construction, or material donations.
Place identity	Promote sense of pride, ownership and familiarity for the students and the community.	Community engagement, local materials, native plants, native landforms, language, cultural traditions or history.
Outdoor learning	Enhance childhood cognitive development potentials at schools.	Outdoor classrooms, edible gardens, educational materials, such as rocks, plants or logs, sustainable features, quiet areas, enclosures, shelters, or barriers.
Play	Encourage social interaction, physical activity and learning.	Varied spaces for exploration, natural materials, edible gardens, seating, climbing features, quiet areas, structures, landforms, enclosures, or malleable material.
Connection to nature	Provision of active and imaginative outdoor play, development of physical skills, social skills, cognitive function, and ecological identity.	Various vegetation, natural materials, native plants, water features, habitats or preservation.

Table 4-1: Case studies summary.

Synthesis and Conclusions

The case studies conducted provided focused analysis targeted at schoolyard design for enhanced outdoor learning opportunities. Conclusions drawn from this analysis supplemented the literature review and design principles exploration, and provided an applied account of design features that may be applicable to the design process of this practicum. The case studies were analyzed according to the main themes determined during the design principles section of the practicum, including community engagement and participation, place identity, outdoor learning, play and connection to nature. When comparing the four case studies, several consistencies are apparent, which proved to be insightful for the design of the École Lorette Immersion schoolyard. The findings are summarized in Table 4-1, including the relevance to the conceptual design and examples of design features that may be used.

5 SURVEY STUDY + ANALYSIS

Introduction

The survey research is based on a descriptive sampling method, which was used to "ascertain attitudes, values and opinions" from residents of Lorette, Manitoba (Gray, 2009, p. 221). This method was achieved using both self-administered and interviewer-administered techniques, where community and staff surveys were made publically available to be self administered, and the student surveys were administered in a structured, face-to-face setting. A letter explaining the purpose of the research and asking for informed consent accompanied each survey. The survey research occurred over a three-month span of time, between March 2014 and May 2014. Participants will receive a summary of the findings at the conclusion of this practicum. The participants were selected based on their connection to Lorette, Manitoba, and especially to École Lorette Immersion. Students, staff members at École Lorette Immersion and community members from Lorette, Manitoba were invited to participate in the study. The information collected as a result of these surveys was essential in developing a complete understanding of the identity of the community and making appropriate design decisions based on the data.

Measurement Procedures

The questions were formulated based on the objectives and research questions of this practicum. Ten questions were designed for each of the three surveys, which differed according to the sample groups. Questions ranged from use, to opinions and values about Lorette, Manitoba and the École Lorette Immersion schoolyard. Student surveys were administered through an interview process, where children were handed a document including ten survey questions and a simple map of the schoolyard for context and for drawing answers. Staff members at École Lorette Immersion were provided with a document including ten questions, which were self-administered, then retrieved by the researcher. Finally, a community survey of ten questions was administered online through SurveyMonkey, advertised for on the École Lorette Immersion website and in the newsletter.

The intention of the survey process was to identify differing perspectives about the current state of the École Lorette Immersion schoolyard, suggestions or desires for the future schoolyard design, and about the Lorette landscape and community. Comparing similarities and differences in perspectives from participants has been a useful tool for building a narrative about the community who currently uses or will use the schoolyard at École Lorette Immersion.

Data Collection and Analysis

With the help of the Parents Advisory Council and the Staff at École Lorette Immersion, over 100 surveys were conducted with students, staff and community members. The data was recorded at the time the responses were received, and were organized in a Microsoft Excel spreadsheet. The data is organized according to sample groups and questions. The responses of each question have been valued according to number of similar responses.

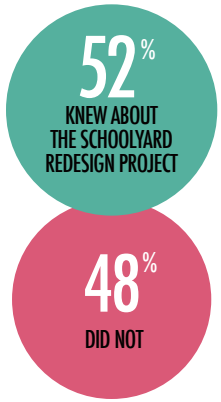
The analysis of the survey data was complex due to the open-ended nature of the questions and responses. To begin, all responses were read through and the potential reasons why individuals chose to participate in the study were investigated. Categories were then developed and each response was assigned to a category. The categories were then checked for appropriateness and reworked as needed. Once the categories were refined, the major themes were identified according to the project objectives. Finally, patterns and trends were identified and the findings were summarized.

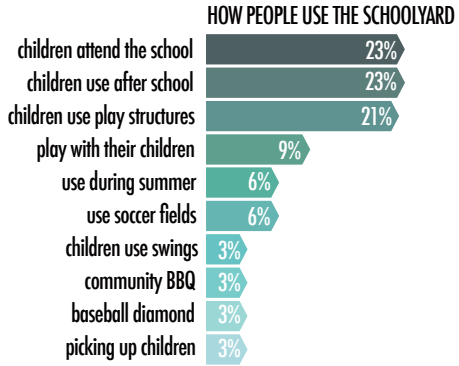
Online Community Survey

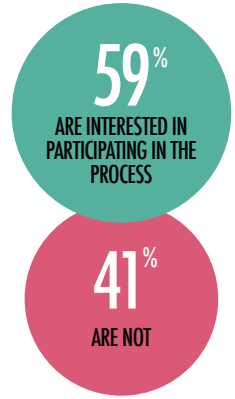
The survey intended for parents of students at École Lorette Immersion and other community members in Lorette, Manitoba was launched on SurveyMonkey (www.surveymonkey.com). The questions encouraged participants to talk about their connection to École Lorette Immersion and to the community. This was to gain a sense of the place identity present in Lorette, and to establish the extents of the community involvement potential in order to have a better idea of the stakeholders. The questions and responses are documented below, with numbers indicating the number of similar responses.

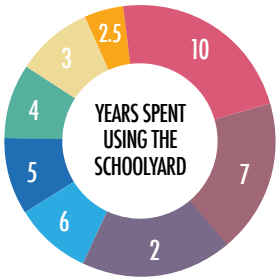
When analyzing the data, it became evident that the majority of participants already had ties with École Lorette Immersion, such as children or friends attending the school. This is likely due to the specificity of the survey to the schoolyard at

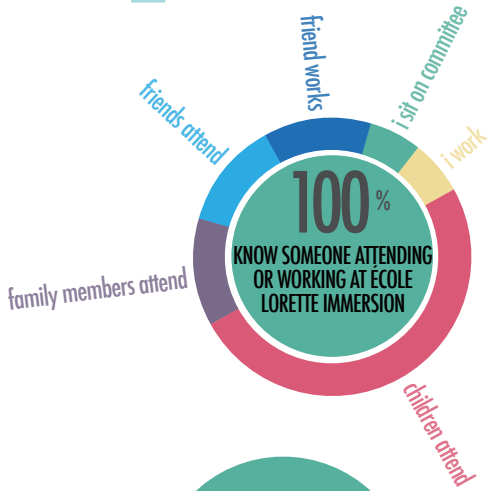
Figure 5-1: Community survey data.

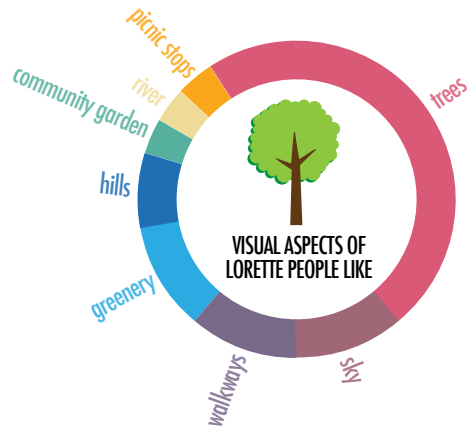


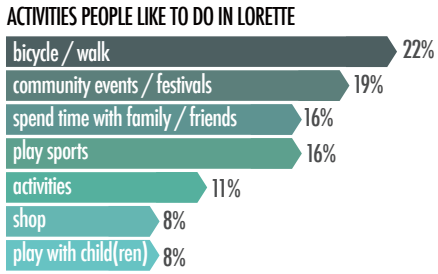












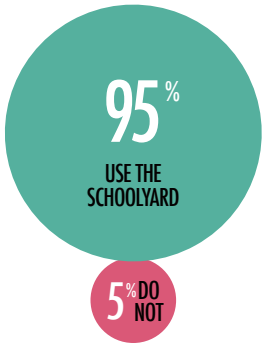
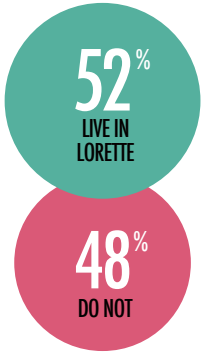
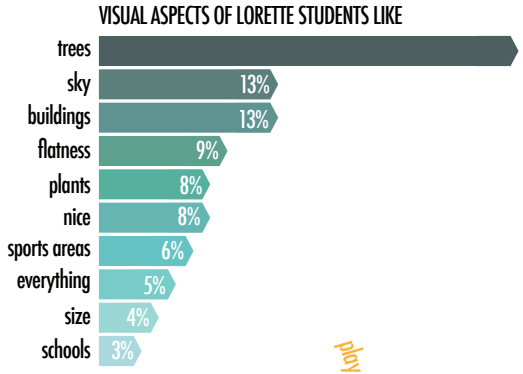
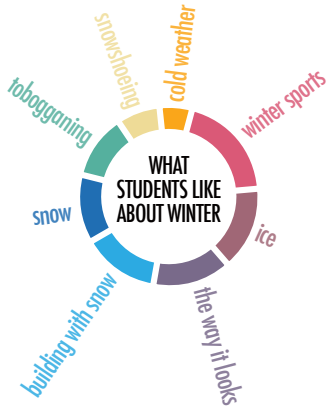
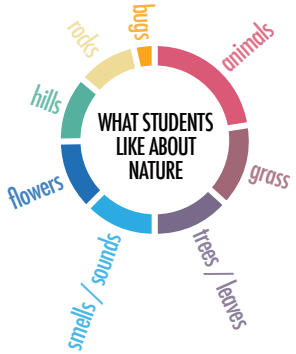


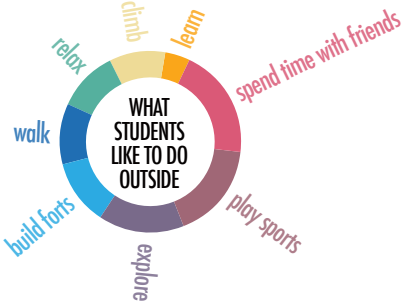
Figure 5-2: Student survey data.

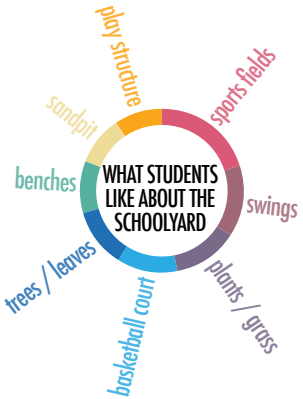


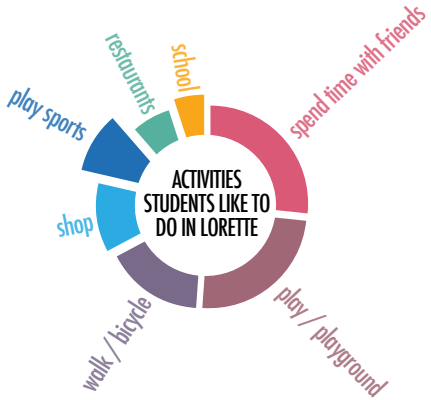












École Lorette Immersion, as well as the advertisement methods, which were limited to the school's website and newsletter. Many responders commented on the lack of excitement or interest of the current schoolyard, and would like to see something that could be used by children of all ages, as well as the community. Safety was of utmost concern to many of the participants, who either noted the existing safety concerns or the desire for additional safe features. Responses regarding Lorette, Manitoba, demonstrated a strong family and community-oriented attitude. Participants notably connect to the social organizations as well as the physical environment, especially the trees and plants.

Student Survey

Students from grades 2 to 8 (one class per grade) were invited to participate in the study. Students in the selected classes were provided with an informed consent document, which they took home to their parents/guardians. The document was to be read and, if interested, signed by the student and their parent/guardian. The student surveys were conducted with the assistance of the school Principal at École Lorette Immersion, in May 2014. The questions and answers are documented below, with numbers indicating the number of similar response occurrences. The experience was amazing, providing some great insight into student's daily lives and experiences in Lorette and at school.

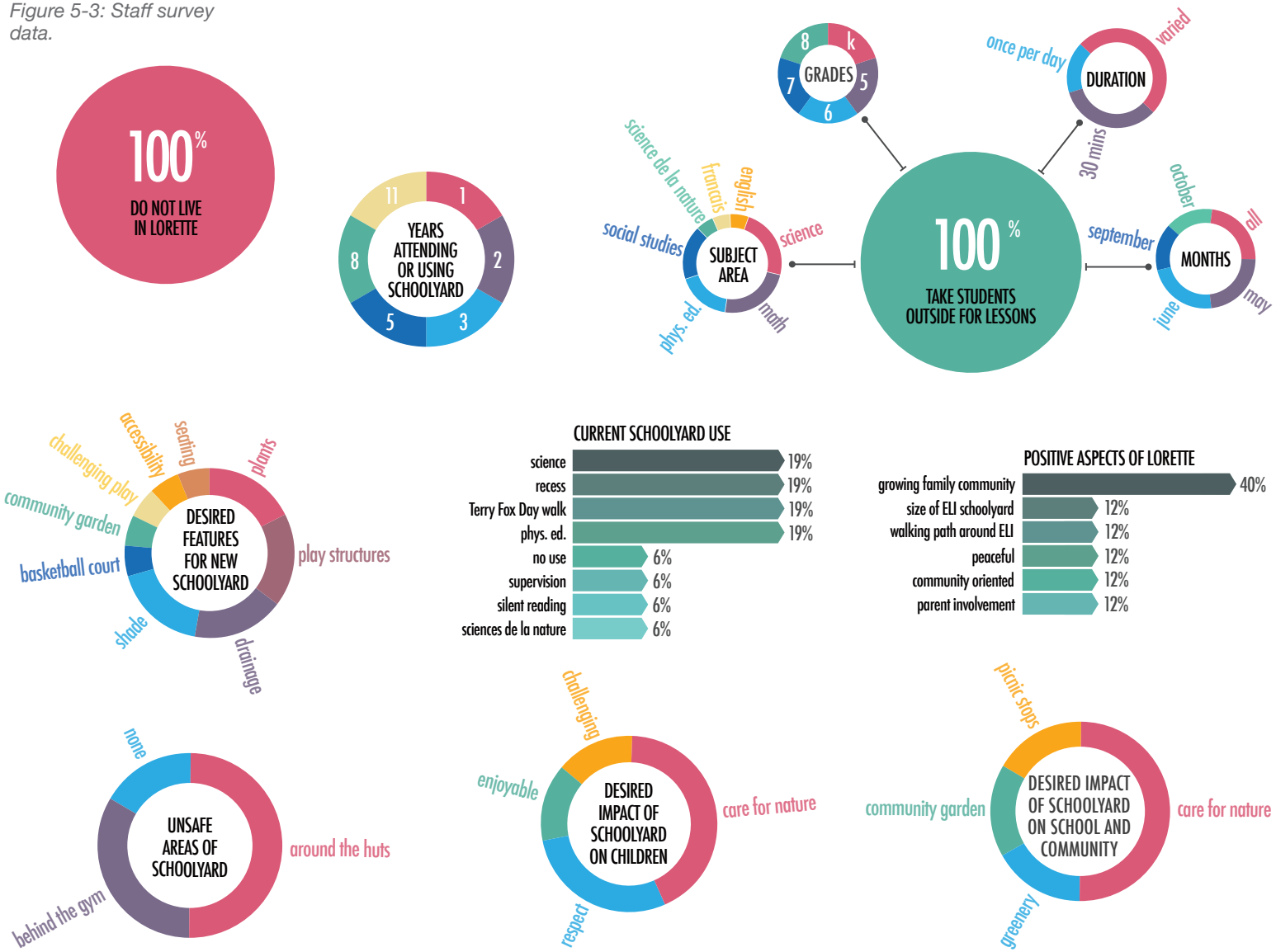
Responses to the questions about Lorette were extremely positive. The students seem to enjoy being a part of the community and taking part in organized sports, events and festivals. Many students noted that Lorette is "fun" or "awesome" and that they like to "spend time with friends", "walk" or "shop". When it came to the questions about their schoolyard, most of the students didn't have too much negative to say, however the impression was that they were bored during their recess time. Many of the students said they had to wait to use certain equipment and that there weren't very many places to sit down or hang out. Organized sports are extremely common in Lorette, and are important to the student participants. Sports provide the children with opportunities to connect with their community, spend time with friends and to be active.

Staff Survey

Staff members at École Lorette Immersion were invited to participate in the survey study. Staff members were provided with an informed consent document with a survey of 10 questions. Through each member of staff was invited to participate and was provided with a document, participation was independent and optional. The document was to be read and, if interested, signed by the staff member, and returned to the school Principal along with the survey response. The participants were given several months to complete and submit their survey responses if desired. The questions and answers are documented below, with numbers indicating the number of similar response occurrences.

Analyzing the staff survey data was extremely interesting, due to the unique perspective on the schoolyard and on Lorette, Manitoba. A large majority of the participants do not live in Lorette, though they were able to reflect upon the community through a different lens than the residents, identifying Lorette as a community oriented place. Staff members were notably concerned with long-term educational needs, such as environmental awareness and longevity of the site. It was also clear than teachers already have the desire to bring lessons outdoors, and would likely benefit form enhanced outdoor learning environments, such as an outdoor classroom.

Figure 5-3: Staff survey data.



Conclusions and Implications

There were two main topics addressed in the survey study, including place identity pertaining to Lorette, Manitoba and the École Lorette Immersion schoolyard, and the use or functionality of play and outdoor learning environments. These topics were utilized in hopes of building a narrative for the community of Lorette and École Lorette Immersion, so design features may be tailored to the specific programming needs or desired design features of the people who will use the space. By creating such relevant features and programming needs, children and community members are more likely to engage in the space, interact with each other, and contribute to the longevity of the site. Table 5-1 lists the programming needs identified through this survey analysis, including description and application to the conceptual design of the École Lorette Immersion schoolyard. In addition, Table 5-2 lists features that were identified as relevant to the participants of the survey study.

Limitations of this data must be considered, including the sample group size and demographics. The sample size may not accurately represent all community members in Lorette, Manitoba, as participants in this study were all directly connected to École Lorette Immersion, meaning any design for community use may not be based on the overall desires of the community. The data represents a bias of the desires of the school society as well as the researcher's agenda.

Implications of this data on the design of the proposed École Lorette Immersion schoolyard include provisions for connections to the local identity, enhanced longevity, safety and education. In addition, features that may encourage community use after school hours or in the summer months have been considered in the design process.

Table 5-1: Programming needs.

Programming Needs	Description	Application
School lessons	Areas for school lessons to be held.	Outdoor classroom, enclosed seating areas, educational materials.
Community events or festivals	Areas for large-scale community gathering.	Shelter, seating, large open area, stage, pedestrian access.
Family use	Areas or activities for all ages.	Pedestrian paths, seating, play equipment.
After hours and summer use	Access for public use, including play or gathering areas.	Lighting, pedestrian paths, community gardens, safety.
Play	Multiple and varied play opportunities.	Hills, active areas, play structures.
Sports	Sports facilities for school and public use.	Sports facilities, active areas.
Walking and cycling	Areas for student commuting and public pedestrian use.	Walking or cycling paths.
Winter activities	Opportunities for comfortable cold weather use.	Hills, wind shelter, safety.

Table 5-2: Relevant features.

Relevant Features
1. Trees and plants. 2. Safety. 3. Active areas. 4. Seating and tables. 5. Walking or cycling paths. 6. Community gardens. 7. Sports facilities. 8. Lighting. 9. Hills. 10. Familiar land forms. 11. Educational features. 12. Shelter.

6 SITE ANALYSIS

Introduction

Throughout this practicum and during the Topics Course, the main focus has been on the importance for landscape architects to determine place identity when designing for community use. This focus stemmed from the knowledge that the École Lorette Immersion schoolyard in Lorette, Manitoba would be the site of study. Through preliminary investigation into the project, including conversations with the Parent Advisory Council, it became clear that this site would be an optimal location for research into the use of place identity in outdoor educational landscape design projects. École Lorette Immersion is one of three elementary schools in Lorette, Manitoba, though is the only French-Immersion school.

The site analysis of Lorette, Manitoba and École Lorette Immersion was conducted by collecting data through observation, onsite documentation, photographs, and research of literature. This analysis focused on the collection of data pertaining to land use, including transportation, parking, circulation, vegetation type, climate and cultural context. The goal of the site analysis study was to understand the existing conditions of the site, including physical features, histories, phenomenon and identity. Opportunities and limitations for the site design were identified as a result of this study.

Context

The community of Lorette is located 19km South-East of Winnipeg, within the Rural Municipality of Taché, Manitoba. Lorette has a population of 2361, and is the largest town in the RM of Taché, which has a population of over 10,000. Lorette has been in existence since 1860, establishing the area as one of the oldest districts in Manitoba. Many of the present day residents of Lorette have direct ties to ancestors who settled on the land in the mid-1800s, with cultural backgrounds including French Canadian, Metis, English and Slavic. The current community of Lorette operates as a bedroom community to Winnipeg, Manioba, as many residents commute into the city for work.

The land on which Lorette sits is fertile prairie land, which is dominated by cropland throughout the RM of Taché. This area is part of the Red River Valley, which is gently sloping at no more than a 2% gradient. Lorette sits at 240 meters above sea level, down from 276 meters above sea level in the West of the RM of Taché. Water drains to the northwest of the municipality via the scenic Seine River that meanders through the region. Human-made agricultural water drains have improved the relatively poor water drainage in the area, though the areas adjacent to the Seine River are still subject to periodic flooding.

Figure 6-1: Lorette context.

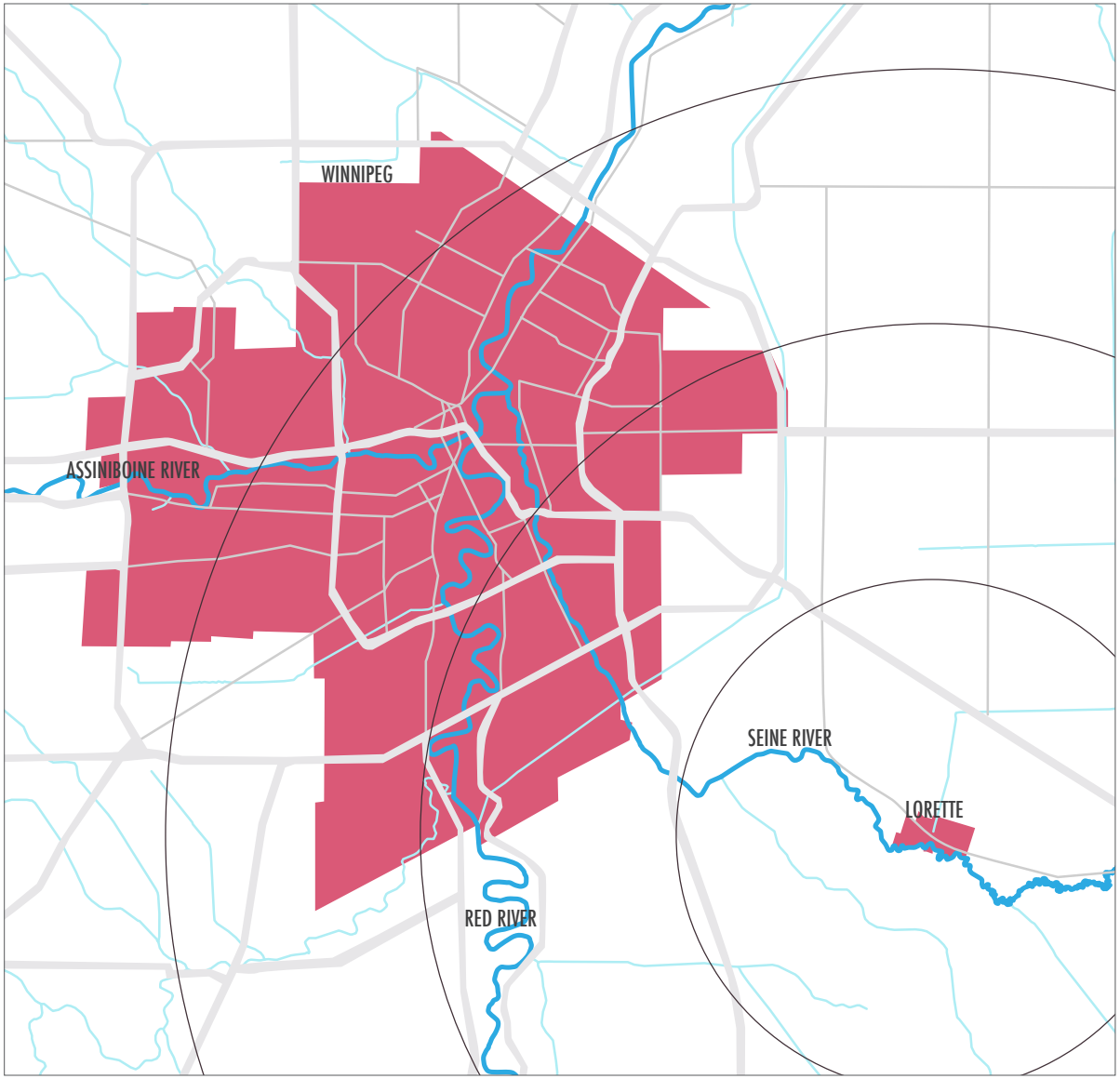


Figure 6-2: Winnipeg and Lorette context map. 10km distance radii.

1857 Dawson commissioned to survey Dawson Trail

1860 River lots surveyed and divided

1871 Dawson Trail completed

1878 Lorette first appears on maps

1884 73 families reside in Lorette

1890 Notre-Dame de Lorette Parish built

1981 Almost half of population Francophone

2006 Population 1848

2011 Population 2361

Figure 6-3: Lorette history timeline.

"Most of the first colonists who came to settle were descendants of Voyageurs who worked for the Hudson's Bay and the North West Companies carrying on fur trading or distributing merchandise between different posts and Fort Rouge, now known as Fort Garry, at the mouth of the Assiniboine and Red Rivers"

(Lorette History Book Committee 2000, 54)

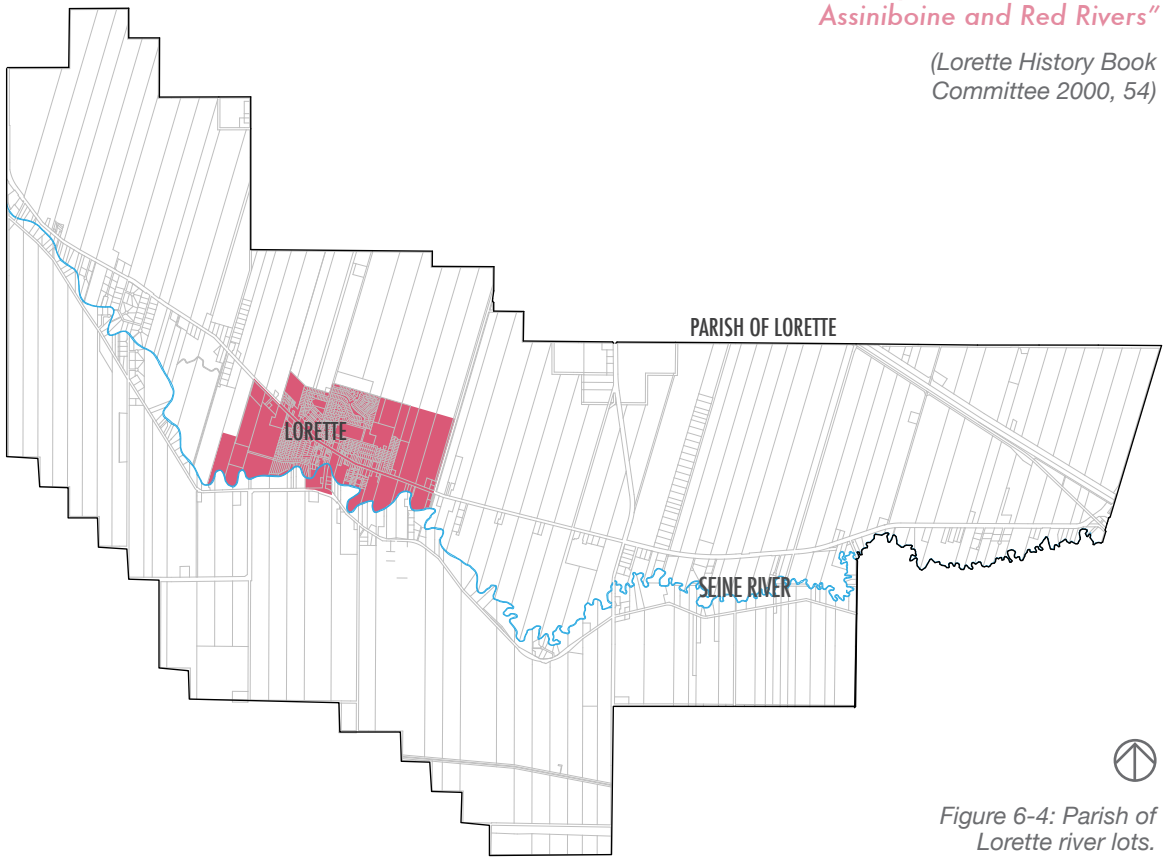


Figure 6-4: Parish of Lorette river lots.

Lorette

History

Lorette was founded as French settlement, then called Petite Pointe de Chênes, along the Seine River. In 1857, engineer Simon James Dawson was commissioned by the Canadian Government to survey a water and land route from Lake Superior to the Red River Settlement. This route would reduce the journey by 90 miles. The route was surveyed in 1858, but construction only began in 1868, to be completed in 1871. The first settlers arrived in Petite Pointe de Chênes around 1860, and were of Métis decent. Once the road was constructed, Voyageurs began to settle along the Seine River, which allowed for easy transportation down the river by canoe. The river also provided the settlers with water for washing, growing crops and for their animals, as many people had cows or chickens. Adequate drinking water could be found by digging a ten foot well, as the ground water sat high. Trees along the banks of the Seine River, and the banks of the creeks that flowed into the river, included oak, ash, maple, and elm trees. Wild fruit was highly available, cherries, currants, hazelnuts, plums, raspberries, saskatoon berries, and strawberries. In winter, transportation was achieved through dog sleds and snowshoes. By 1884, the settlement had increased to house 26 Métis families, 44 French-Canadian families and 3 Irish families, and was then called Lorette. The land was divided into river lots of 10 and 12 chains in width by 2 miles in depth (around 160 to 244 acres). Areas that were once covered in aspen trees and shrubs became fields of barley, canola, flax, oats or wheat. The local church, Parish of Notre-Dame-de-Lorette, provided most of the amenities used by the residents in the village, including school facilities. In 1901, three nuns came to teach at the school, which then had 79 students in attendance.

Demographics

As of 2011, the community of Lorette has a population of 2,361, which grew 27.8% since 2006 (population: 1,848). This increase is immense compared to the 5.2% average increase in population in the province of Manitoba. The population density is 745.6 people per km2, which compared to Winnipeg, at 1430 people per km2 is quite low. This is evident in the dwelling types, 680 of which are single-detached houses, out of a total 801 dwellings. Lorette is a family oriented community, with the majority of residents either working age or school aged.

Culture in Lorette, Manitoba has shifted in the past few decades. In 1981, there were 655 Francophone residents and 680 Anglophone residents, representing an almost even split between the cultures. Currently, there are 485 people who list French as their mother tongue, compared to 1735 people who speak English. There is, however, still motivation to preserve the Francophone culture, which is evident by the Français elementary school, two French immersion schools, and several French cultural events or activities. As a result of these efforts, 805 residents speak both English and French.

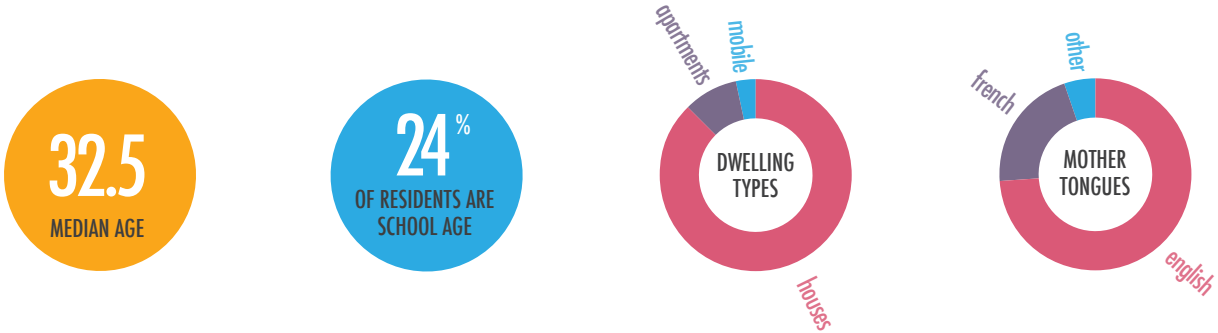


Figure 6-5: Lorette demographics.

Climate

Lorette is located in the southern region of Manitoba, approximately 20km South-East of Winnipeg. Due to the location within the Canadian Prairies, temperatures can be extreme, with temperatures as high as 42°C and as low as -47°C. The winter season is long and dry in Lorette, with snow cover usually lasting from November to March. This duration accounts for exactly half of the school year, demonstrating the importance of considering cold weather activities and protection, and snow as a construction or play material in the conceptual design of this practicum.

Lorette is located in hardiness zone 3a, which should be considered when selecting plants for the site. As trees in Lorette are usually in full bloom by late May and lose their leaves in early October, it is important to consider plants with winter wind and sun protection, and winter beauty.

Exploring Lorette

October 15, 2013: 5:55pm - 7:07pm
November 1, 2013: 12:07pm - 12:47pm
January 4, 2013: 2:05pm - 2:41pm
May 1, 2014: 9:00am - 3:27pm
June 10, 2014: 6:00pm - 7:21pm
September 14, 2014: 3:00pm - 4:22pm
January 24, 2015: 2:02pm - 2:42pm

Over the duration of this practicum, École Lorette Immersion, Dawson Trail School, École Lagimodière and the surrounding context was explored to contribute to the development of the narrative of the community. This includes observations of relevant features that contribute to the physical and social identity of Lorette. Vehicular and pedestrian movement, and public green spaces were additionally observed to determine how residents use space. The three schools were then observed for site conditions, including current use, existing features, opportunities, and limitations.

Features

The first type of feature to be discussed in this section will be physical features of Lorette. The community of Lorette, Manitoba is a bedroom community of Winnipeg, indicating that residents spend a substantial amount of time travelling between Winnipeg and Lorette. In addition, survey data noted that almost half of student participants, and all of the staff participants do not live in Lorette. For these reasons, the physical appearance of Lorette is often considered over an extended land area. In this site analysis exploration, the physical appearance of Lorette will acknowledge features found along Dawson Road, as it supports the highest concentration of vehicular movement. The physical appearance of Lorette, Manitoba and Dawson Road consists of striking views across the flat prairie landscape. The first important physical feature is the Dawson Road, which is celebrated as an historical relic, and is the main access route into Lorette. Figure 6-6 depicts an easterly view down Dawson Road, several kilometers west of Lorette, and Figure 6-7 depicts a westerly view from the eastern edge of Lorette. Another physical feature of Lorette is the rail line, which runs parallel to the Trans-Canada Highway. For commuting residents of Lorette, this rail line is both an obstacle and a beautiful feature of the landscape, as imaged in Figure 6-8.

Agricultural fields are significant features as they surround Lorette and line Dawson Road on the route to Winnipeg. These picturesque features provide clear views across the land, giving the region a feeling of continuity and great expanse. These features give way to another physical feature of the area, which is the unobstructed skyline. The agricultural fields and vast skies are depicted in Figures 6-9 to 6-11. The final noteworthy physical feature is the Seine River, which runs along the Southern border of Lorette. The feature has a strong presence due to the thick tree line of Bur Oak trees, which can be viewed across the agricultural fields or empty lots. In addition, the lots in Lorette are positioned according to the historic river lots and follow the movement and orientation of the river. Figures 6-12 to 6-17 depict the Seine River.

Figure 6-6: Dawson Road east.

Figure 6-8: Rail line.

Figure 6-7: Dawson Road west.

Figure 6-9: Lorette sign.

Figure 6-10: Agricultural field (looking north).

Figure 6-12: Seine River (looking west).

Figure 6-11: Agricultural field (looking south).

Figure 6-13: Seine River (looking east).

Figure 6-14: Seine River (looking east).

Figure 6-16: Seine River treeline.

Figure 6-15: Seine River (looking west).

Figure 6-17: Seine River treeline.

Figure 6-18: Noteworthy buildings.

1. Paroisse Notre-Dame de Lorette Parish
2. Lorette Community Complex
3. Brian's Drive-Inn
4. Marketplace
5. Dawson Trail Country Store
6. Jeanson Grocery
7. Dr. Joel Chiropractor / Elaine's Massage Therapy
8. Centre Les Bles D'or
9. College Lorette Collegiate
10. Caisse
11. Thrifty Treasures
12. Dawson Trail Motor Inn
13. Seine River Church

25 100
50 200

Public/Institutional
Commercial/Retail
Seine River
Lorette Boundary

The next type of feature to be discussed in the exploration is the built environment, including major employers and most noteworthy commercial or institutional buildings. The major employers in Lorette, Manitoba include the Seine River School Division, Municipality of Taché, Division Scolaire Franco-Manitobaine, and All-Star Concrete, as well as several retail or leisure centers. These workplaces contribute to the overall identity of the community, as noted during the community engagement process. Many of the community members talk about the history, especially of Paroisse Notre-Dame de Lorette Parish, as several of the community events are held in the churches. In addition the Community Complex was greatly discussed due to the townspeople's love for organized sports. Several of the most noteworthy places of interest are indicated on the following map. The buildings are imaged in Figures 6-19 through 6-32. As noted in Figure 6-18, the majority of the most noteworthy buildings are located along Dawson Road, the main road in Lorette. This corridor has become a commercial hub for residents of Lorette, and surrounding rural communities.

Figures 6-19 - 6-20: Paroisse Notre-Dame de Lorette Parish. 1

2 *Figure 6-21: Lorette Community Complex.*

3 *Figure 6-22: Brian's Drive-Inn.*

4 *Figure 6-23: Marketplace.*

Figure 6-24: Dawson Trail Country Store. 5

Figure 6-25: Jeanson Grocery. 6

Figure 6-26: Dr. Joel Chiropractor / Elaine's Massage Therapy. 7

8 *Figure 6-27: Centre Les Bles D'or.*

9 *Figure 6-28: College Lorette Collegiate*

10 *Figure 6-29: Caisse.*

Figure 6-30: Thrifty Treasures. 11

Figure 6-31: Dawson Trail Motor Inn. 12

Figure 6-32: Seine River Church. 13

Green Space / Public Space

Lorette is situated within the Seine River drainage basin and sits along the Seine River. This location in conjunction with the historic river lots has created interesting and exciting green space opportunities. The existing green space in Lorette is analyzed according to public green space, the Seine River tree line, and the shared schoolyards of École Lorette Immersion, Dawson Trail School and École Lagimodière. There are four designated pubic green spaces, including a pubic park, Lorette Community Complex, Paroisse Notre-Dame de Lorette Parish, and an empty lot for future development. Through the community engagement process, a desire for more public space has become apparent. Currently, residents of Lorette have access to adequate sports facilities and play structures. Evidently however, there is a lack of unprogrammed outdoor gathering spaces for community use. There are very few seating or gathering areas, pedestrian paths or access points to the Seine River. École Lorette Immersion, Dawson Trail School and École Lagimodière have great potential to become public green space destinations for residents of Lorette. These sites can fulfill a need for public recreational space, and become a part of a larger network of green space throughout Lorette.

Figure 6-33: Three elementary schools yard.

Figure 6-34: Lorette Community Complex.

Figure 6-35: Paroisse Notre-Dame de Lorette Parish yard.

Figure 6-36: Community park.

Figure 6-37: Green space / public space map.

25 100
50 200

Public Green Space
Seine River Treeline
Seine River
Lorette Boundary

Circulation

The circulation of the community of Lorette, Manitoba was considered in terms of built roads and pedestrian paths. The roads are indicated in orange and the red lines indicate the pedestrian paths. There are three vehicular access roads into Lorette, including Dawson Road, which runs east-west, Station Road, which runs north-south, and St. Amant Avenue, which also runs north-south. The highest traffic road is Dawson Road, which runs through the centre of the Town, and is the main access route from Lorette to Winnipeg. Pedestrian circulation within Lorette serves two major purposes, including connecting residents to Dawson Road, which is the commercial hub of the town, and connecting residents to the four schools. Public sidewalks line the majority of both sides of Dawson Road and are connected by two crosswalks; one near College Lorette Collegiate and the other at Paroisse Notre-Dame de Lorette Parish. Secondary paths exist throughout the residential areas, connecting sections of the neighbourhood.

Figure 6-38: Pedestrian path with crosswalk.

Figure 6-39: Dawson Road.

Figure 6-40: Circulation map.

25 100
50 200

Vehicular Movement
Pedestrian Movement
Seine River
Lorette Boundary

Three Schools

During the site analysis process of this practicum, an apparent opportunity arose to consider all three elementary schools adjacently located at the study site. Site analysis was therefore conducted on École Lorette Immersion, Dawson Trail School and École Lagimodière. The three schools share a common schoolyard, which upon investigation, is often used by the local community for pedestrian commuting, play, sports activities and other outdoor activities. The lots that house the three schools are approximately a combined 20 acres, which make up 2.5% of the total land area of Lorette, and combined are one of few public green spaces available for residents of Lorette.

Context

Figure 6-44 represents 500 meter radii intervals from École Lorette Immersion. A distance of 500 meters takes approximately 5 minutes for the average person to walk. This demonstrates the capacity for impact of École Lorette Immersion and of Dawson Trail School and École Lagimodière as a public space for residents of Lorette. Within a 15 minute walking duration, a majority of the residents in the community could access the study site.

Though this practicum is directed predominantly by studies focused on École Lorette Immersion, the results of the studies have indicated a need for public community space for all residents of Lorette, indicating a great potential for the development of all three school grounds as a cohesive and inclusive space for the community. For this reason the three schoolyards will be considered together as a community park for the conceptual design exploration. Figures 6-42 to 6-43 represent the École Lorette Immersion, Dawson Trail School and École Lagimodière.

Figure 6-41: École Lorette Immersion. 1

Figure 6-42: Dawson Trail School. 2

Figure 6-43: École Lagimodière. 3

Figure 6-44: Figure Ground Map.

1. École Lorette Immersion.
2. Dawson Trail School.
3. École Lagimodière.

25 100
50 200

Schools
Buildings
500m Radii
Seine River
Lorette Boundary

Figure Ground

First a figure ground study, Figure 6-48, was used to determine the relationships between the three schools and the surrounding community. The schools are in close proximity to Dawson Road, the commercial hub and main thoroughfare, and Paroisse Notre-Dame de Lorette Parish. The schools are bordered on all but the eastern side by residential development. Through further investigation, the undeveloped land to the east has been zoned as residential and is currently in the midst of development. At the present time there do not seem to be plans to develop the empty land that indents into the northeast section of the schoolyards. This section will therefore be considered for use in the conceptual design of the site, which potentially could increase the total land area by 1.5 acres.

As noted in the green space analysis, the three schools can fulfill a need for public outdoor recreational space for a large group of residents situated in the northern portion of the community of Lorette. In addition, due to the distance from the Seine River, residents to the north do not have adequate access to naturally vegetated areas. The three schools can be an opportunity for provisions of naturalized features to connect residents with nature.

Figure 6-45: View of residences from schools.

Figure 6-46: View of Taché Community Daycare.

Figure 6-47: View of Division Scolaire Franco-Manitobaine.

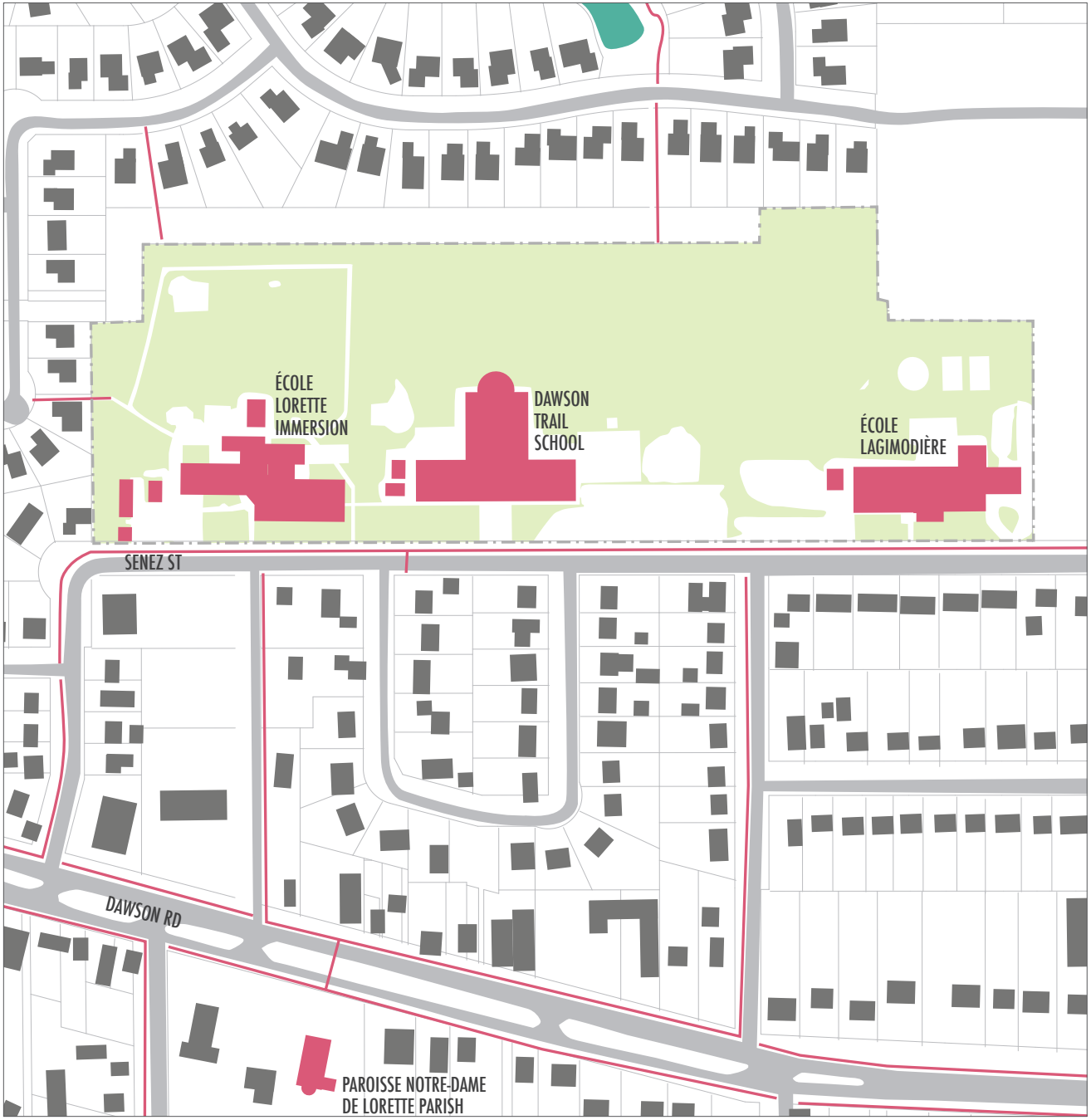
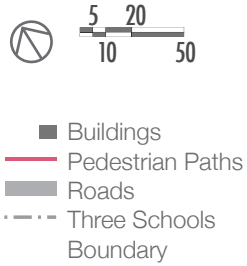


Figure 6-48: Figure ground study.



Circulation

Circulation was considered to provide access to community members and student commuting. Grey lines in Figure 6-51 indicate roads that service the three schools. The only vehicular access to the site is by Senez Street, located to the South of the schools, including access by cars and school buses. 17 school buses service École Lorette Immersion, Dawson Trail School and College Lorette Collegiate. Student pick-up and drop-off zones are also located to the south of the three schools.

Pedestrian movement occurs from three streets to the South, one walking path to the West, and two trails to the North. Dotted lines in Figure 6-51 represent types of movement through the site. Vehicular (car) movement is represented by the red dotted lines, school bus movement is represented by the orange dotted lines, and pedestrian movement is represented by the blue dotted lines. This study can assist with decisions pertaining to connectivity and desire lines for the conceptual design of the three schools. Through observation and interviews with participants, a clear need for improved vehicular movement has become apparent. Currently it is prohibited for vehicles other than school buses to stop on Senez Street, creating hazardous pick-up and drop-off environments within the parking lots. This demonstrates a need for better suited parking solutions and areas for vehicles to safely pick-up and drop-off students, without interfering with school bus services. Pedestrian paths existing on the site are mainly limited to the South edge. Currently pedestrians using the site are forced to walk through grass to access the schools from the North. The movement study demonstrates a need for more pedestrian paths through the site, as there is currently a large amount of movement to and from the North of the site.

Figure 6-49: Sidewalks along south side of site.

Figure 6-50: Main vehicular access route.

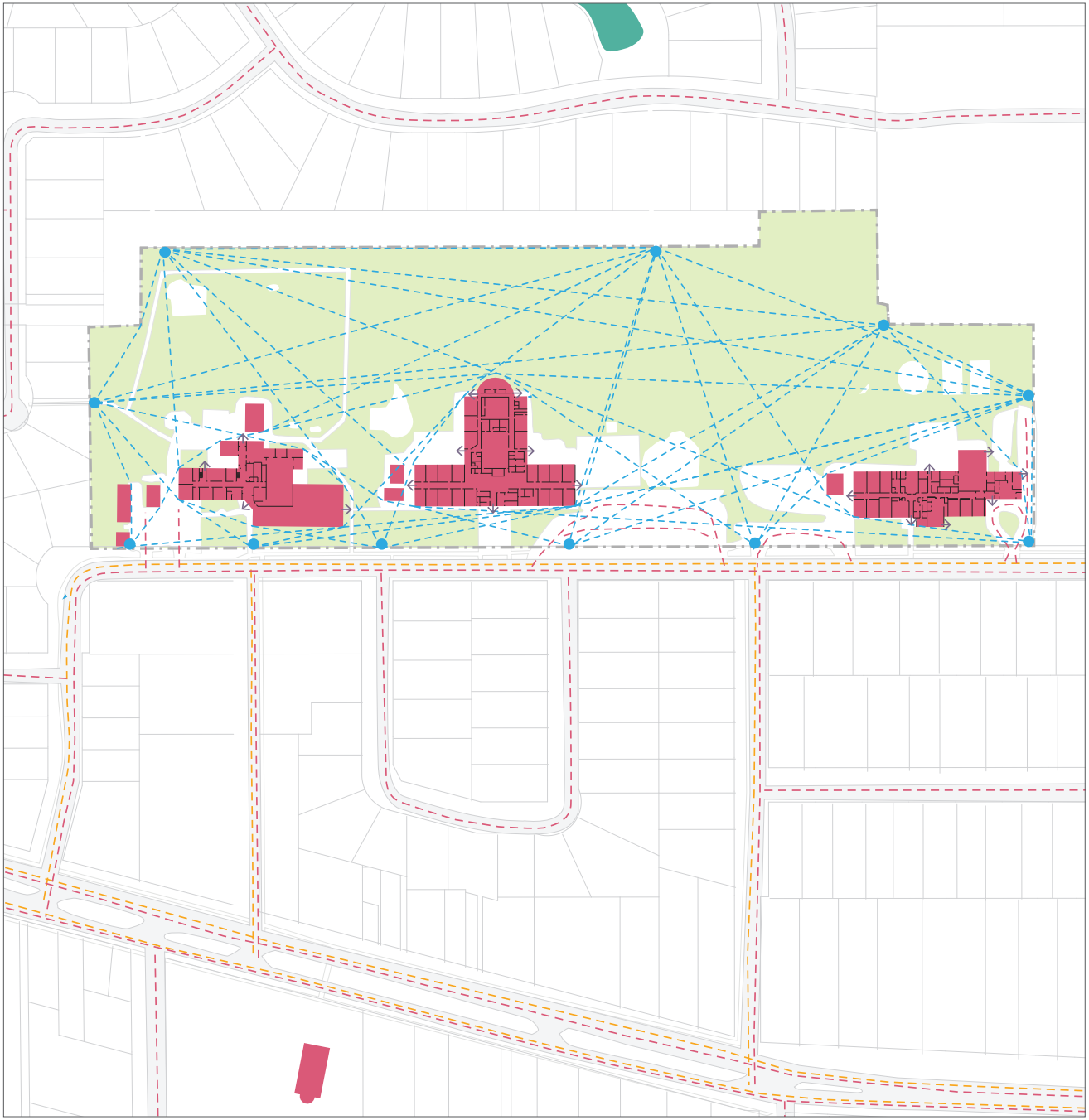


Figure 6-51: Circulation analysis.

5 20
10 50

Car Movement
Bus Movement
Pedestrian Movement
Entry Points
Three Schools Boundary

Sightlines

Sightlines were considered according to the principles of place identity, which dictate that views onto a site help it to connect to the surrounding context. Figure 6-55 Represents the sightlines to and from the three schools site. The existing views onto the site occur through three pedestrian paths and six road access points. Areas where views to Notre-Dame de Lorette Parish are prevalent were also identified, indicated by the translucent blue graphics. Sightlines identified in this analysis could be considered in the conceptual design of this practicum in hopes of connecting residents to the local place identity. Clear sightlines into the site can encourage people to enter and explore. This may engage the community in the new space, providing residents with safe, beautiful experiences.

Figure 6-52 - 6-54: Views of Paroisse Notre-Dame de Lorette Parish from schools.

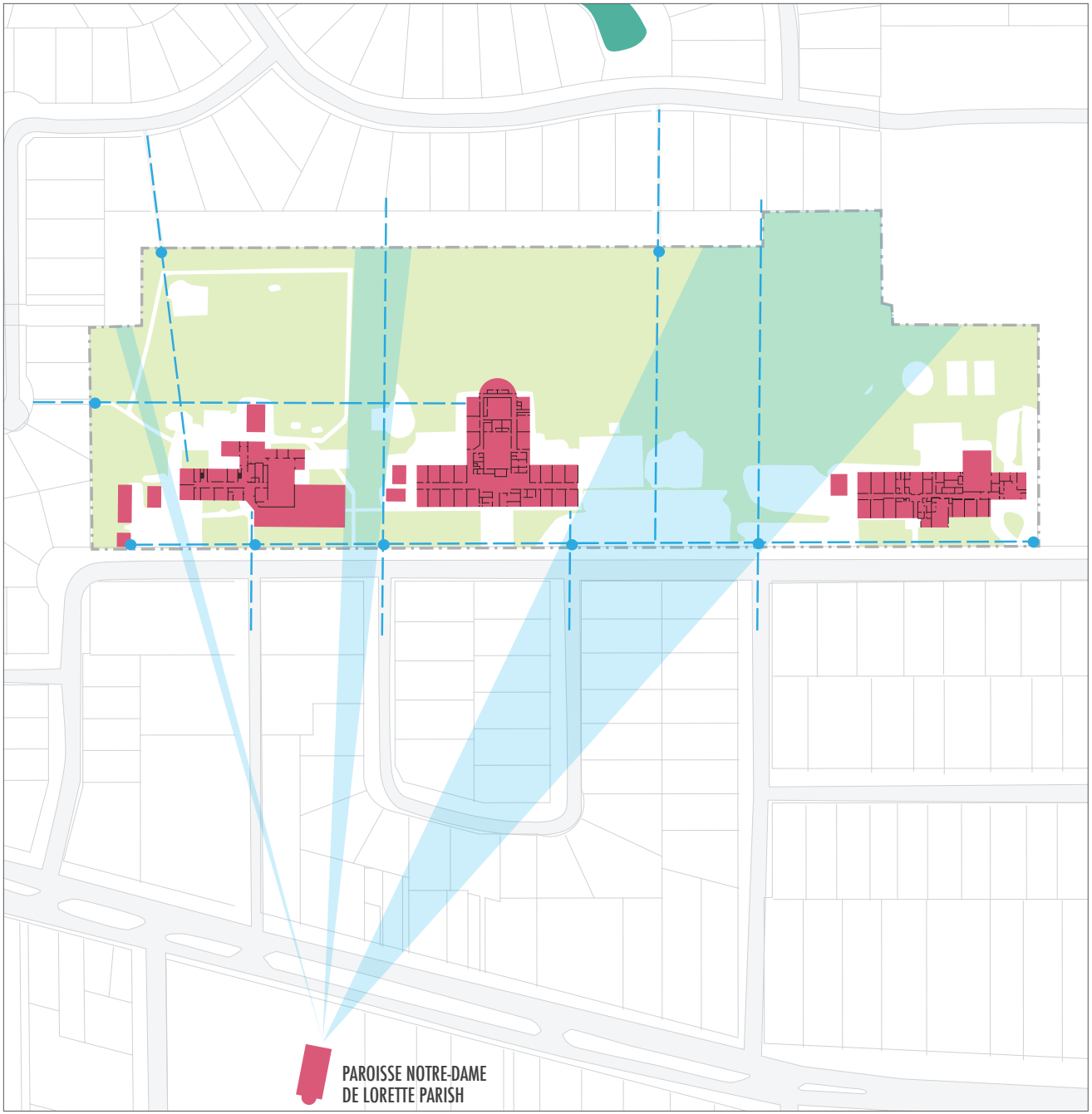


Figure 6-55: Sitelines analysis.

5 20
10 50

Sightlines
Entry Points
Views to Church
Three Schools Boundary

Programming Analysis

Materiality on the selected sites was then considered in the site analysis study. As indicated on Figure 6-57, the existing ground surface materials include asphalt, crushed limestone gravel, pea gravel and grass. The majority of the hard surfaces are constructed out of gravel, including all of the parking lots. Figures 6-65 to 6-67 depict the quantity of existing turf, which makes up the most used material on the site, and is used for school sports activities or unprogrammed use. The grass is not maintained as regulation sports fields, rather it is intended to be used freely by the students. Asphalt is solely used for programmed play, including Basketball and painted games. Pea gravel is used under all of the playground structures for each of the schools.

Plants on the site for the most part are used to form boundaries around the site and for school entry decoration. Participants in the community engagement process have indicated a desire for more vegetation on the site for educational and aesthetic purposes. Vegetation will also be considered in the conceptual design process for sun and wind protection.

Figure 6-56: Play features on the threes schools site.

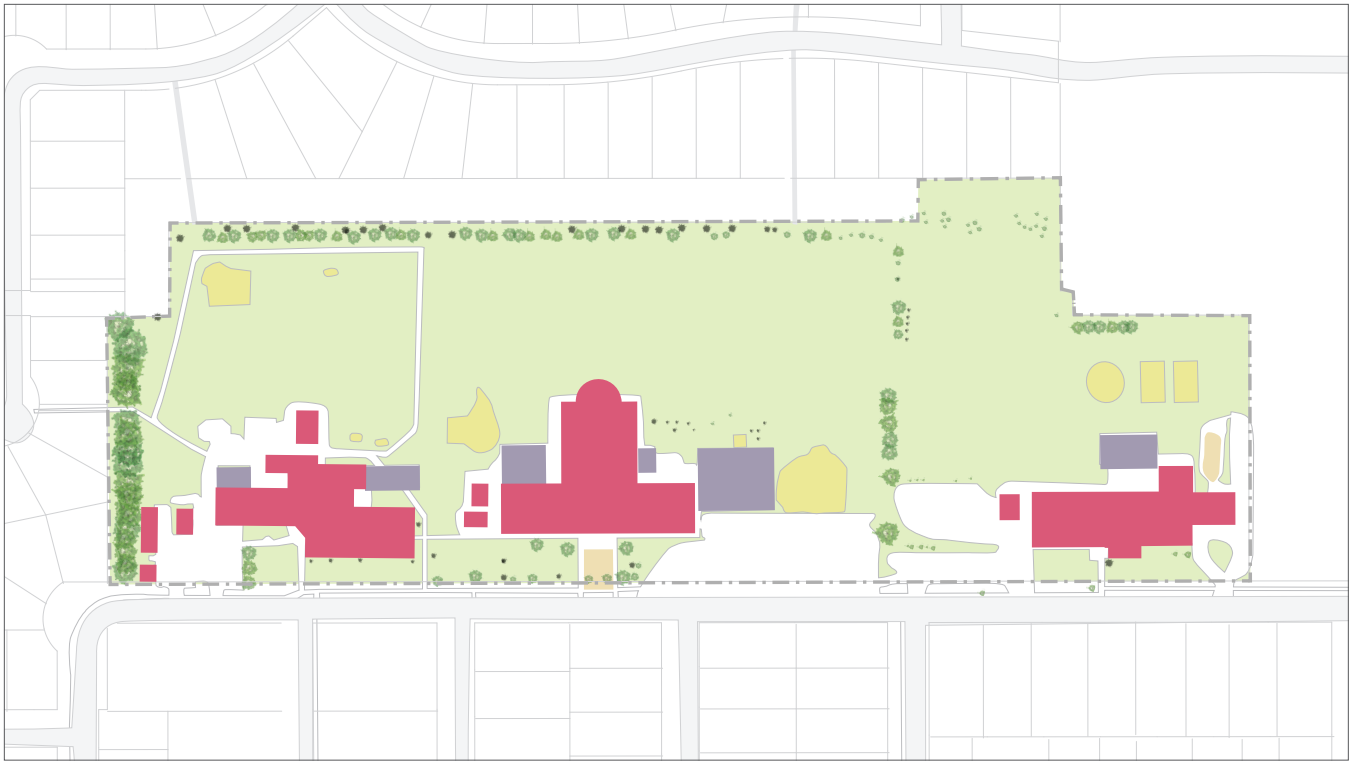
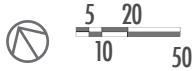


Figure 6-57: Programming analysis



- Trees
- Crushed Limestone
- Pea Gravel / Sand
- Asphalt
- Three Schools Boundary

Figure 6-58: Turf used for unprogrammed activities.

Figure 6-59: Play structures with pea gravel surround.

Figure 6-60: Asphalt pads with painted lines and basketball hoops.

Figure 6-61: Crushed limestone parking lots.

Figure 6-62: Crushed limestones paths used for commuting and track running.

Figure 6-63: Sandpits.

Figure 6-64: Baseball diamond or fence.

Figure 6-65: École Lorette Immersion.

Figure 6-66: Dawson Trail School.

Figure 6-67: École Lagimodière.

Water Drainage

Site observation and interviews have also brought drainage issues to attention. Drainage is of great concern to residents who use the study site. As indicated in Figure 6-69, the drainage on the site can be extremely poor, especially during the spring melt. The drainage system currently in place on the study site runs along the North boundary and drains into an empty lot to the North-East of the site. The drainage system is illustrated in Figure 6-30, indicated by green lines. As a result of this study, an improved drainage system will be considered in the conceptual design component of this practicum. Through the literature review and design principles studies, concepts of rivers as place identifiers were explored. As there is an opportunity to re-evaluate the drainage system on the site, there is also potential for considering concepts of place identity and the river metaphor into the conceptual design. This could include using water channels, dry riverbeds, pumps or riparian zone vegetation.

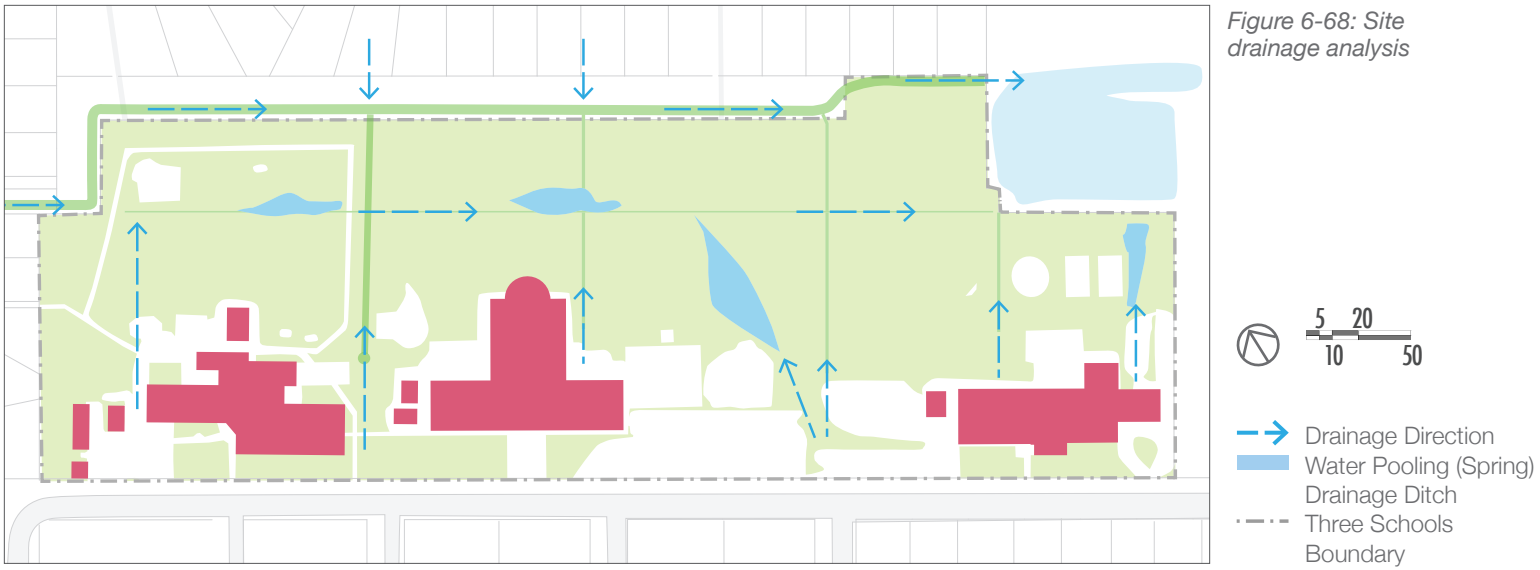


Figure 6-68: Site drainage analysis

Figure 6-69: Water pooling.

Microclimate Conditions

Figure 6-71 represents the microclimate conditions existing on the three schools site. Two conditions were determined to be pertinent to the conceptual design process, including sun movement and wind movement. The movement of the sun is represented by the yellow translucent graphic, showing the position of the sun throughout the day, as well as the position at different times of year. Wind is represented with blue lines, with arrows showing the wind direction. The heavy line through the center of the site refers to the strong wind tunnel that occurs on the site. The current users of the site have expressed desires to mitigate this wind tunnel as it can make for unpleasant experiences and bitter cold conditions, especially in winter.

The findings from this analysis can help inform the design decisions, especially ones concerned with plant use. Trees may be planted as sun or wind barriers in order to reduce harsh climatic conditions and to create pleasant outdoor spaces. This data can also help to determine the positioning of gardens, specifically those that require high amounts of direct sunlight.

Figure 6-70: Direct sunlight on south side of site.

Figure 6-71: Microclimate conditions analysis.

5 20
10 50

Wind Movement
Sun Movement
Three Schools Boundary

7 CONCEPTUAL DESIGN

Introduction

According to the findings in this practicum, a need for a public community park in Lorette was identified, indicating a great potential for the development of all three schoolyards as a cohesive and inclusive space for the community. The conceptual design process began by reflecting upon the main objectives of this practicum, including creating physical and social connections for the community, celebrating history and culture in Lorette, and providing students at the schools with outdoor spaces for learning, development and play. Outcomes of the research in this practicum indicated several design principles, including place identity, connection with nature, outdoor learning and play. These principles, and the design features that enable them, may be applicable to the conceptual design process when aiming to achieve the objectives of this practicum.

Design Concept

Place Identity

Place identity of the residents who may use or be affected by the site was first considered in the conceptual design process of this practicum. Building a narrative of place identity for the community of Lorette occurred through several types of community engagement and analysis. The community engagement process began with meetings with the Parents Advisory Council for École Lorette Immersion, where we began to outline a series of opportunities and goals for the schoolyard. A primary goal was to involve the students at École Lorette Immersion and the community in the design process of the schoolyard. Surveys, interviews and design consultations were determined to be the optimal means for engaging the community. When reflecting upon the survey data, residents of Lorette identify with specific visual features about the town, including the trees, skyline, river and several of the town buildings.

Lorette is a family oriented, quickly growing community with a unique narrative. The community is deeply rooted in history, but is also rapidly evolving due to the extremely high growth rate. In order to celebrate the rich history of Lorette, the proposed park is named Settler's Trail Park, honouring the settlers that travelled across the Dawson Trail to farm Lorette's fertile land.

The design concept begins with the inspiration of the Seine River, which has been determined to be an important feature to residents of Lorette, used to inform the appearance of a water feature, aptly named the Little Seine River. Figure 7-2 depicts the Little Seine River, which meanders through the site, providing a drainage system, a series of educational centers, a visually stunning feature, and a location for various types of play. Children can go up and touch the water, experience the different forms water takes and connect to nature. Penetrating through the trees are sightlines that draw residents to the site and create links to the surrounding neighbourhoods. Notre-Dame de Lorette Parish can be spotted from various parts of the park, which grounds the site in the local history.

Figure 7-1: Lorette entry landmarks.

Settler's Trail Park
Le parc du sentier des colons

Figure 7-2: Design concept: Place identity.

Figure 7-3: Seine River inspiration.

Figure 7-4: View to surrounding neighbourhood.

5 20
10 50

Sightlines
Little Seine River
Three Schools Boundary

Programming Zones

The concept for the Settler's Trail Park is split into programming zones which each fulfill different needs for the community and schools, including connecting people to nature, providing play and learning spaces, and encouraging community use.

The Prairie Grove zone, located on the northern region of the park, is a forested area designed to connect residents to nature while they are immersed in plant groupings styled like natural forests common to the Lorette area. This zone creates spaces for nature walks, enclosures for quiet reflection or wind breaks on cold winter days.

The light green section of the diagram represents the Prairie Meadow zone, which is a section of the park styled like Canadian prairies. The meadow is a mixture of short to tall unmowed grasses and mowed turf, that may be used for any type of imaginative use, such as tobogganing, sports, flying kites or playing games. These spaces encourage the user to create their own activity, while taking in the beauty of the prairie landscape that is native to the Lorette area.

Next, the Playground Promenade is indicated in light pink, which is a plaza area with play and learning features that run along the Little Seine River and transition the park from formal to informal programming. This zone includes various play areas, each with unique play features, breaking invisible barriers between schools and spreading play activity across the site. At any given time groups of student can be learning about bugs and birds in one section while other students build dams and smash them with water.

Finally, represented in white is the Lorette Garden Plaza, which extends up from the bottom of the site as community space with formal features for quiet sitting among the orchards or agricultural test planters. The plaza opens up to the market parking lot and skatepark sculpture garden, which can play host to weekend markets or summer carnivals. Linear movement drives east to west across the terrace, through parking lots and community gardens, creating strong connections between edges of the site and to the surrounding community

Figure 7-5: Garden inspiration.

Figure 7-6: Nature inspiration.

Figure 7-7: Plaza inspiration.

Settler's Trail Park
Le parc du sentier des colons

Figure 7-8: Design concept: Programming zones.

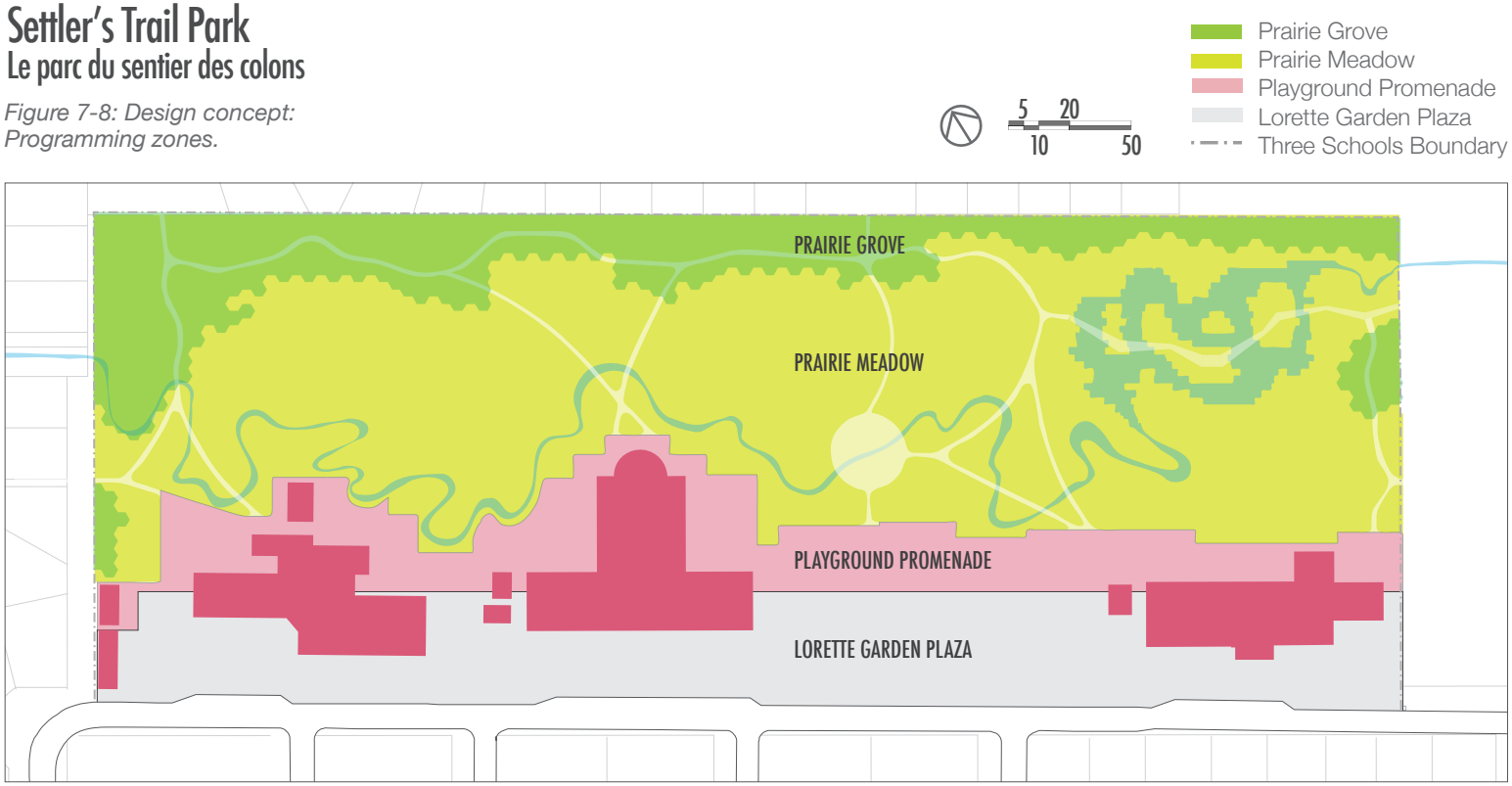


Figure 7-9: Prairie Grove.

Figure 7-10: Prairie Meadow.

Figure 7-11: Playground Promenade.

Figure 7-12: Lorette Garden Plaza.

Circulation

The site analysis process revealed potential for expanding and enhancing pedestrian circulation between neighbourhoods and public green space. The three elementary schools, including École Lorette Immersion, Dawson Trail School, and École Lagimodière, have proven to be an excellent location for an enhanced public green network. Figure 7-15 represents the proposed movement through the Settler's Trail Park, as well as the links between the site and the surrounding neighbourhoods. Two new entry points have been proposed on the east side of the park, connecting the new development to the site and opening up new opportunities for movement through Lorette.

Blue lines represent pedestrian movement through the site. The circulation proposed for the northern section of the park meanders through the natural vegetation, encouraging leisurely paced movement. The circle path in the center of the park slows commuter pedestrian traffic and establishes a unique landmark for people entering the site. Movement through the Lorette Garden Terrace is linear and structured to handled large groups of people connecting to other parts of the park.

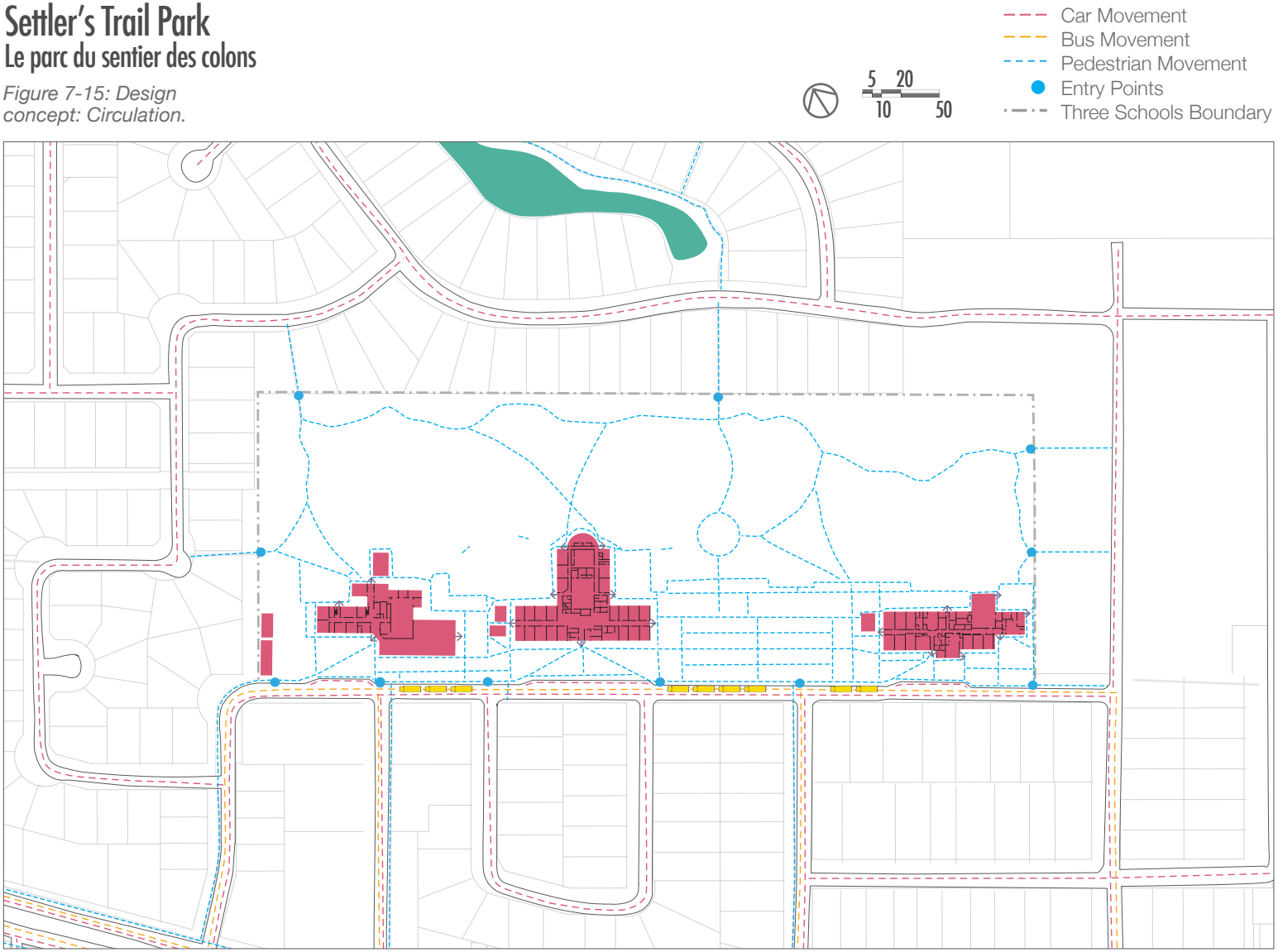
Vehicular movement is considered in the conceptual design in order to mitigate movement issues between pedestrians and vehicles. Red lines indicate car movement, which is significant due to the addition of the laybys, located in front of each school. These systems are proposed to direct traffic for those picking up and dropping off students at the schools in a structured, safe setting. These laybys are bordered by the main east-west pedestrian commuter path on the south end of the park, allowing ease of movement from the drop-off zones and into the park. Bus movement is represented by orange lines and additionally with images of buses in their designated drop-off zones. These zones were organized in conjunction with the laybys so as to reduce conflicts between car and bus movement.

Figure 7-13: Nature path inspiration.

Figure 7-14: Plaza path inspiration.

Settler's Trail Park
Le parc du sentier des colons

Figure 7-15: Design concept: Circulation.



Vegetation

Many different plant associations are considered in the design to relate the space to the local identity and to educate people about Manitoba ecozones as they journey through the naturalized site. Topography is molded to be similar to the prairies with an addition of several gentle hilly areas for added adventure. By implementing various types of vegetation natural habitat communities can be formed, which provide excellent educational models for exploring plant and animal interactions and life and energy cycles. They also provide students, teachers and the community with the opportunity to improve the health and diversity of their outdoor spaces. Prairie and meadow communities provide an abundance of colour and support a rich variety of animal-life, from birds to butterflies, dragonflies and small mammals. Tall grass prairie surrounds the wetland, creating interesting play experiences as children make their way through the tall and dense vegetation. Short grass prairie moves up the west side of the park, providing open views of the site, connecting with the riparian plant community and unmowed lawn. The section drawing represents the connection of these plant zones and the pedestrian paths that make their way through the plants. Wetland and bioswale plants filter the water as it moves in and out of the site, and become great educational environments for children to learn about natural processes while being provided with cleaner water for them to interact with. Large trees are planted around the north end of the site on a hilly upland forest terrain to create a canopied nature trail. As we move closer to the water system the trees change into river bottom forest community, which is filled with deciduous tree with large canopies, providing sightlines through to the edges of the site, and creating great spaces for outdoor classrooms. To the south, formalized native plant gardens, and community gardens are proposed to contribute to the ordered community terrace plaza, inviting community member to enter and engage the park, which during off hours or in the summertime could increase safety levels and long-term ownership. Students can use the gardens during lessons to learn about growing and harvesting plants, or even cooking with vegetables or selling off any extra produce. Native plant gardens vary across the terrace, including sunflower gardens, prairie flower gardens, orchards and even agricultural test planters for experimenting with new Manitoba plant species. Native plant gardens and community gardens are positioned on the south side of the site to get direct sunlight and to be close to the rainwater catchment sites.

Figure 7-16: Garden vegetation inspiration.

Figure 7-18: Water transition vegetation inspiration.

Figure 7-17: Marsh vegetation inspiration.

Figure 7-19: Plaza vegetation inspiration.

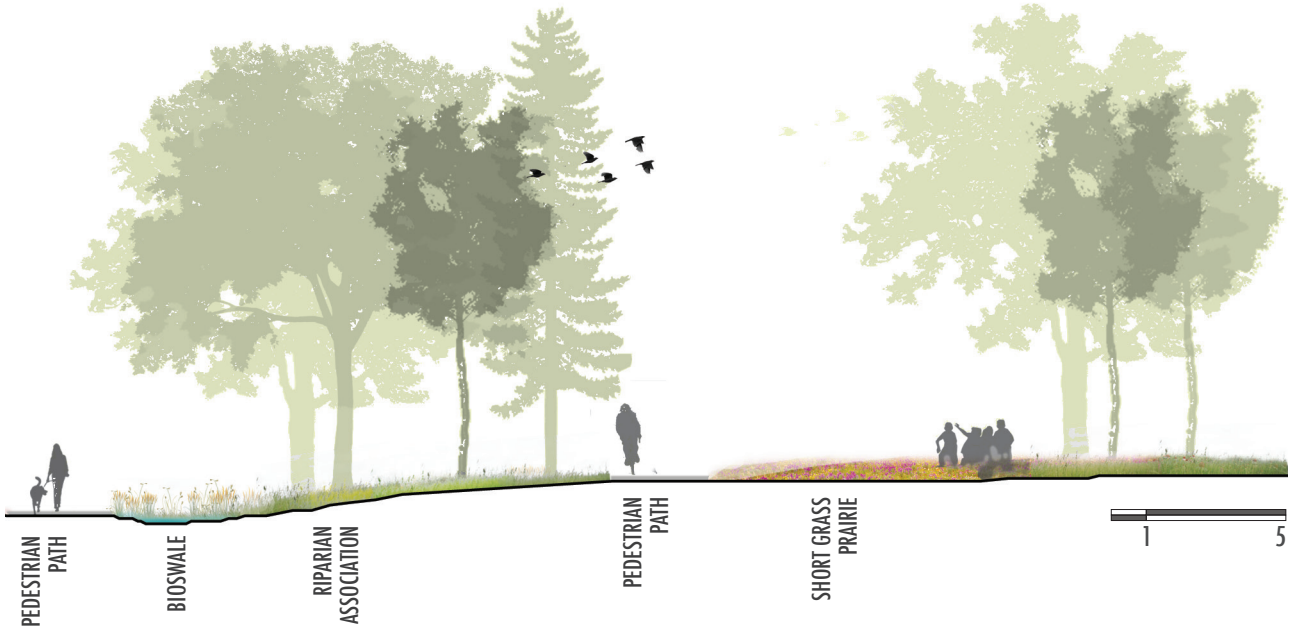


Figure 7-20: Section of riparian association and short grass prairie.

1. Tall Grass Prairie:
   - Big Bluestem
   - Western Snowberry
   - Spear Grass
   - Prairie Crocus
   - Wild Rose

2. Short Grass Prairie:
   - Big Bluestem
   - Western Snowberry
   - Spear Grass
   - Prairie Crocus
   - Wild Rose

3. Riparian Corridor:
   - Common Cattail
   - Common Reed Grass
   - Bulrush
   - Lesser Duckweed
   - Water Milfoil

4. Upland Forest:
   - Bur Oak
   - White Spruce
   - Paper Birch
   - Trembling Aspen
   - Balsam Fir

5. Aspen Parkland:
   - Trembling Aspen
   - Balsam Poplar
   - Bur Oak
   - Red osier Dogwood
   - Willow

6. River Bottom Forest:
   - Green Ash
   - American Elm
   - Cottonwood
   - Manitoba Maple
   - Black Ash
   - Bur Oak

7. Wetland:
   - Willow
   - Alder
   - Dwarf Birch
   - Sedge
   - Reed Grass
   - Bulrush

8. Orchard

9. Sunflower Garden

10. Agricultural Test Plots
   - Yarrow
   - Echinacea

11. Community Gardens

12. Native Plants Gardens

Settler's Trail Park
Le parc du sentier des colons

Figure 7-21: Design concept: Vegetation diagram.

5 20
10 50

Figure 7-22: Tall Grass Prairie.

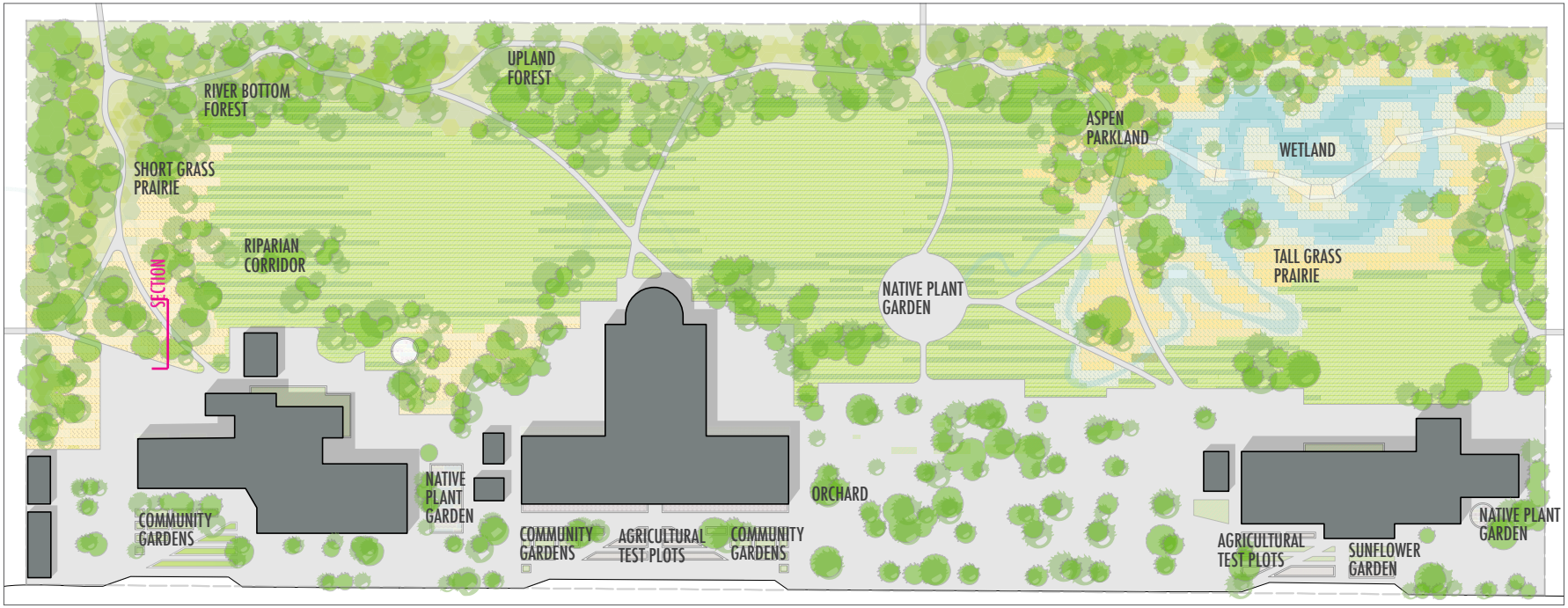
Figure 7-23: Short Grass Prairie.

Figure 7-24: Riparian Corridor.

Figure 7-25: Upland Forest

Figure 7-26: Aspen Parkland.

Figure 7-27: River Bottom Forest.



Trees
Prairie Grass
Native Plants

Figure 7-28: Wetland.

Figure 7-29: Orchard.

Figure 7-30: Sunflower Garden.

Figure 7-31: Agricultural Test Plots.

Figure 7-32: Community Gardens.

Figure 7-33: Native Plant Gardens.

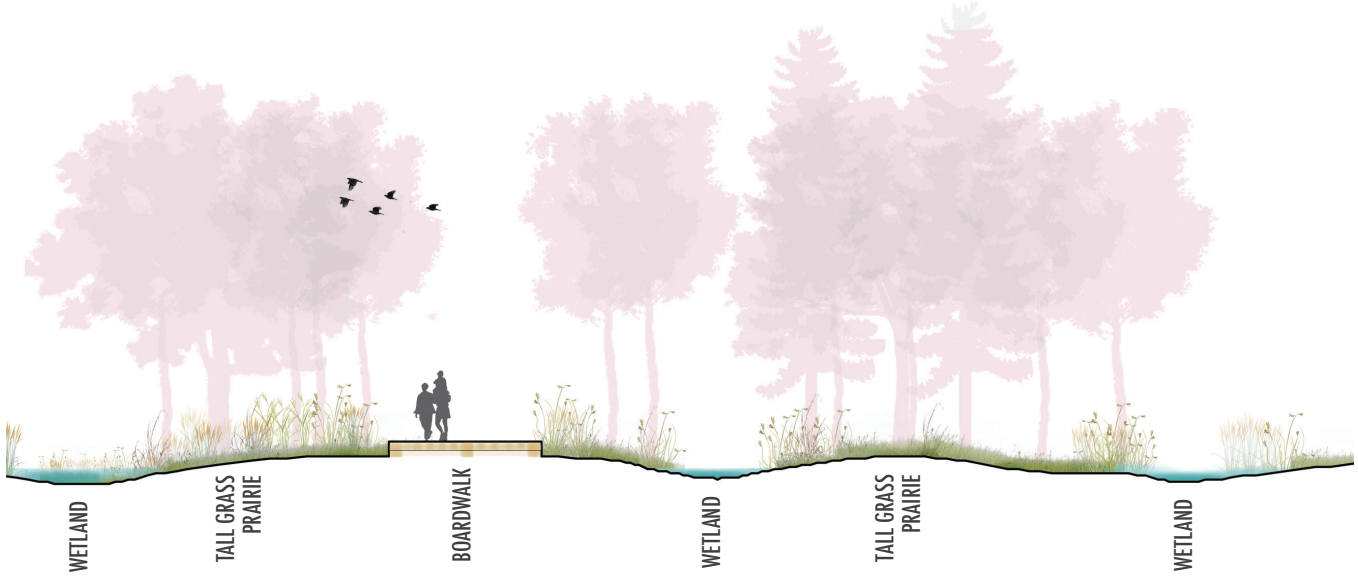


Figure 7-34: Section of wetland.

1 5

Little Seine River

The Little Seine River water system and grading is detailed in Figure 7-35. The grading is labeled according to the base grade of the three schools, which here will be called 0 meters. Any cut or fill is indicated as plus or minus from the base grade, and are represented in half meter intervals.

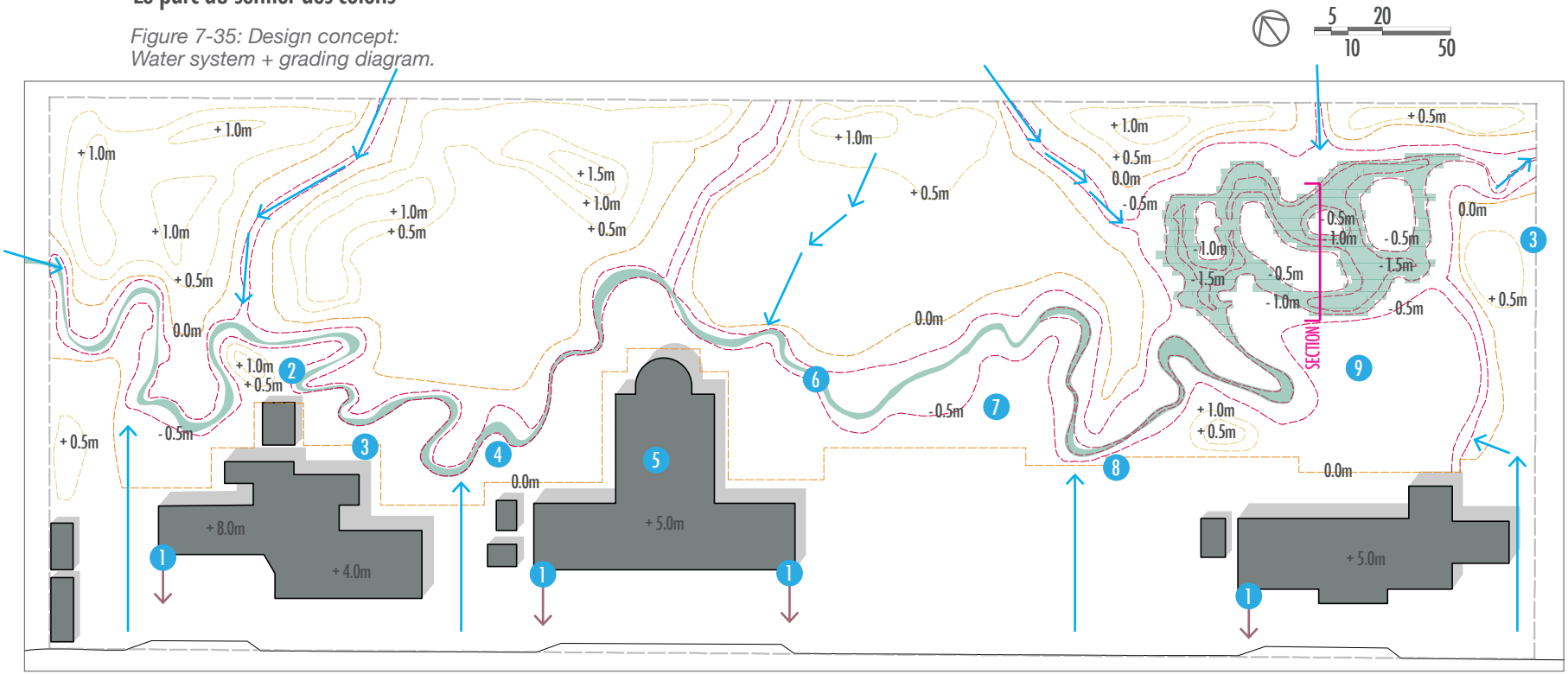
The Little Seine River water system is intended to be the drainage system for the site. The existing drainage system wraps along the northern edge of the site, it was imagined that the existing system was pulled onto the site, merging with the areas that were already causing pooling issues and breaking the barriers between the schoolyard and the water, letting the children experience the water and integrate it into their play and education. Bringing this water system onto the site opens up many opportunities for education and play. This feature is proposed to take on many forms, move and change, and to be the source of many outdoor experiences, with different learning opportunities at every turn. Children can explore the waters edge, where the water sometimes pools. People can canoe through the wetland and watch birds and insects, and maybe even spot fish, or other wildlife moving through the site.

The water system is proposed to flow from the west edge over a flowing stream bed, filter through a bioswale, treating the water that came from outside of the site, then twist through a sand and water play center. Inevitably when the water pools in the low reservoir on the east side of the site, a wetland takes form through the tall grass prairie. In more formal areas of the site design the water may surface through fountains or pumps.

Surface runoff on the site is directed towards the water system through gentle sloping of the topography and vegetated swales, which is intended to keep specific sections of the site dry for active use, including most of the play zones. Rainwater is collected from off of the buildings, which could be used for irrigation of the community gardens at the bottom of the site. Above ground water collection drums allow community members and students to maintain gardens with ease, and help turn the terrace into a community garden hub.

Settler's Trail Park
Le parc du sentier des colons

Figure 7-35: Design concept: Water system + grading diagram.



1. Rainwater collection:
   - Irrigation for gardens.
   - Above ground drums.

2. Flowing Stream
   - Rock river bed.

3. Bioswales:
   - Surface water treatment

4. Sand Makers Center:
   - Water and Sand play.

5. Waterworks Splash Pad:
   - Water play centers.

6. Swale:
   - Water movement through lawn areas.

7. Rain Garden:
   - Native plants.
   - Scenic viewing path around garden.
   - Stepping stones through features.

8. Skatepark Sculpture Garden:
   - Water Pump + Fountain

9. Lagimodière Marsh:
   - On-site water retention

- Building Base Grade (0.0m)
- Above Base Grade (+)
- Below Base Grade (-)
- Water Movement
- Irrigation Water Movement
- Little Seine River
- Three Schools Boundary

Programming

Figure 7-36 represents the programming of the park features for the conceptual design of Settler's Trail Park. Programming of the conceptual design was based on features determined through the design principles study and on programming needs determined in the survey analysis section of the practicum. The park is proposed to have a variety of play features that provide opportunities for play, connecting with nature, engaging community, learning and connecting to the local culture and history. Programming design features are oriented according to the programming zones that were identified at the beginning of the conceptual design section, grouping congruent features in a linear east-west fashion.

Play features proposed in the Playground Promenade provide the three schools with ample active and educational space for the students to enjoy. A play structure area is proposed for active, adventurous play. Adjacent, the Sand Makers Center with tools and loose materials is intersected by the water system so children can create and invent. To the east of École Lorette Immersion, the amphitheater faces out over the lawn, which may become the backdrop to plays or band performances. West of Dawson Trail School the Waterworks Splash Pad draws children of all ages to the site, and can be used as water centers during the school day. To the opposite side of the school the Mosaic Art Center encourages children to shape loose material, draw with chalk on the asphalt or add to the mural on the wall. The Construction Center provides children with logs, sticks, and rocks that can be used to build or to make sounds on the instruments. Next is the Observatory Bug and Bird Center, which is a space for bird watching and feeding, bug hunting and science discovery, with a viewing platform, birdhouses and bug habitat planters. Tables and chairs let students investigate their findings. On the far east side of the park swings and log climbers again encourage children to play actively.

Within the Lorette Garden Plaza, community events or activities can be held, such as farmers markets in the parking lot + market space. Skateboarders or cyclists can use the Skatepark Sculpture Garden, though it can also be used for quiet reflection as it has several enclosed spaces with seating and canopy cover.

1. Soft Play Surface:
   - Play structure.

2. Soft Play Surface:
   - Sand makers center.

3. Hard Play Surface:
   - Amphitheater
   - Painted Games

4. Soft Play Surface:
   - Waterworks splash pad, water games.

5. Hard Play Surface:
   - Mosaic art center.

6. Soft Play Surface:
   - Construction center.
   - Logs, rocks, sand.
   - Music / Sound play.

7. Hard Play Surface:
   - Observatory Bug + Bird center.
   - Viewing Platform.
   - Work tables / seating.

8. Soft Play Surface:
   - Swings.
   - Log climbers.

9. Skatepark Sculpture Garden

10. Lorette Garden Plaza:
    - Community Events / Activities
    - Seating Areas
    - Casual play or hang-out areas

11. Sports Meadow:
    - Unmarked fields for active play, mowed.

12. Prairie Meadow:
    - Hilly lawn for imaginative / challenging play, not mowed.

13. Dawson Trail Nature Walk

14. Boardwalk + Lookout

15: Parking Lot / Market:
    - Planters, seating, walking channels, painted games.
    - Market + Event space.

Settler's Trail Park
Le parc du sentier des colons

Figure 7-36: Design concept: Programming diagram.

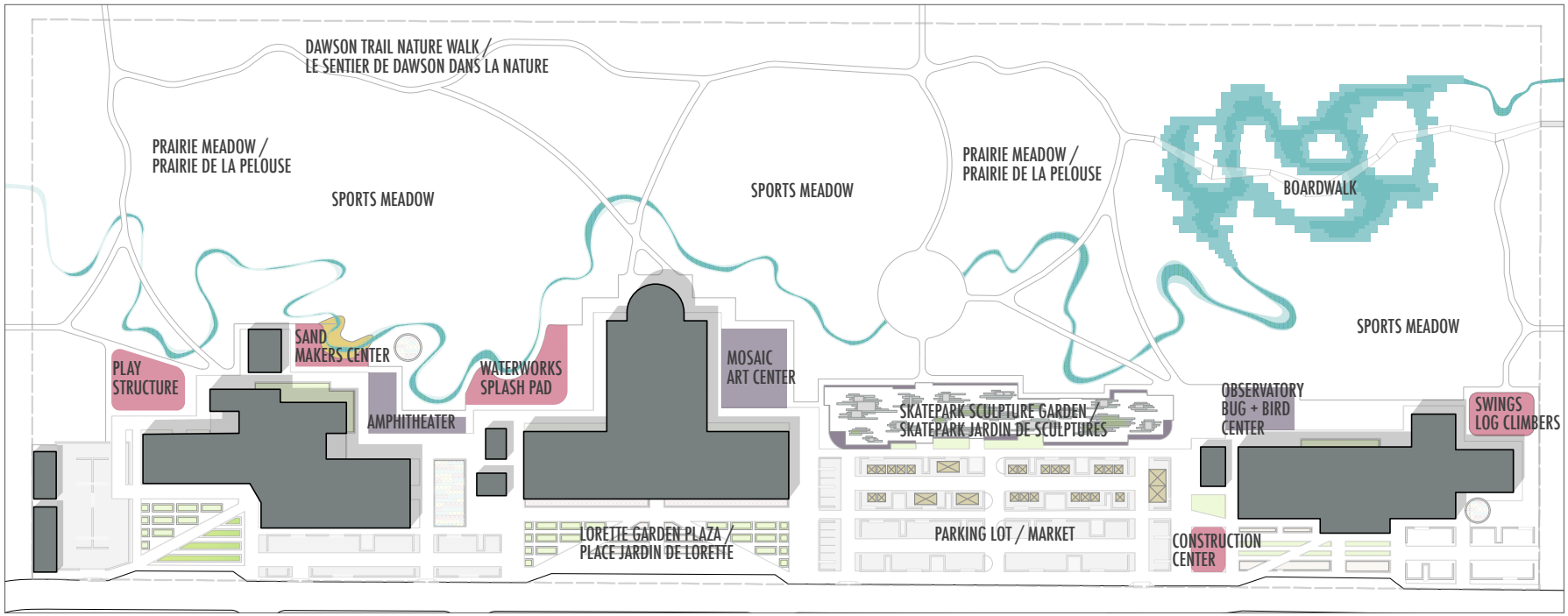
5 20
10 50

Figure 7-37: Play structure.

Figure 7-38: Sand Makers Center.

Figure 7-39: Amphitheater.

Figure 7-40: Waterworks Splash Pad.



Soft Play Surface
Hard Play Surface
Water System
Three Schools Boundary

Figure 7-41: Mosaic Art Center.

Figure 7-42: Construction Center.

Figure 7-43: Observatory Bug + Bird Center.

Figure 7-44: Swings + Log Climbers.

Figure 7-45: Log climbers play feature inspiration.

Figure 7-47: Edible garden inspiration.

Figure 7-46: Play structure inspiration.

Figure 7-48: Sand and water play feature inspiration.

Conceptual Design

Located in the heart of the community of Lorette are three elementary schools, which combined create the selected community park site for Settler's Trail Park. Figure 7-49 represents the conceptual design solution for the three schools site. The park is proposed to fill a need for public green space in the community, while providing École Lorette Immersion, Dawson Trial School and École Lagimodière with an exciting, naturalized space for children to learn and grow in.

The park was designed with inspiration from the local history and environment. Many of the features are represented and named according to this inspiration, and is celebrated in both the French and English languages. Each of the three schools are honoured through the naming of features in the park, including the Dawson Trail Nature Walk, the Lagimodière Marsh, and the Lorette Garden Plaza. The local environment is represented through agricultural zones, including the Prairie Grove, Prairie Meadow, and Lagimodière Marsh, which are designed to represent plant associations, such as upland forest, tall grass prairie, or wetland.

A water system named the Little Seine River runs through the site from west to east, which is both a drainage system and a network of beautiful, educational features for the park. The Little Seine River is inspired by the Seine River, which runs along the border of Lorette, and is of great importance to the history of settlement in Lorette, and is an important current-day landmark. Park users may interact with the Little Seine River through a variety of features, including a splash pad, flowing stream or wetland, or cross over the features on wooden bridges, stepping stones, or a boardwalk.

Community plaza space named the Lorette Garden Plaza is proposed to run along the three schools, providing space for community activities, formal gardens, and parking. A Skatepark Sculpture Garden, Parking Lot Market and amphitheater are positioned in the center of the plaza in order to provide space for large community events, such as markets, carnivals, concerts or festivals. Community gardens and native plant gardens are situated within the Lorette Garden Plaza, which are styled to represent Lorette's agricultural history. These gardens could encourage habitual community park use, creating a vibrant and safe atmosphere for the park.

Paved paths connect the Settler's Trail Park to the surrounding neighbourhoods, and offer a variety of routes through the park. The paths on the north half of the site bend and weave through the forests and meadows, sending park-goers on a leisurely journey. A boardwalk with lookout platform move through the Lagimodière Marsh, which provides an interesting route through wetland vegetation and water, while opening up views to the surrounding community, especially the Paroisse Notre-Dame de Lorette Parish. The Spirit Circle path and nature garden connects the organic-styled path system with the formal plaza paths, forcing commuters to slow their movement and join the busier pedestrian channels. Plazas on the south half of the park provide direct, fast-paced routes between busy sections of the park, connecting the three schools and public plaza space to the main vehicular access route.

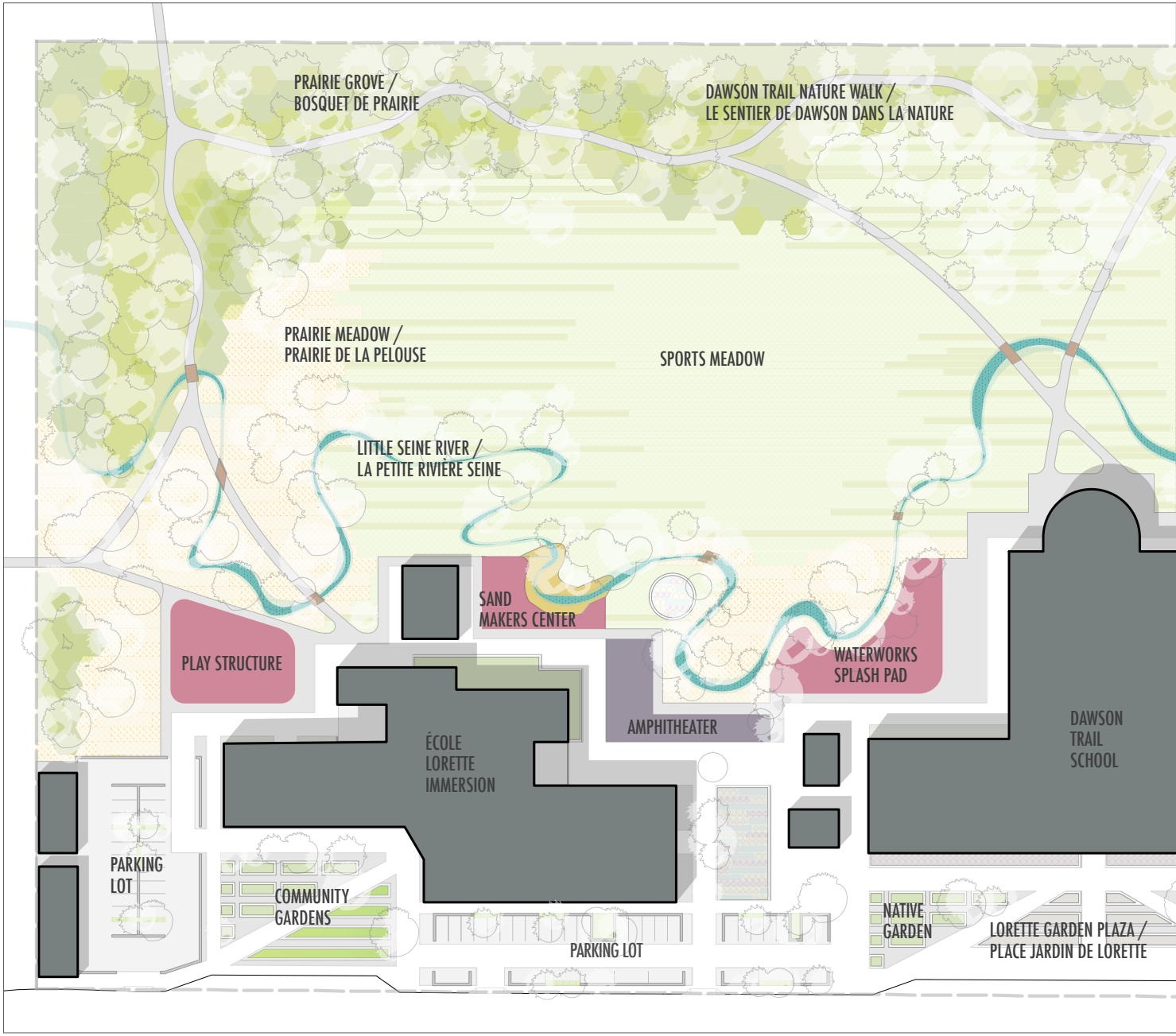
Park features are programmed to fulfill specific needs determined through the studies in this practicum. Such features include play structures, Sports Meadow, Sand Makers Center, Waterworks Splash Pad, Mosaic Art Center, Construction Center, Observatory Bug + Bird Center, swings, and log climbers. These features provide a variety of programmed park activities that encourage educational, active and social play.

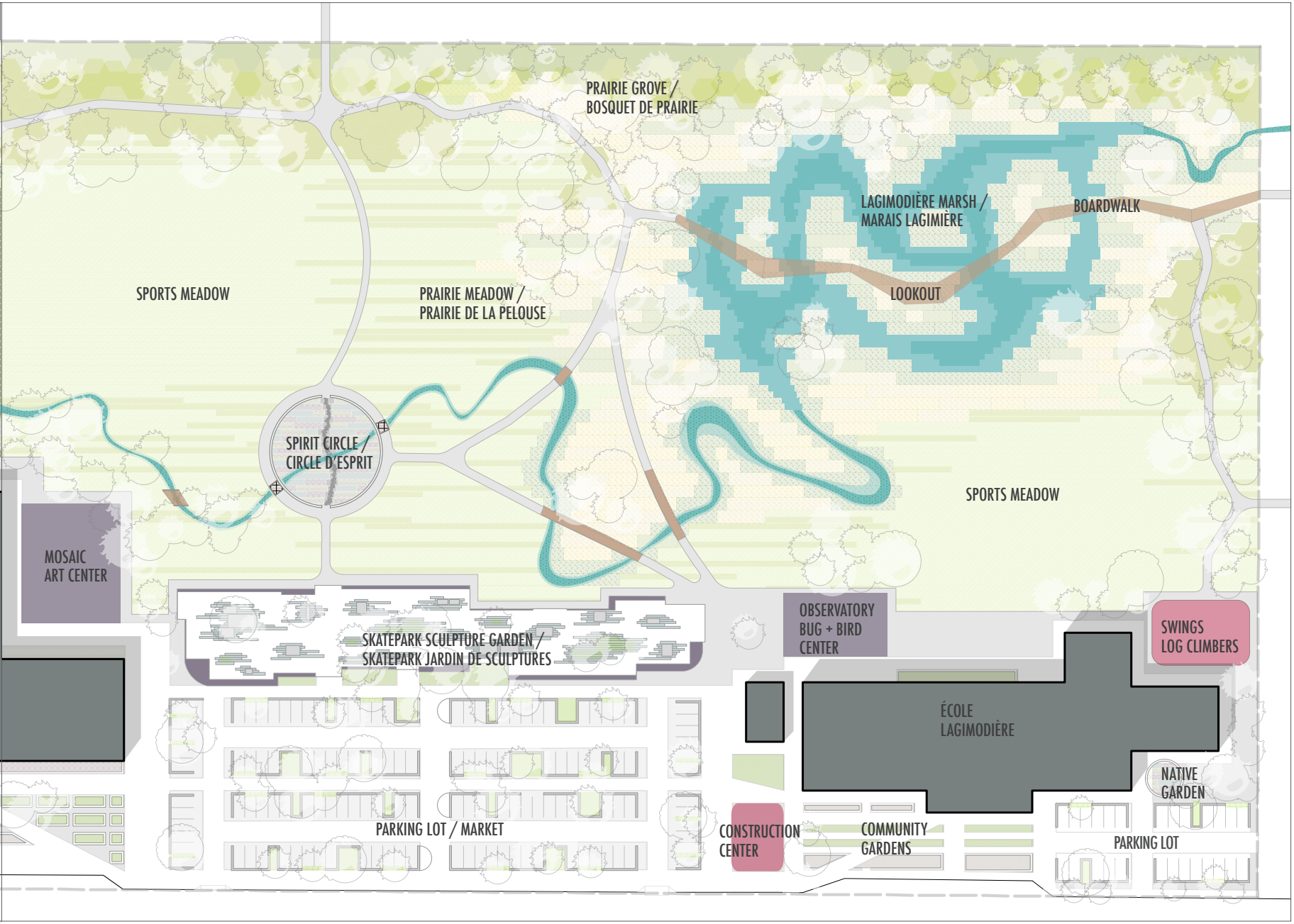
Settler's Trail Park
Le parc du sentier des colons

Figure 7-49: Design concept: Site plan

- Soft Play Surface
- Hard Play Surface
- Pavement
- Asphalt
- Grass
- Water System
- Three Schools Boundary

5 10 20 50




PRAIRIE GROVE /
BOSQUET DE PRAIRIE
LAGIMODIÈRE MARSH /
MARAIS LAGIMIÈRE
BOARDWALK
SPORTS MEADOW
PRAIRIE MEADOW /
PRAIRIE DE LA PELOUSE
LOOKOUT
SPIRIT CIRCLE /
CIRCLE D'ESPRIT
SPORTS MEADOW
MOSAIC
ART CENTER
OBSERVATORY
BUG + BIRD
CENTER
SWINGS
LOG CLIMBERS
SKATEPARK SCULPTURE GARDEN /
SKATEPARK JARDIN DE SCULPTURES
ÉCOLE
LAGIMODIÈRE
NATIVE
GARDEN
PARKING LOT / MARKET
CONSTRUCTION
CENTER
COMMUNITY
GARDENS
PARKING LOT

8 CONCLUSIONS

This practicum explored the role of a landscape architect in engaging the community in order to build a narrative of place identity, and determine a strategy for interpreting and utilizing that narrative into a design that connects people to their environment and promotes community pride. The conception, development and implementation of the conceptual design for the Settler's Trail Park in Lorette, Manitoba has been about mediation between landscape architecture and cultural identity. The success of this type of inclusive design process required the support of the residents of Lorette, and their openness to work collectively as a community. This practicum also explored the creation of complex networks of learning opportunity for children, utilizing concepts of place identity, participation, connection to nature, various types of play and outdoor learning opportunities. All of these concepts are interconnected when considering children's intellectual, social, physical and self-concept development. The environment is a backdrop for learning opportunities, cognitive development, social encounters, and development of personal, social and environmental identities. Elements of enhanced outdoor learning environments guided the conceptual design process, which provides École Lorette Immersion, Dawson Trail School and École Lagimodière with the potential to become exciting, functional community space.

The conceptual design proposal for the shared site of École Lorette Immersion, Dawson Trail School, and École Lagimodière represents a desire by residents of Lorette build a closer relationship with their community and environment. Currently, there is a need in Lorette for public community space that is structured for community gatherings, while providing various types of active, play and educational experiences. An opportunity also arose to

delve into the identity pertaining to Lorette, since it is a community with a rich history and unique landscape, but is losing some of its original features due to rapid development. To mitigate this issue place identity became the foundation of this practicum, guiding the design principles and features that were used in the conceptual design of Setter's Trail Park. Place identity theory directed the use of topographical features, vegetation, connections between the park and the community, and the celebration of Lorette's history.

I believe the outcome of the conceptual design process using place identity theory is a community park that suits the needs of the community and of École Lorette Immersion, Dawson Trail School, and École Lagimodière, which could be beneficial to Lorette if it were realized. If I were to move ahead with this practicum, the next step would therefore be to meet with representatives from the Seine River School Division and the Division scolaire franco-manitobaine to discuss the potential of the Settler's Trail Park conceptual design. A park of this scale would take the support of both school divisions as the design considers all three school sites as a whole, creating connections between the schools and the school divisions.

When I reflect upon this experience I realize I did not only build a narrative about Lortte, I also told a story about myself. For as long as I can remember I have had a bond with nature. From a young age I was encouraged to explore, play and learn outdoors. I had the good fortune of growing up near the Seine River where I had endless opportunities to build forts, catch frogs, climb trees and inevitably get covered head to toe in mud. I honestly believe that these experiences with nature have greatly benefited my growth as an individual and have helped shape my sense of self. When I visit the section of the Seine River that I grew up along, I understand why I have such a strong connection to nature and why I want to provide opportunities for a new generation of children to do the same.

I had a hopeful vision for what childhood could be like in Lorette – I imagined children being able to go to the Settler's Trail Park and become immersed in nature. There they can develop a love of the outdoors, science, or landscape, while learning, discovering and connecting to their community. Through the design of the Settler's Trail Park the connections between the community and the schools may become stronger. Based on the finding of this practicum, it is evident that landscape architects could consider narrative of place identity, educational values and connection to nature and create spaces that are responsive to these concepts.

BIBLIOGRAPHY

Akkurt, H. B. (2012). *Reconstitution of the Place Identity Within the Intervention Efforts in the Historic Built Environment*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 63-77). Oak Park: Bentham Science Publishers.

Alparone, F. R., & Rissoto, A. (2001). *Children's Citizenship and Participation Models: Participation in Planning and Children's Councils*. Journal of Community and Applied Social Pshychology , 11, 421-434.

Amundsen, A. B. (2001). *Articulations of Identity: A Methodological Essay and a Report of Askin and Tidaholm*. NoordXXI Report no. 19.

Architecture Foundation. (2000). *We Cherish Our Homes; We Aspire to Beautiful Places of Work: Why Should Our Schools Be Different? School Works: A Secondary Schools Design Initiative*. London: Architecture Foundation/Arts Council.

Austin, M. E., & Kaplan, R. (2003). *Identity, Involvement, and Expertise in the Inner City: Some Benefits of Tree-Planting Projects*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 205-225). Cambridge, MA: The MIT Press.

Bernardo, F., & Palma-Oliveira, J. (2012). *Place Identity: A Central Concept in Understanding Intergroup Relationships in the Urban Context*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 35-46). Oak Park: Bentham Science Publishers.

Bloom, B. S., Engelhart, M. B., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of Educational Objectives, Handbook I: The Classification of Educational Goals - Cognitive Domain*. New York: Longman.

Bonaiuto, M., Breakwell, G., & Cano, I. (1996). *Identity Processes and Environmental Threat: The Effects of Nationalism and Local Identity Upon Perception of Beach Pollution*. Journal of Community and Applied Social Psychology , 6 (3), 157-175.

Bressi, T. W. (2001). *Rosa Parks Elementary School [EDRA/ Places Awaards-Design]*. Places , 14 (1).

Buttimer, A. (1976). *Grasping the Dynamism of Lifeworld*. Annals of the Association of American Geographers, 66, 277-292.

Buttimer, A., & Seamon, D. (Eds.). (1980). *The Human Experience of Space and Place*. London: Croom Helm.

Carbaugh, D. (1996). *Situating Selves*. Albany: State University of New York Press.

Casakin, H., & Neikrug, S. (2012). *Place Identity in the Neighborhood as Perceived by the Elder Residents: Relations with Attachment, Dependence and Place Quality*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 107-119). Oak Park: Bentham Science Publishers.

Casey, E. (1987). *Remembering: A Phenomenological Study*. Bloomington: Indiana University Press.

Chawla, L. (Ed.). (2002). *Growing Up In an Urbanising World*. London: Earthscan.

Clark, C., & Uzzell, D. (2006). *The Socio-Environmental Affordances of Adolescents' Environments*. In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning Using and Designing Spaces (pp. 176-195). Cambridge: Cambridge University Press.

Clayton, S. (2003). *Environmental Identity: A Conceptual and Operational Definition*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 45-65). Cambridge, MA: The MIT Press.

Clayton, S., & Opotow, S. (2003). *Introduction: Identity and the Natural Environment*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 1-24). Cambridge, MA: The MIT Press.

Cobb, E. (1977). *The Ecology of Imagination In Childhood*. New York: Columbia University Press.

Coleman, J. C. (1979). *The School Years*. London: Methuen.

Cooper Marcus, C. (1992). *Environmental Memories*. In I. Altman, & S. Low (Eds.), Place Attachment; Human Behavior and Environment: Advances in Theory and Research (pp. 87-112). New York: Plenum Press.

Cosco, N., & Moore, R. (2002). *Our Neighbourhood Is Like That! Cultural Richness in Boca-Baraccas, Buenos Aires*. In Growing Up In An Urbanising World (pp. 25-56). London: Earthscan.

Creative STAR Learning. (2010, July 8). *A Visit to The Coombes CE Primary School*. Retrieved Aug 28, 2014, from I'm a teacher, get me OUTSIDE here!: http://creativestarlearning.co.uk/developing-school-grounds-outdoor-spaces/a-visit-to-the-coombes-ce-primary-school/

Creswell, J. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: SAGE.

Cumming, S. (2010, May 22). *The Coombes*. Retrieved Aug 28, 2014, from 2009 Churchill Fellowship Stuart Cumming: http://withersprimary.blogspot.ca/2010/05/coombes.html

da Costa Meyer, E. (2009). *The Place of Place in Memory*. In M. Treib, Spatial Recall: Memory in Architecture and Landscape (pp. 176-193). New York: Routledge.

Day, C. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Oxford: Architectural Press.

Deming, E., & Swaffield, S. (2011). *Landscape Architecture Research; Inquiry, Strategy, Design*. Hoboken: John Wiley & Sons, Inc.

Derr, T. (2006). *'Sometimes Birds Sound Like Fish': Perspectives on Children's Place Experiences*. In Children and Their Environments: Learning, Using and Designing Spaces (pp. 108-123). Cambridge: Cambridge University Press.

Driskell, D. (2002). *Creating Better Cities with Children and Youth: A Manuel for Participation*. Paris: UNESCO Publishing.

Foster, S. J. (2011). *Risky Business: A Jungian View of Environmental Disasters and the Nature Archetype*. Toronto: Inner City Books.

Freeman, C., & Tranter, P. (2011). *Children and Their Urban Environment: Changing Worlds*. London: Earthscan.

Gaboury Prefontaine Perry architect.e.s. (2002). *Lorette CDC Vision Development Proposal*. Winnipeg: Gaboury Prefontaine Perry architect.e.s.

Gamson Danks, S. (2010). *Asphalt to Ecosystems: Design Ideas for Schoolyard Transformation*. Oakland: New Village Press.

Glashan Schoolyard Greening Project. (2014). Retrieved Oct 10, 2014, from Glashan Schoolyard Greening Project: glashangreening.ca

Giddens, A. (1991). *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Cambridge: Polity.

Goličnik Marušič, B., & Nikšič, M. (2012). *Multilayered Identity of Places: Linkage Between Physical Form, Behaviour Patterns and Public Perception*. In The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 120-132). Oak Park: Bentham Science Publishers.

Goodnow, J. J., Miller, J., & Kessel, F. (1995). *Editor's Preface to "Development Through Participation in Sociocultural Activity"*. In J. J. Goodnow, J. Miller, & F. Kessel (Eds.), Cultural Practices as Contexts for Development (pp. 41-44). San Francisco: Jossey Bass.

Gray, D. E. (2009). *Doing Research in the Real World* (2nd Edition ed.). London: SAGE Publications Inc.

Groat, L., & Wang, D. (2002). *Architectural Research Methods*. New York: John Wiley & Sons.

Groth, N. (2002). *Urban and Regional Identity Challenged by Globalisation* . In S. P. Miljøministeriet/Ministry of the Environment (Ed.), European Cities in a Global Era: Urban Identities and Regional Development. Denmark: Ministry of the Environment, Spatial Planning Department.

Hague, C. (2005). *Planning and Place Identity*. In Place Identity, Participation and Planning (pp. 3-17). New York: Routledge.

Hart, R. A. (1997). *Children's Participation: The Theory and Practice of Involving Young Citizens in Community Development and Environmental Care*. London: Earthscan.

Hartsen, T., Groote, P., & Huigen, P. (Eds.). (2000). *Claiming Rural Identities: Dynamics, Contexts, Policies*. Assen, The Netherlands: Van Gorcum.

Heerwagen, J. H., & Orians, G. H. (2002). *The Ecological World of Children*. In J. P. Kahn, & S. R. Kellert (Eds.), Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. 29-63). Cambridge, MA: The MIT Press.

Heft, H., & Chawla, L. (2006). *Children as Agents in Sustainable Development: The Ecology of Competence*. In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning, Using and Designing Spaces (pp. 199-216). Cambridge: Cambridge University Press.

Hernández, B., Martin, A. M., Ruiz, C., & Hidalgo, M. C. (2010). *The Role of Place Identity and Place Attachment in Breaking Environmental Protection Laws*. Journal of Environmental Psychology , 30 (3), 281-288.

Hilderman Thomas Frank Cram, Planning Department. (2001). *Innovative Playgrounds: Research Project Report*. Winnipeg: Hilderman Thomas Frank Cram.

Horne Martin, S. (2006). *The Classroom Environment and Children's Performance – Is There a Relationship?* In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning, Using and Designing Spaces (pp. 91-107). Cambridge: Cambridge University Press.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Vintage Books.

Jenkins, P. (2005). *Space, Place an Territory: An Analytical Framework*. In Place Identity, Participation and Planning (pp. 19-37). New York: Routledge.

Jones, O. (2005). *An Ecology of Emotion, Memory, Self and Landscape*. In J. Davidson, L. Bondi, & M. Smith (Eds.), Emotional Geographies (pp. 205-218). Hampshire, England: Ashgate Publishing Limited.

Kahn, J. P., & Kellert, S. R. (2002). *Introduction*. In J. P. Kahn, & S. R. Kellert (Eds.), Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. vii-xix). Cambridge, MA: The MIT Press.

Kellert, S. R. (2002). *Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children*. In J. P. Kahn, & S. R. Kellert (Eds.), Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. 117-151). Cambridge, MA: The MIT Press.

Kellert, S. R. (1996). *The Value of Life: Biological Diversity and Human Society*. Washington, DC: Island Press.

Kempton, W., & Holland, D. C. (2003). *Identity and Sustained Environmental Practice*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 317-341). Cambridge, MA: The MIT Press.

Kirk, K. (2005). *Local Participation and Place Identity*. In C. Hague, & P. Jenkins (Eds.), Place Identity, Participation and Planning (pp. 139-157). New York: Routledge.

Kondolf, M. (2009). *Rivers, Meanders, and Memory*. In M. Treib, Spatial Recall: Memory in Architecture and Landscape (pp. 106-119). New York: Routledge.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook 2, Affective Domain*. New York: Longman.

Lackney, J. A. (2000). *Thirty-Three Educational Design Principles for Schools as Community Learning Centers*. Starkvill, MS: Mississippi State University, Educational Design Institute.

Lieberg, M. (1995). *Teenagers and Public Space*. Communication Research , 22 (6), 720-744.

Lieberg, M. (1997). *Youth in Their Local Environment*. In R. Camstra (Ed.), Growing Up in a Changing Urban Landscape. Assen, The Netherlands: Van Gorum.

Linneweber, V., Hartmuth, G., & Fritshce, I. (2003). *Representations of the Local Environment as Threatened by Global Climate Change: Toward a Contextualized Analysis of Environmental Identity in a Coastal Area.* In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 227-245). Cambridge, MA: The MIT Press.

Lorette History Book Committee. (2000). *Paroisse Notre-Dame de Lorette Parish*, 1875-2000. Lorette, Manitoba: Lorette History Book Committee.

Louv, R. (2008). *Last Child in the Woods: Saving our Children from Nature-Deficit Disorder*. Carolina: Algonquin Books.

Lyndon, D. (2009). *The Place of Memory*. In M. Treib, Spatial Recall: Memory in Architecture and Landscape (pp. 62-85). New York: Routledge.

Maker, C. J. (1982). *Teaching Models of the Gifted*. Austin: Pro-ed.

Malpas, J. E. (1999). *Place and Experience: A Philosophical Topography*. Cambridge: Cambridge University Press.

Maryland State Department of Education. (2012). *A Practical Guide to Planning, Constructing, and Using School Courtyards*. Baltimore: Maryland State Department of Education.

Matthews, H. (2001). *Children and Community Regeneration: Creating Better Neighbourhoods*. London: Save the Children.

Morel-Edniebrown, F. (2012). *Wither Genius Loci?: The City, Urban Fabric and Identity in Perth, Western Australia*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 209-227). Oak Park: Bentham Science Publishers.

Myers, G., & Russell, A. (2003). *Human Identity in Relation to Wild Black Bears: A Natural-Social Ecology of Subjective Creatures*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 67-90). Cambridge, MA: The MIT Press.

Myers, J. O., & Saunders, C. D. (2002). *Animals as Links toward Developing Caring Relationships with the Natural World*. In J. P. Kahn, & S. R. Kellert (Eds.), Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. 153-178). Cambridge: The MIT Press.

Nickerson, R. S. (2003). *Psychology and Environmental Change*. Mahwah, NJ: Laurence Erlbaum Associates Publishers.

Noack, R., & Silbereisen, R. K. (1988). *Adolescent Development and Choice of Leisure Settings*. Children's Environments Quarterly , 5, 25-33.

Noormohammadi, S. (2012). *Essential Human Qualities in Strengthening Place Identity as Expressed in Louis Kahn's Architectural Theory*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place Identity in the Perception, Understanding, and Design of Built Environments (pp. 22-34). Oak Park: Bentham Science Publishers.

OCED. (1988). *The Quality of the Physical Environment of the School and the Quality of Education*. OECD , 21.

Opotow, S., & Brook, A. (2003). *Identity and Exclusion in Rangeland Conflict*. In S. Clayton, & S. Opotow (Eds.), Identity and the Natural Environment: The Psychological Significance of Nature (pp. 249-272). Cambridge, MA: The MIT Press.

Paba, G. (2000). *Partecipare Per Costruire La Città*. In M. dell'Ambiente (Ed.), Le Bambine e i Bambini Trasformano Le Città: Progetti e buone Pratiche Per La Sostenibilità Nei Comuni Italiani (pp. 24-30). Firenze: Litografica.

Proshansky, H. M. (1978). *The City and Self-Identity*. Environment and Behavior , 10, 147-169.

Proshansky, H. M., & Fabian, A. K. (1987). *The Development of Place Identity in the Child*. In C. S. Weintein, & T. G. David (Eds.), Space for Children. New York: Plenum Press.

Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). *Place Identity: Physical World Socialization of the Self*. Journal of Environmental Psychology , 3, 57-83.

Pyle, R. M. (2002). *Eden in a Vacant Lot: Special Places, Species, and Kids in the Neighborhood of Life*. In J. P. Kahn, & S. R. Kellert (Eds.), In Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. 305-327). Cambridge: The MIT Press.

Relph, E. (1992). *Modernity and the Reclamation of Place*. In D. Seamon (Ed.), Dwelling, Seeing and Designing: Towards a Phenomenological Ecology (pp. 25-40). New York: State University of New York Press.

Relph, E. (1976). *Place and Placelessness*. London: Pion.

Rissotto, A., & Giuliani, M. V. (2006). *Learning Neighbourhood Environments: The Loss of Experience in a Modern World*. In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning, Using and Designing Spaces (pp. 75-90). Cambridge: Cambridge University Press.

Rose, G. (1995). *Place and Identity: A Sense of Place*. In D. Massey, & P. Jess (Eds.), A Place in the World? Places, Cultures and Globalisation (p. Chapter 3). Oxford: Oxford University Press.

Russell, J. A., & Ward, L. M. (1982). *Environmental Psychology*. Annual Review of Psychology, 33, 651-688.

Schiavo, R. S. (1988). *Age Differences in the Assessment and Use of a Suburban Neighbourhood Among Children and Adolescents*. Children's Environments Quarterly , 5, 4-9.

Seamon, D. (2012). *Place, Place Identity, and Phenomenology: A Triadic Interpretation Based on J.G. Bennett's Systematics*. In H. Casakin, & F. Bernardo (Eds.), The Role of Place I dentity in the Perception, Understanding, and Design of Built Environments (pp. 3-21). Oak Park: Bentham Science Publishers.

Searles, H. F. (1960). *The Nonhuman Environment in Normal Development and Schizophrenia*. New York: International Universities Press.

Sieverts, T. (2009). *Metropolitan Landscapes: Attitudes, Research and Practice*. Places, 19 (1), 18.

Silbereisen, R. K., & Eyferth, K. (1986). *Development as Action in Context*. In R. K. Silbereisen, K. Eyferth, & G. Rudinger (Eds.), Development as Action in Context: Problem and Behaviour and Normal Youth Development. New York: Springer.

Smith, M. (2005). *On 'Being' Moved by Nature: Geography, Emotion and Environmental Ethics*. In J. Davidson, L. Bondi, & M. Smith (Eds.), Emotional Geographies (pp. 219-230). Hampshire, England: Ashgate Publishing Limited.

Sobel, D. (1993). *Children's Special Places: Exploring the Role of Forts, Dens and Bush Houses in Middle Childhood*. Tuscon: Zephyr Press.

Spencer, C., & Blades, M. (2006). *An Introduction.* In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning, Using and Designing Spaces (pp. 1-9). Cambridge: Cambridge University Press.

Spencer, C., Woolley, H., & Dunn, J. (1999). *Participating In Their Towns: Children Feel Ignored*. Streetwise, 10, 16-18.

Statistics Canada. (2012). *Lorette, Manitoba (Code 1373) and Manitoba (Code 46) (table)*. Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012. http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E (accessed October 6, 2014).

Stern, D. (1985). *The Interpersonal World of the Infant*. New York: Basic Books.

Sutton, S. E., & Kemp, S. P. (2006). *Young People's Participation in Constructing a Socially Just Public Sphere*. In C. Spencer, & M. Blades (Eds.), Children and Their Environments: Learning, Using and Designing Spaces (pp. 256-276). Cambridge: Cambridge University Press.

Taylor, S. (2010). *Narratives of Identity and Place*. Sussex: Routledge.

The Coombes CE Primary School. (2014). *Curriculum*. Retrieved Aug 28, 2014, from The Coombes CE Primary School: www.thecoombes.com/curriculum

Toker, U. (2012). *Making Community Design Work: A Guide For Planners*. Chicago: American Planning Association.

Tuan, Y. (1974). *Space and Place: Humanistic Perspective*. Progress in Geography, 6, 266-276.

Verbeek, P., & de Waal, F. B. (2002). *The Primate Relationship with Nature: Biophilia as a General Pattern*. In J. P. Kahn, & S. R. Kellert (Eds.), Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations (pp. 1-27). Cambridge: The MIT Press.

Vernez Moudon, A. (1992). *A Catholic Approach to Organizing What Urban Designers Should Know from Journal of Planning Literature*. In M. Larice, & E. Macdonald (Eds.), The Urban Design Reader (pp. 312-460). New York: Routledge.

Whitman, W. (1995). *The Complete Poems of Walt Whitman*. Hertfordshire: Wordsworth Editions Limited.

Wilson, R. (2012). *Nature and Children; Encouraging Creative Play and Learning in Natural Environments*. New York: Routledge.

Wohlwill, J. F. (1983). *The Concept of Nature: A Psychologist's View*. In I. Altman, & J. F. Wohlwill (Eds.), Behavior and the Natural Environment; Human Behavior and Environment: Advances in Theory and Research (pp. 5-37). New York: Plenum Press.

TABLES + FIGURES

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APPENDIX A

École Lorette Immersion: Conceptual Design

Introduction

This practicum began as a volunteer landscape design project for the École Lorette Immersion schoolyard. A conceptual design for this schoolyard was developed early in the practicum process, which ended up being an advantageous step in the research. This project became a precursor to the rest of this practicum, providing the site for the final conceptual design, and helped build pertinent theory, including design principles and programming needs. The outcome of this exploration is a conceptual design plan that is currently being implemented in the École Lorette Immersion schoolyard.

This design process focused on the needs and desires of the students, staff at École Lorette Immersion and community members who are impacted by the school. This project was initiated by the Parents Advisory Council for the school, who were dedicated to bringing outdoor education, opportunities for play, and a sense of community to the schoolyard. The main goal for this project is to provide interesting, imaginative, and natural styled spaces for children and community members to enjoy. The Council's hope is to provide students with more to do during recess, encourage community members to use the space after hours, and instill a sense of pride and ownership for the site.

Site Analysis

École Lorette Immersion is a two-storey French immersion school with 303 students. The current site consists of two play structures, a set of swings, gravel baseball diamond, asphalt basketball court, unprogrammed field, gravel track, painted asphalt pad, sand-pit and several benches on gravel. A gravel parking lot is located on the south-west corner of the site, which is connected to the maintenance parking lot, including three maintenance sheds. The maintenance sheds are used to maintain all three schools. Parents use the parking lot for picking up or dropping off students, which has created problems with congestions as well as pedestrian safety.

Students access the school from several access points, including Senez Street to the South, and pedestrian paths from all sides. Students predominantly use the two entrances on the North side of the building, and do not often use the front entrance to the school. The entrance on the West side of the building is solely for the Seine River School Division office. Students who take school buses are dropped off and picked up along Senez Street, and as cars are prohibited to stop along the street, many students are picked up or dropped off in the school parking lot.

Drainage ditches are located along the north and east sides of the site. Currently, there exists a problem with drainage, where water collects in the center of the field, causing problems for outdoor activities during the wet months of the year.

Vegetation is limited to the north edge of the site and to the main entrances. Most of the vegetation is trees, which are planted predominantly as wind shields and entry decoration. The west edge is impacted by trees planted in the adjacent residential lots, creating a boundary, but are out of reach from the students and the public.

Figure AA-1: ÉLI play structures.

Figure AA-2: ÉLI field.

Figure AA-3: École Lorette Immersion site analysis.

Conceptual Design

The conceptual design of the École Lorette Immersion schoolyard was based on the findings from the community engagement and site analysis process, as well as the need for practicality of budget and funding. The budget was limited for this project, making the use of existing materials and features extremely important to the conceptual design. Community volunteer action, including donated time, materials and funding was also instrumental to the design process. Many building materials were donated, including logs, lumber, tires, cement and fill. Labour was donated for construction of several features, including grading, concrete pouring and construction of the play hill.

The main goals for this project included fixing a low spot in the topography, solving safety issues, and fixing existing paths and material divisions. Providing natural design features were also a goal for this conceptual design, including creating seating or "hang-out" spots, sun and wind protection, natural play features, such as hills, climbing steps, and native plants.

Provisions for connection to the local cultural heritage include the dry riverbed, which is styled to represent the Seine River, the proposal of native plants and edible gardens to connect students to the agricultural traditions of Lorette.

Outdoor spaces for learning are a major consideration in the conceptual design proposal for this site. Proposed are several enclosed seating areas for quiet learning and a covered outdoor classroom. Curriculum is considered in the conceptual design proposal, including the use of native plant species, and local materials. Sight lines from the enclosed learning spaces were considered to allow supervisors to observe the play from one the vantage point of the north side of the school.

The existing perimeter track is proposed to be maintained around the defined play areas creating a looping circuit connecting the exterior spaces, framing the interior space, and linking the two playgrounds. This primary path is still intended to carry the highest volumes of fast moving foot traffic to focal points and so will be left wide and relatively straight with a firm crushed granite surface. This path may be used for active play, while the slower movement can be kept to the secondary paths proposed in the interior of the schoolyard. These secondary paths are proposed to be narrow and winding, leading to the more private play and learning pockets. Designated play pockets were located in relation to the set circulation pattern. Pockets are determined based on open, active, transition and quiet program types.

Conceptual design responses to winter weather conditions focused on the placement of windscreens across the site and on the addition of topography as a play element. Trees are proposed to be organized in clusters or belts throughout the site to buffer a bulk of the wind.

Several different iterations of parking lots are proposed to cater to financial and future growth potential. The first iteration would combine the school and maintenance parking lots, increasing the number of stalls, and adding a pick-up/drop-off loop to ease the traffic issues that currently exist. A second iteration includes a parking lot in front of the School Division Office, which could accommodate an additional 19 additional.

Due to budgetary constraints for the École Lorette Immersion schoolyard, the implementation of the features was split into phases. The first phase as initiated in June of 2014, which consisted of five priority construction elements, including one of the dry riverbeds in an area where drainage is poor, building a covered outdoor classroom, creating a 5' x 30' play hill on the east side of the playground, adding a planter and curb barrier feature around the asphalt pad, and repairing the perimeter gravel track.

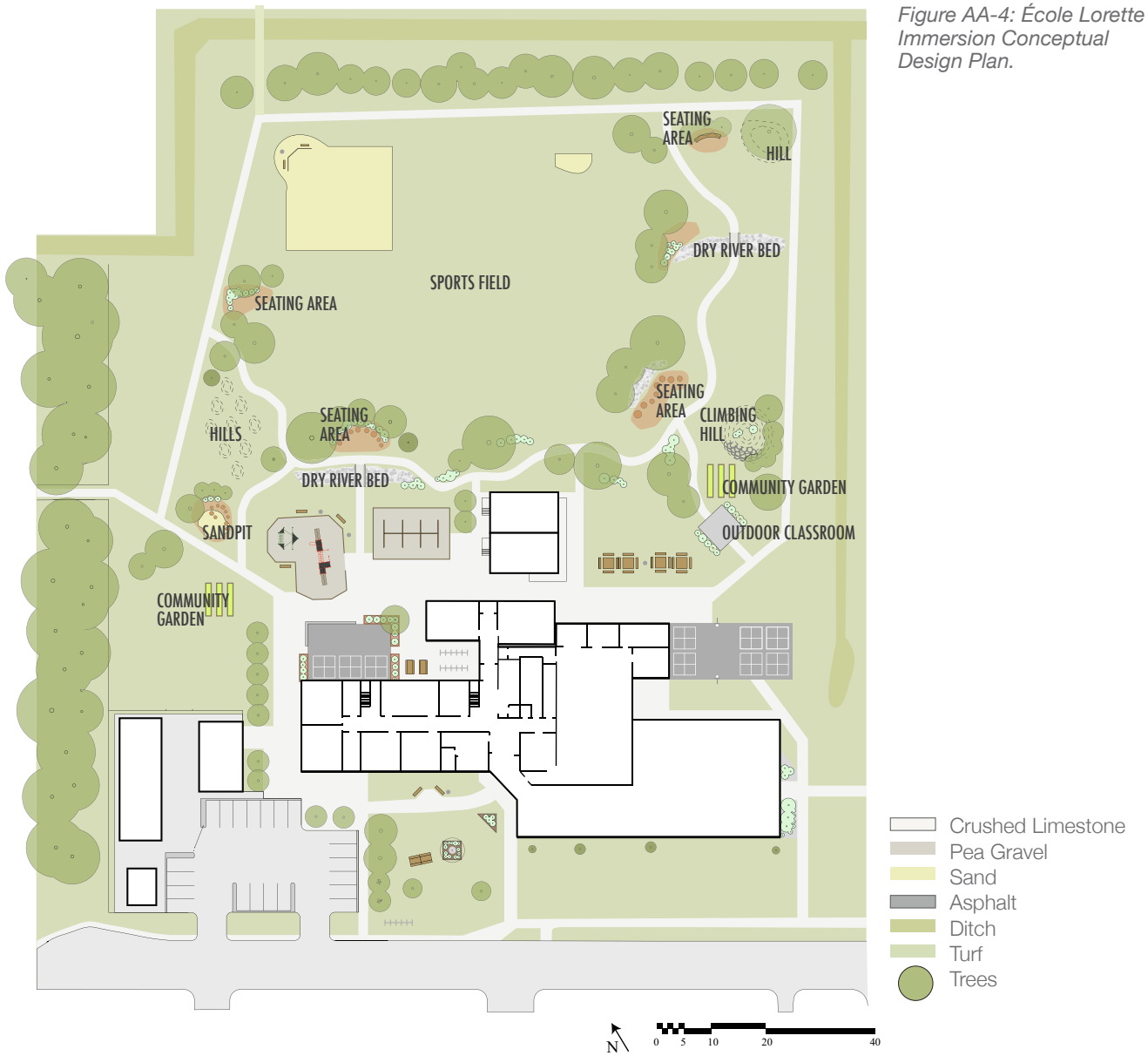

Figure AA-4: École Lorette Immersion Conceptual Design Plan.

Figure AA-5: Climbing Hill.

Figure AA-7: Stone seating circle.

Figure AA-6: Ground levelling.

Figure AA-8: Stone seating.

Figure AA-9: Outdoor classroom shelter.

Figure AA-10: New trees.

APPENDIX B

Consent Forms

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Telphone (204) 474-9458
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Parent Consent Form – Student Survey

Project Title
Rethinking landscapes of learning: the power of place on children's identities.

Principal Investigator
Marie Carey B.Env.D.
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Research Supervisor
Dr. Karen Wilson-Baptist,
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University of Manitoba
(204) 474-7289
Karen.wilsonbaptist@umanitoba.ca

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Your child is invited to be a participant in a research study which I will conduct in April 2014 in your child's school, École Lorette Immersion in Lorette, Manitoba, titled: Rethinking landscapes of learning: the power of place on children's identities. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture, Department of Landscape Architecture at the University of Manitoba. The research is being conducting under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor (see contact information above) regarding this study.

The purpose of this research study is to engage the students in the schoolyard design process. Working with the children's teacher, I will invite the children to answer survey questions about Lorette, their likes and dislikes about the existing schoolyard, and ideas for the new schoolyard design. The survey will contain ten short questions, which can be answered by writing or drawing. The surveys will be guided by the teachers and myself, and will occur one time per classroom. The exercise is expected to take no more than fifteen minutes per class. I will collect the surveys at the end of the exercise, which

will be used to guide the design process of my practicum (project). Any use of this data in my practicum report will be described using pseudonyms (fake names), and personal identifiers will not be used.

The actual surveys will not be shared, and will be stored in a locked cabinet in my home until December 2015. At this time all documentation will be destroyed. Only copies of the data using pseudonyms will exist after this date. Results of this study will be used in my Master's Practicum, and may also be used in subsequent research articles I write. At the conclusion of the research, only I will have access to any information, which might include any identification of the child.

In the written report of the practicum, I may refer to the children's comments or drawings. The University of Manitoba requires that permission be sought for the use of any information for the purposes of the research. I am therefore requesting your permission and your child's permission to use the documentation I collect for my Master's Practicum.

Your permission to use as data documentation related to your child must be given voluntarily. No consequences will arise from giving or withholding your permission. If you decide to withdraw your consent or your child decides to withdraw his/her assent you are free to do so at any time by contacting me (see above contact information). If permission has not been given, or is withdrawn, no documentation regarding your child will be used or referred to in my thesis report. There are no known or anticipated risks to your child associated with giving consent to your child's participation in this study. If, during the study, your child indicates that he/she has experienced abuse or bullying, I will notify the school principal Mireille Bazin-Berryman, who will rectify the issue. Any reports of abuse or bullying will not be documented in my project.

I have informed the school principal, and division superintendent of my intended research, which they have granted me permission to undertake. Should you feel that there are pressures or unanticipated consequences as a result of participating or not, you are free to contact the school principal, Mireille Bazin-Berryman (204-878-4233), Dr. Karen Wilson-Baptist (204-474-7289), or the human ethics secretariat at the University of Manitoba (204-474-7122) to have your concerns addressed.

The aim of this research is to get students involved in the schoolyard design process. Drawing upon this survey research, the child may benefit from the schoolyard design because it will be designed to better meet the child's interests and needs. If you decide to give consent/assent for your child to participate in this study and for me to use the data from your child's survey for the purposes of my practicum, I will send you a summary of the study if you so desire. A copy of my completed thesis will be left at the school and the school secretary will be informed when it is available to be viewed by people who are interested. The thesis will also be made available online through the University of Manitoba MSpace.

I will be available at your convenience to answer any questions you may have (see contact information above). You may also contact my supervisor, Dr. Karen Wilson-Baptist (see contact information above) or the human ethics secretariat at the University of Manitoba (204-474-7122) to check on ethical approval for this study or to raise any concerns you might have. Please discuss this letter with your child and decide whether he or she agrees to give assent. I have attached an optional simplified list of what this study involves to help you explain this process to your child.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification for new information throughout your participation.

The University of Manitoba may look at your child's research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204)474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Please return this consent form in person either to your child's classroom teacher or to the school office on or before March 28, 2014.

Thank you for your time and consideration.

Sincerely,

Marie Carey B.Env.D.
Graduate Student
University of Manitoba

Please place a check mark in the corresponding box if you agree with the statement. If you do not agree, leave the box blank.

I have read the details of this consent form. ☐

My questions have been addressed. ☐

I, _____ (print name), agree to my child's participation in this study. ☐

I agree to allow my child's classroom survey to be collected. ☐

I agree to allow my child's input in the discussion to be written down. ☐

I agree to be contacted by phone or e-mail if further permission is required after the study has begun. ☐

I agree to have the findings from this study published or presented in a manner that does not reveal my child's identity. ☐

Do you wish to receive a summary of the findings? Yes ☐ No ☐

How do you wish to receive the summary? Email ☐ Surface mail ☐

Address/e-mail: _____

_____	_____	_____
Parent of Participant (print name)	Signature	Date

Please talk about this with your child and if they assent, have her/him sign the form by printing their name on the line.

I have asked my child, _____ who has agreed to have Marie Carey use survey and discussion answers for her Master's Practicum for the Faculty of Architecture, Department of Landscape Architecture, at the University of Manitoba. My child understands Marie's written practicum may include answers, including copies of drawings using pseudonyms, and anonymous copies of his/her work.

_____	_____	_____
Name of Student	Signature of Student (Print)	Date

Optional Script for Parents of Student Participants

- Marie Carey is a Student from the University of Manitoba who will be designing a new schoolyard at École Lorette Immersion.

- Marie is doing this design as a university project. Part of the project is taking what children say and think about their schoolyard. She thinks that children know a lot about fun activities to do in the schoolyard and they have many new ideas to share.

- Marie will spend some time in your classroom asking questions and listening and talking with all the children and your teacher. She will sometimes write things down and will keep anything you want to write or draw about the questions and discussion.

- Marie will use the answers from the discussion to decide how to design the new schoolyard. She will write about this discussion in her project. Your name will not be written on any of Marie's drawings or in her project document.

- In order to use some of your answers or drawings for this project, Marie needs your permission. You can say yes or no, either is fine. You will not be "in trouble" if you say no. If you say yes but want to say no later, that is okay, too. Just tell Marie and she will just not use any of your ideas for the project.

- If this sounds okay to you and you want to give Marie permission to use your answers or drawings for her project, you have to sign the consent form by printing your name on the line on the form. I have to sign the form, too, and then we will hand it in to Marie or to your teacher.

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Landscape Architecture
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telphone (204) 474-9458
Fax (204) 474-7532

Teacher Consent Form – Student Survey

Project Title
Rethinking landscapes of learning: the power of place on children's identities.

Principal Investigator
Marie Carey B.Env.D.
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
umcarey7@myumanitoba.ca

Research Supervisor
Dr. Karen Wilson-Baptist,
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
(204) 474-7289
Karen.wilsonbaptist@umanitoba.ca

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

You are invited to be a participant in a research study which I will conduct in April 2014 at École Lorette Immersion in Lorette, Manitoba, titled: Rethinking landscapes of learning: the power of place on children's identities. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture, Department of Landscape Architecture at the University of Manitoba. The research is being conducting under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor (see contact information above) regarding this study.

The purpose of this research study is to engage the students, faculty and community in the schoolyard design process. Working with you, the children's classroom teacher, I will invite the children to take part in a survey about Lorette, their likes and dislikes about the existing schoolyard, and ideas for the new schoolyard design. The survey will contain ten short questions, which can be answered by written response or drawings. The questions can also be discussed as a class, which I may record by hand to add to the data. The survey will be distributed by me, and will occur one time in April 2014. The survey is expected to take no more than fifteen minutes per class. I will collect

the completed surveys at the end of the exercise, which will be used to guide the design process of my practicum (project). Any use of this data in my practicum report will be described using pseudonyms (fake names), and personal identifiers will not be used.

The actual surveys will not be shared, and will be stored in a locked cabinet in my home until December 2015. At this time all documentation will be destroyed. Only copies of the data using pseudonyms will exist after this date. Results of this study will be used in my Master's Practicum, and may also be used in subsequent research articles I write. At the conclusion of the research, only I will have access to any information, which might include any of the children's identification.

In the written report of the practicum, I may refer to your comments or your student's comments. The University of Manitoba requires that permission be sought for the use of any information for the purposes of the research. I am therefore requesting your permission to use the documentation I collect for my Master's Practicum.

Your permission to use as data documentation must be given voluntarily. No consequences will arise from giving or withholding your permission. If you decide to withdraw your consent you are free to do so at any time by contacting me (see above contact information). If permission has not been given, or is withdrawn, no documentation will be used or referred to in my thesis report. There are no known or anticipated risks to you associated with giving consent to participating in this study.

I have informed the school principal, and division superintendent of my intended research, which they have granted me permission to undertake. Should you feel that there are pressures or unanticipated consequences as a result of participating or not, you are free to contact your school principal, Mireille Bazin-Berryman (204-878-4233), Dr. Karen Wilson-Baptist (204-474-7289), or the human ethics secretariat at the University of Manitoba (204-474-7122) to have your concerns addressed.

The aim of this research is to get students, faculty and community involved in the schoolyard design process. Drawing upon this survey research, the students may benefit from the schoolyard design because it will be designed to better meet their needs and interests. If you decide to give consent to participate in this study and for me to use the data for the purposes of my practicum, I will send you a summary of the study if you so desire. A copy of my completed thesis will be left at the school and the school secretary will be informed when it is available to be viewed by people who are interested. The thesis will also be made available online through the University of Manitoba MSpace.

I will be available at your convenience to answer any questions you may have (see contact information above). You may also contact my supervisor, Dr. Karen Wilson-Baptist (see contact information above) or the human ethics secretariat at the University of Manitoba (204-474-7122) to check on ethical approval for this study or to raise any concerns you might have.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification for new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204)474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Thank you for your time and consideration.

Sincerely,

Marie Carey B.Env.D.
Graduate Student
University of Manitoba

Please place a check mark in the corresponding box if you agree with the statement. If you do not agree, leave the box blank.

I have read the details of this consent form. ☐

My questions have been addressed. ☐

I, _____ (print name), agree to participate in this study. ☐

I agree to allow my conversations to be documented. ☐

I agree to be contacted by phone or e-mail if further permission is required after the study has begun. ☐

I agree to have the findings from this study published or presented in a manner that does not reveal my identity. ☐

Do you wish to receive a summary of the findings? Yes ☐ No ☐

How do you wish to receive the summary? Email ☐ Surface mail ☐

Address/e-mail: _____

_____	_____	_____
Participant (print name)	Signature	Date

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Landscape Architecture
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telphone (204) 474-9458
Fax (204) 474-7532

Consent Form – Teacher Survey

Project Title
Rethinking landscapes of learning: the power of place on children's identities.

Principal Investigator
Marie Carey B.Env.D.
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
umcarey7@myumanitoba.ca

Research Supervisor
Dr. Karen Wilson-Baptist,
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
(204) 474-7289
Karen.wilsonbaptist@umanitoba.ca

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

You are invited to be a participant in a research study which I will conduct in March 2014 at École Lorette Immersion in Lorette, Manitoba, titled: Rethinking landscapes of learning: the power of place on children's identities. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture, Department of Landscape Architecture at the University of Manitoba. The research is being conducting under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor (see contact information above) regarding this study.

The purpose of this research study is to engage the students, faculty and community in the schoolyard design process. You are invited to take part in a survey about Lorette, your likes and dislikes about the existing schoolyard, and ideas for the new schoolyard design. The survey will contain ten short questions, which can be answered by written response. The survey will be distributed by the Parents Association Committee (PAC) or me, and will occur one time in March 2014. The survey is expected to take no more than fifteen minutes. Please submit the completed surveys to the PAC or me by April 11th 2014. The surveys will be used to guide the design process of my practicum

(project). Any use of this data in my practicum report will be described using pseudonyms (fake names), and personal identifiers will not be used.

The actual surveys will not be shared, and will be stored in a locked cabinet in my home until December 2015. At this time all documentation will be destroyed. Only copies of the data using pseudonyms will exist after this date. Results of this study will be used in my Master's Practicum, and may also be used in subsequent research articles I write. At the conclusion of the research, only I will have access to any information, which might include any of your identification.

In the written report of the practicum, I may refer to your comments. The University of Manitoba requires that permission be sought for the use of any information for the purposes of the research. I am therefore requesting your permission to use the documentation I collect for my Master's Practicum.

Your permission to use as data documentation must be given voluntarily. No consequences will arise from giving or withholding your permission. If you decide to withdraw your consent you are free to do so at any time by contacting me (see above contact information). If permission has not been given, or is withdrawn, no documentation will be used or referred to in my thesis report. There are no known or anticipated risks to you associated with giving consent to participating in this study.

I have informed the school principal, and division superintendent of my intended research, which they have granted me permission to undertake. Should you feel that there are pressures or unanticipated consequences as a result of participating or not, you are free to contact your school principal, Mireille Bazin-Berryman (204-878-4233), Dr. Karen Wilson-Baptist (204-474-7289), or the human ethics secretariat at the University of Manitoba (204-474-7122) to have your concerns addressed.

The aim of this research is to get students, faculty and community involved in the schoolyard design process. Drawing upon this survey research, you may benefit from the schoolyard design because it will be designed to better meet your needs and your student's needs. If you decide to give consent to participate in this study and for me to use the data from your survey for the purposes of my practicum, I will send you a summary of the study if you so desire. A copy of my completed thesis will be left at the school and the school secretary will be informed when it is available to be viewed by people who are interested. The thesis will also be made available online through the University of Manitoba MSpace.

I will be available at your convenience to answer any questions you may have (see contact information above). You may also contact my supervisor, Dr. Karen Wilson-Baptist (see contact information above) or the human ethics secretariat at the University of Manitoba (204-474-7122) to check on ethical approval for this study or to raise any concerns you might have.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification for new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204)474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Thank you for your time and consideration.

Sincerely,

Marie Carey B.Env.D.
Graduate Student
University of Manitoba

Please place a check mark in the corresponding box if you agree with the statement. If you do not agree, leave the box blank.

I have read the details of this consent form. ☐

My questions have been addressed. ☐

I, _____ (print name), agree to participate in this study. ☐

I agree to allow my survey to be collected. ☐

I agree to be contacted by phone or e-mail if further permission is required after the study has begun. ☐

I agree to have the findings from this study published or presented in a manner that does not reveal my identity. ☐

Do you wish to receive a summary of the findings? Yes ☐ No ☐

How do you wish to receive the summary? Email ☐ Surface mail ☐

Address/e-mail: _____

_____	_____	_____
Participant (print name)	Signature	Date

Consent Form – Online Survey

Project Title
Rethinking landscapes of learning: the power of place on children's identities.

Principal Investigator
Marie Carey B.Env.D.
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
umcarey7@myumanitoba.ca

Research Supervisor
Dr. Karen Wilson-Baptist,
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
(204) 474-7289
Karen.wilsonbaptist@umanitoba.ca

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. If you would like a copy of this consent form for your records you may contact me (see contact information above) or print this page online. Please take the time to read this carefully and to understand any accompanying information.

You are invited to be a participant in a survey research study regarding École Lorette Immersion in Lorette, Manitoba, titled: Rethinking landscapes of learning: the power of place on children's identities. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture, Department of Landscape Architecture at the University of Manitoba. The research is being conducting under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor (see contact information above) regarding this study.

The purpose of this research study is to engage the students, teachers and community in the schoolyard design process. You are invited to take this survey to answer questions about Lorette, your likes and dislikes about the existing schoolyard, and ideas for the new schoolyard design. The survey will contain ten short questions, which can be answered by written or multiple-choice answers. The survey will be available online during February 2014. I will collect the answers and take down the online survey on March 1st 2014, which will be used to guide the design process of my practicum (project). Your responses will be confidential and no personal information or identifying questions will be asked.

If any personal information is shared, pseudonyms will be used in the practicum document and no personal identifiers will be used. The survey data will not be shared, and will be stored in a passcode protected file on my home computer until December 2015. At this time all documentation will be destroyed. Only copies of the data using

pseudonyms will exist after this date. Results of this study will be used in my Master's Practicum, and may also be used in subsequent research articles I write. At the conclusion of the research, only I will have access to any information, which might include any of your identification. SurveyMonkey protects confidentiality by storing the survey responses in password protected electronic formats. Only I will have the password for the survey.

In the written report of the practicum, I may refer to your answers. The University of Manitoba requires that permission be sought for the use of any information for the purposes of the research. I am therefore requesting your permission to use the documentation I collect for my Master's Practicum.

Your permission to use as data documentation must be given voluntarily. No consequences will arise from giving or withholding your permission. If you decide to withdraw your consent you are free to do so at any time by withdrawing from the survey, or by contacting me (see contact information above) before March 31st 2014. If permission has not been given, or is withdrawn, no documentation will be used or referred to in my thesis report. There are no known or anticipated risks associated with giving consent to participate in this study.

I have informed the school principal, and division superintendent of my intended research, which they have granted me permission to undertake. Should you feel that there are pressures or unanticipated consequences as a result of participating or not, you are free to contact the school principal, Mireille Bazin-Berryman (204-878-4233), Dr. Karen Wilson-Baptist (204-474-7289), or the human ethics secretariat at the University of Manitoba (204-474-7122) to have your concerns addressed.

The aim of this research is to get students, teachers and community members involved in the schoolyard design process. Drawing upon this survey research, you may benefit from the schoolyard design because it will be designed to better meet the interests and needs of the community. If you decide to give consent to participate in this study and for me to use the data from your survey for the purposes of my practicum, I will send you a summary of the study if you so desire. A copy of my completed thesis will be left at the school and the school secretary will be informed when it is available to be viewed by people who are interested. The thesis will also be made available online through the University of Manitoba MSpace.

I will be available at your convenience to answer any questions you may have (see contact information above). You may also contact my supervisor, Dr. Karen Wilson-Baptist (see contact information above) or the human ethics secretariat at the University of Manitoba (204-474-7122) to check on ethical approval for this study or to raise any concerns you might have.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification for new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204) 474-7122. You can contact me for a copy of this consent form or print this pave for your records and reference.

Thank you for your time and consideration.

Sincerely,

Marie Carey B.Env.D.
Graduate Student
University of Manitoba

Clicking on the "agree" button below indicates that:

- you have ready the above information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Agree ☐

Disagree ☐

SurveyMonkey

August 28, 2013

SurveyMonkey Inc.
www.surveymonkey.com

For questions, email:
support@surveymonkey.com

Re: Permission to Conduct Research Using SurveyMonkey

To whom it may concern:

This letter is being produced in response to a request by a student at your institution who wishes to conduct a survey using SurveyMonkey in order to support their research. The student has indicated that they require a letter from SurveyMonkey granting them permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the SurveyMonkey platform provided that they abide by our Terms of Use, a copy of which is available on our website.

SurveyMonkey is a self-serve survey platform on which our users can, by themselves, create, deploy and analyze surveys through an online interface. We have users in many different industries who use surveys for many different purposes. One of our most common use cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us at the email address above.

Sincerely,

SurveyMonkey Inc.

285 Hamilton Avenue, Suite 500, Palo Alto, CA 94301 | O: 650.543.8400 | F: 650.289.0335
111 SW 5th Ave, Suite 1600, Portland, OR 97204 | O:503.225.1202 | F: 503.225.1200

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Landscape Architecture
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telphone (204) 474-9458
Fax (204) 474-7532

Consent Form – Design Consultations

Project Title
Rethinking landscapes of learning: the power of place on children's identities.

Principal Investigator
Marie Carey B.Env.D.
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
umcarey7@myumanitoba.ca

Research Supervisor
Dr. Karen Wilson-Baptist,
Faculty of Architecture, Department of Landscape Architecture
University of Manitoba
(204) 474-7289
Karen.wilsonbaptist@umanitoba.ca

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. If you would like a copy of this consent form for your records you may contact me (see contact information above). Please take the time to read this carefully and to understand any accompanying information.

You are invited to be a participant in a design consultation research study regarding École Lorette Immersion in Lorette, Manitoba, titled: Rethinking landscapes of learning: the power of place on children's identities. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture, Department of Landscape Architecture at the University of Manitoba. The research is being conducting under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor (see contact information above) regarding this study.

The purpose of this research study is to engage the students, teachers and community in the schoolyard design process. You are invited to take part in this design consultation and share your thoughts, ideas or concerns out the design iteration. The design consultation will include a presentation with visuals by me followed by a discussion about participants' questions or thoughts. The discussion will be audio recorded and transcribed by me after the session. Any use of this data in my practicum report will be described using pseudonyms (fake names), and personal identifiers will not be used. Anonymity and confidentiality cannot be assured given that participants will be

able to hear what others have to say. Anonymity and confidentiality can only be afforded in the writing up of the findings from these sessions.

The recordings will not be shared, and will be stored in a locked cabinet in my home or in a passcode protected file on my home computer until December 2015. At this time all documentation will be destroyed. Only copies of the data using pseudonyms will exist after this date. Results of this study will be used in my Master's Practicum, and may also be used in subsequent research articles I write. At the conclusion of the research, only I will have access to any information, which might include any of your identification.

In the written report of the practicum, I may refer to your answers. The University of Manitoba requires that permission be sought for the use of any information for the purposes of the research. I am therefore requesting your permission to use the documentation I collect for my Master's Practicum.

Your permission to the documented data must be given voluntarily. No consequences will arise from giving or withholding your permission. If you decide to withdraw your consent you are free to do so at any time by withdrawing from the discussion, or by contacting me (see contact information above) before March 31st 2014. If permission has not been given, or is withdrawn, no documentation will be used or referred to in my thesis report. There are no known or anticipated risks associated with giving consent to participate in this study.

I have informed the school principal, and division superintendent of my intended research, which they have granted me permission to undertake. Should you feel that there are pressures or unanticipated consequences as a result of participating or not, you are free to contact the school principal, Mireille Bazin-Berryman (204-878-4233), Dr. Karen Wilson-Baptist (204-474-7289), or the human ethics secretariat at the University of Manitoba (204-474-7122) to have your concerns addressed.

The aim of this research is to get students, teachers and community members involved in the schoolyard design process. Drawing upon this survey research, you may benefit from the schoolyard design because it will be designed to better meet the interests and needs of the community. If you decide to give consent to participate in this study and for me to use the data for the purposes of my practicum, I will send you a summary of the study if you so desire. A copy of my completed thesis will be left at the school and the school secretary will be informed when it is available to be viewed by people who are interested. The thesis will also be made available online through the University of Manitoba MSpace.

I will be available at your convenience to answer any questions you may have (see contact information above). You may also contact my supervisor, Dr. Karen Wilson-Baptist (see contact information above) or the human ethics secretariat at the University of Manitoba (204-474-7122) to check on ethical approval for this study or to raise any concerns you might have.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your

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Thank you for your time and consideration.

Sincerely,

Marie Carey B.Env.D.
Graduate Student
University of Manitoba

Please place a check mark in the corresponding box if you agree with the statement. If you do not agree, leave the box blank.

I have read the details of this consent form. ☐

My questions have been addressed. ☐

I, _____ (print name), agree to participate in this study. ☐

I agree to allow my input in the discussion to be audio recorded. ☐

I agree to be contacted by phone or e-mail if further permission is required after the study has begun. ☐

I agree to have the findings from this study published or presented in a manner that does not reveal my identity. ☐

Do you wish to receive a summary of the findings? Yes ☐ No ☐

How do you wish to receive the summary? Email ☐ Surface mail ☐

Address/e-mail: _____

_____	_____	_____
Participant (print name)	Signature	Date

APPENDIX C

Surveys

École Lorette Immersion
Student Survey for Playground Design

Name: _____ Grade: _____

1. Do you live in Lorette? (Yes or No)

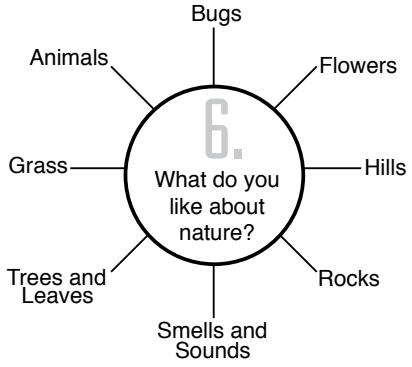
2. Describe Lorette in 3 words.

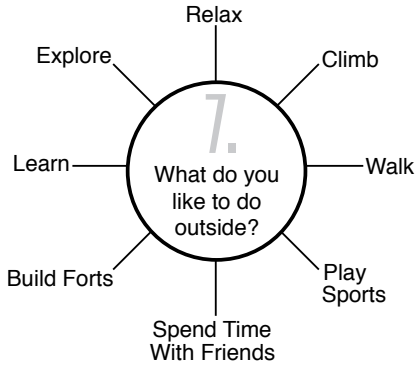
3. What do you like to do in Lorette? (Ex.: Play, Shop, Walk)

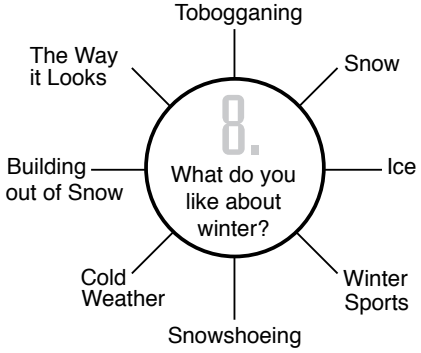
4. What do you like about how Lorette looks? (Ex.: Trees, Flatness, Sky)

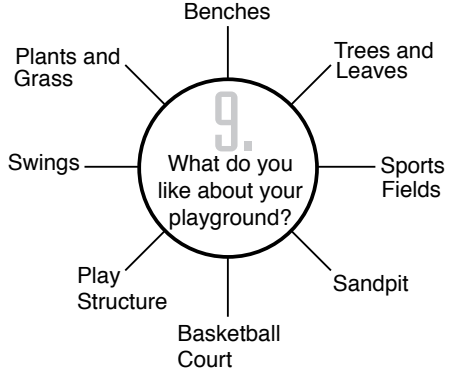
5. What do you like to do in the summertime? (Ex.: Spend time with Friends, Go to Festivals, Play)

Circle your favourite answers.



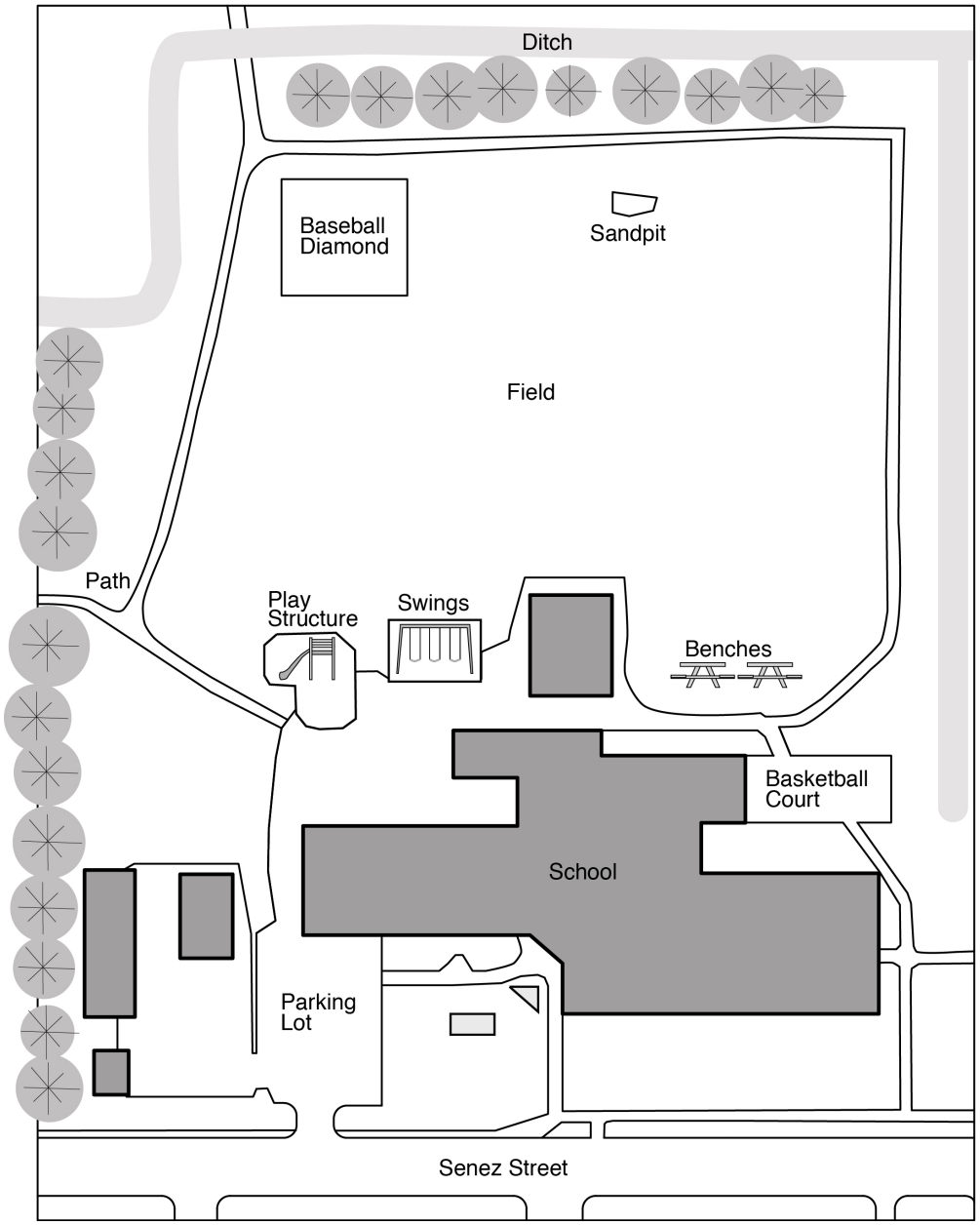






10. What else do you like in your playground? (Write or Draw)

Ecole Lorette Immersion - Map



Principal Investigator Script – Student Surveys

- My name is Marie Carey. I am a Student from the University of Manitoba, and I will be designing a new schoolyard at your school, École Lorette Immersion.
- I am doing this design as a university project. Part of the project is taking what you students say and think about your schoolyard. I think that you all know a lot about fun activities to do in the schoolyard and you may have many new ideas to share.
- I am going to give you some questions to answer together with your teacher and myself. You can write your answers or you can draw them. I even gave you a map of the schoolyard for you to draw or write on if you want. We will talk about our answers and I will write anything we talk about down. After we are done, I am going to collect your answers and drawings.
- I am going to use the answers from the discussion to decide how to design the new schoolyard. I will write about this discussion in my project, but your name will not be written on any of my drawings or in my project document.
- A little while ago, your parents might have talked to you about my project and asked you if you wanted to participate. I am very excited to work with you all, but if you don't want to participate anymore, that is ok too. Just let one of us know at any point.
- Lets begin!

École Lorette Immersion
Staff Survey for Playground Design

Name: _____ Date: _____

What is your role in the school? _____
(grade level / staff position / after school / other)

Email address (optional): _____

1. How do you currently use your schoolyard?

2. What impact do you want the new schoolyard and outdoor classroom to have on your school and community?

3. What impact do you want the new schoolyard and outdoor classroom to have on students and children in the neighborhood?

4. Do you currently take your students outside for teaching and learning?

    a. If so in what subject area?

    b. What grades?

    c. For how long at a time?

    d. During what months of the year?

    e. Any summer programs?

5. How long have you been teaching here/using this schoolyard?

6. Are there any areas in the current schoolyard that are hard to supervise or are unsafe for the students?

7. Is there anything you would like to see in the new schoolyard design?

8. Do you live in Lorette? or Did you ever live in Lorette?

9. What is something that you believe to be positive about Lorette? (Ex.: Community, trees/landforms, space)

10. Any further comments or concerns?

École Lorette Immersion

Parents & Community Survey for Playground Design

Name: _____ Date: _____

Are you a parent, neighbor, community member? _____ _____

Email address (optional): _____

1. Did you know École Lorette Immersion is planning a schoolyard redesign?

    a. Yes

    b. No

2. Do you currently use the schoolyard? When and how?

3. What impact do you want the new schoolyard to have on your school and community?

4. When you think of renovations and improvements to the schoolyard do you have any suggestions or concerns?

5. How long have you been using this schooyard?

6. Do you know anyone attending or working at École Lorette Immersion?

    a. Yes

    b. No

7. Are you interested in participating in the process? _____

    Attending design consultations? _____

    Helping with fund-raising or cleanups? _____

    Other? _____

8. Are there any visual aspects of Lorette that you like? (Ex.: Flatness, Trees, Sky)

9. What do you like to do in Lorette? (Ex.: Shop, Take part in events, Spend time with family/friends)

10. Any further comments or concerns?

APPENDIX D

Letters

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Landscape Architecture
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telphone (204) 474-9458
Fax (204) 474-7532

January 5, 2014

Dear Mireille,

I would like to thank you for allowing me to conduct research in your school for my practicum. I am writing to inform you of the finer details of the practicum and to request your continued support for this research.

This research includes surveys, consultations, and site analysis, which I will begin in February 2014 in École Lorette Immersion. The practicum is titled: Rethinking landscapes of learning: the power of place on children's identities. The research will be used to enhance the conceptual design plan for your school, and will be completed no later than March 31, 2014. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture: Landscape Architecture Department at the University of Manitoba. It is being conducted under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor at (204) 474-7289, e-mail: karen.wilsonbaptist@umanitoba.ca regarding this study.

The purpose of this study is to explore environment-behavior relationships present in Lorette, Manitoba, specifically those pertaining to the École Lorette Immersion schoolyard. The aim is to understand these relationships and the affects on the ways residents of Lorette, Manitoba use and view their local environment. I am interested in the role of a landscape architect in engaging the community and fostering healthy connections between people and the environment, especially those relationships with children. During childhood, people develop their cognitive identities, which allow them to form opinions about who they are in their environment and how they perceive the state of the environment.

The first part of the research will be surveys containing 10 short questions about Lorette, their likes and dislikes about the existing schoolyard, and ideas for the new schoolyard design. Working with the classrooms teachers, I will administer a student survey and invite the children to share their ideas. This will occur once per classroom and should not take more than 15 minutes to administer. Any conversations will be recorded by me or by the classroom teachers. The purpose of this research study is to engage the students in the schoolyard design process. Teachers, staff, parents and community members will also be invited to take a survey containing 10 questions about the existing schoolyard, Lorette, and their expectations for the new schoolyard. All participants will receive consent forms before the research is initiated.

Next, I will conduct site analysis of physical land features at École Lorette Immersion. This will include site grading, photographing the site, and taking any necessary measurements. The analysis will only be conducted while students are not in school.

The final part of the research will be design consultation, where students, teachers, staff, parents and community members will be invited to share their thoughts, ideas or concerns about the design iteration, in a public format. The design consultation will include a presentation with visuals by me followed by a discussion about participants' questions or thoughts. The discussion will be audio recorded and transcribed by me after the session. All participants present at the consultations will be provided with consent forms.

All participants will be informed of the benefits and risks associated with the study. They will be offered the option to withdraw from the study at any time. Documentation of conversations and surveys will be used only after informed and the participants provide signed consent. Any use of this data in my practicum report will be described using pseudonyms (fake names), and personal identifiers will not be used. The research data will be stored in a secure file. All stored data will be destroyed as of December 2015. The results of this study will be made available to you and the participants upon completion.

Feel free to contact me if you have any questions. Thank you for your support in this research.

Regards,

Marie Carey

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Landscape Architecture
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telphone (204) 474-9458
Fax (204) 474-7532

January 5, 2014

Dear Mr. Michael Borgfjord,

I am writing to request permission to conduct research involving students, staff, parents and community members in École Lorette Immersion. This research includes surveys, consultations, and site analysis, which I will begin in February 2014 titled: Rethinking landscapes of learning: the power of place on children's identities. The research will be used to enhance the conceptual design plan for the school, and will be completed no later than March 31, 2014. This research is part of the requirements for a Master of Landscape Architecture degree through the Faculty of Architecture: Landscape Architecture Department at the University of Manitoba. It is being conducted under the supervision of Dr. Karen Wilson-Baptist. You may contact my advisor at (204) 474-7289, e-mail: karen.wilsonbaptist@umanitoba.ca regarding this study.

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Thank you for considering this research proposal. I look forward to your reply.

Regards,

Marie Carey