Urban Darning:

Stitching Squamish through Design

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Landscape Architecture, Landscape Architecture
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Abstract

Urban Darning explores public realm design as a tool for improving pedestrian connectivity and for turning forgotten spaces and edges into places that welcome and invite people to inhabit them. It proposes an urban design framework for future development at the entrance to downtown Squamish. The framework envisions a future where small-scale commercial development extends the existing fabric and urban frontage of the main street downtown further north along Cleveland Avenue.

A gateway community node is proposed where the grid of downtown shifts to meet the turn off from the Sea-to Sky Highway, creating a visual connection for both residents and visitors. Set into a park space the node attempts to mitigate the negative edge effects of railway tracks, while celebrating the town's railway past. Oversized benches, which are set into the decommissioned rail track that runs southward through the site, can be pushed along the rail to create a variety of experiences. Their scale reflects the locomotives, which pass by on the nearby rail line.

The central and western portions of the park reflect the connections between the downtown neighbourhood and the educational district to the north. They imagine a series of playful experiences that would punctuate the walk to and from school. These include a boardwalk, terraced pond seating, and a series of temporal stepping stones which in high rainfall evens would be inaccessible as they are set into the curvature of the infiltration pond.

By using design to stitch Squamish together and darn it into its surrounding landscape at various scales the proposed interventions provide much needed public realm amenity space for the residents of the town. They pique the interest of people traveling along the Sea-to-Sky Highway drawing them into the town itself, and finally provide an urban design framework for future residential and economic development to take place within the town.

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1.0 PROJECT DEFINITION

British Columbia recently established its Climate Action Plan targets for GHG reductions. Each municipality is required to achieve a 33% reduction of GHG emission by 2020 and an 80% reduction by 2050 (Government of British Columbia, 2008).

The government's targets can be difficult to conceptualize and have been described by some as too abstract (Condon, 2010). Nevertheless, there are numerous ways that communities can work towards these goals, such as greener energy sources, vehicle emission reduction and more efficient energy use. Significant and permanent reductions will only be possible, however, if the design, form and layout of new and existing communities is fundamentally reconsidered (Condon, 2010; CABE, 2007a).

Squamish has been experiencing substantial population growth in recent years, and although it has recently slowed due to the economic downturn, it is likely to continue to steadily increase into the future (District of Squamish, 2009). The 2009 Official Community Plan defines the downtown as the centre of the community and advocates improving access into the area through mixed transportation modes as the District grows.

In its current condition the town's urban morphology makes such a task very difficult. The core urban area of the town is bisected by both a railway and a highway meaning that way-finding and legibility are very poor (**see Figure 1.1**). Downtown Squamish feels disconnected and inaccessible. At the same time, the District's planning policies encourage compact development that aims to shift new and existing residents towards using alternative modes of transportation (District of Squamish, 2009).

To understand some of the barriers to a modal shift in Squamish and

examine how urban form might influence transportation choices, I have turned urban design; a field of practice that is concerned with the three-dimensional design of the public realm and sits at the intersection of planning, architecture and landscape architecture (Cuthbert, 2007). Urban design is practiced by all three disciplines with the common goal of transforming "abstract 'space' into humanized 'place'" (Walters & Brown, 2004, p. 79). Current practice seeks to use design to build more robust communities, generate 'sense of place' and encourage more sustainable lifestyles.

The primary aim of this project is to develop an urban design framework that will help 'stitch' downtown Squamish and the surrounding neighbourhoods together in such a way that a modal shift from personal automobile usage to walking and cycling is possible. I propose to use urban design to explore how alterations to the urban fabric, patterns, built form and transportation networks of Squamish might influence travel behaviour and achieve the District's goal of achieving a "balanced transportation system that encourages transit, cycling, pedestrian and other modes of travel" (District of Squamish, 2009 p.71). I will focus specifically on connections to the downtown area because the District has clearly articulated its desire for the area to become a strong focus for development within the community. I have chosen an urban design-driven process because it is only through a cross-disciplinary three-dimensional understanding of the urban fabric and public realm that the types of interventions and connectivity desired and envisioned within the OCP can be achieved.

As part of this project I will explore the development patterns and networks within Squamish. I will investigate local and best practice guidelines that influence the built environment and public realm to develop a thorough understanding of how the current fabric of Squamish came to be and how it might be altered in the future. I will examine these themes through a review of the current literature, precedent studies of best practice cases and physical exploration and analysis of Squamish itself.

Figure 1.1: Squamish's transportation networks
(Adapted from District of Squamish GIS Data)

2.0 PROJECT GOALS

- Develop an urban design framework that helps 'stitch' downtown Squamish and the surrounding neighbourhoods together.

- Enable and encourage more walking and biking in Squamish through alterations to urban fabric, patterns, built form and networks.

- Enhance connections to downtown Squamish to support its development as the focus of the community.

- Encourage sustainable development consistent with the Smart Growth Principles adopted by the District.

Problem Identification

Literature Review

Urban Design Building Blocks

Quality Pedestrian Networks

Building Complete Communities

Precedent Studies

Kitsilano, BC

Newhall, UK

Walthamstow, UK

Site Analysis

Land Use

Connectivity

Network Anaylsis

Existing Urban Fabric

Design Goals

Design Principles

Opportunity Identification

Program Development

Schematic Urban Design

Review and Reflection

Pedestrian Network Design

Review and Reflection

Site Design

Review and Reflection

Final Design Proposal

A Gantt chart showing the Plan of Work with columns: Project Definition, Literature Review, Site Selection, Neighbourhood Analysis, Site Analysis, Precedent Research, Design Principles, Program Development, Connection Identification, Schematic Urban Design, Masterplan Design, Site Design, Detailed Design, Production, Presentation. Rows are months: September, October, November, December, January, February, March, April.

Legend:
- 50% Faculty Presentation
- Midterm Review
- Substantial Review
- Final Presentation

Urban Morphology

Within the disciplines of urban design, landscape architecture, planning and architecture, researchers have developed a significant body of work that explores the interconnected components of urban environments. Since the seminal works of Jane Jacobs (1961), Kevin Lynch (1960) and Gordon Cullen (1961), the design professions have become acutely aware of the need to plan and design for people first (Gehl, 1987). How this is best achieved remains a point for debate. Some designers subscribe to the principles and ideals of different design movements. Two movements that have gained in popularity recently include New Urbanism and Landscape Urbanism. Both profess to have discovered or rediscovered the best ways to approach future urban development. Each has its own method of analysis and its own way of incorporating findings into designs. This section of the literature review focuses on the basic building blocks of urban fabrics that inform contemporary urban design practice, including these two movements.

As part of developing an understanding of the larger fabric of a built environment designers study, "change(s) in the physical form and shape of settlements over time" (Carmona et al., 2010 p. 77). By exploring the changing development patterns in the built environment, urban morphology analysis helps create a clearer picture of how buildings relate to surrounding open spaces and how individual buildings fit into the larger urban environment in terms of scale and organization (Carmona et al., 2010). Such analyses have shown that street patterns tend to be the most enduring element of the public realm, while buildings and individual parcel boundaries are more frequently subject to change and adaptation (Carmona et al., 2010). The use of this type of analysis to examine the urban morphology of Squamish will help to identify how the public realm relates to existing and past urban structures such as the

CN rail lines, highway and buildings. It will also help identify how these structures might be adapted to meet future needs within the community.

Streets as Networks and Streets as Places

Loukaitou-Sideris & Banerjee (1998) argue that as city designers we "…should rediscover the social role of the street as a connector that stitches together and sometimes penetrates the disparate downtown realms" (p. 304). This section explores the design of streets as both places to inhabit and as movement corridors. It considers the historic development influences on street networks and some of the more recent thinking on street redesign strategies. As the movement network within Squamish is so heavily automobile dominated, it specifically considers current approaches that advocate re-designing streets for a more balanced range of users.

Streets, blocks and travel networks develop around movement patterns. Historically, walking influenced the forms and patterns of urban areas, resulting in the dense compact cores of many pre-industrial cities (Barton, et al., 2010). More recently, urban designers have suggested a return to this type of compact pedestrian oriented development and often focus on the concept of communities built around 5-minute walking radius (Condon, 2010; Biddulph, 2007). Since the turn of the century cities have been growing outwards, often over larger distances, first as a result of the lands that streetcar and commuter rail lines opened up for development and, after WWII, as a result of increasing automobile ownership (Condon, 2010). These shifts had a profound impact on the form and shape of modern towns and cities. The personal automobile allowed for the development of travel patterns and urban fabrics that are difficult — if not impossible — to navigate by foot. It is these same fabrics and networks that many municipalities are now trying to 'retrofit' to accommodate and encourage pedestrian travel (Dunham-Jones & Williamson, 2008).

Developing a connected and functional pedestrian network that is well integrated into the automobile dominated street network remains a challenge in many municipalities, as **Figure 5.1** demonstrates. Decades of engineering for automobile safety has created an environment that is difficult to navigate and hostile to pedestrians. Carmona (2010) argues that this is closely associated with the differing purposes behind pedestrian and vehicular movement systems. While, "car-based movement is pure circulation; pedestrian movement is circulation but also permits economic, social and cultural exchange" (p. 201). The same authors who criticize the dominance of automotive transportation quickly point out however, that this does not mean we should exclude cars entirely (Carmona et al., 2010; Duany et al., 2000; DfT, 2007). Instead,

Consider how best the site can be connected with nearby main routes and public transport facilities

The typical cul-de-sac response creates an introverted layout, which fails to integrate with the surroundings

A more pedestrian-friendly approach that integrates with the surrounding community links existing and proposed streets, and provides direct links to bus stops

This street pattern then forms the basis for perimeter blocks, which ensure that buildings contribute positively to the public realm
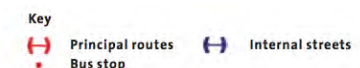
Key

Principal routes   Internal streets
Bus stop

Figure 5.1: Understanding, analyzing and connecting with existing street networks (Llewelyn-Davies, 2000)
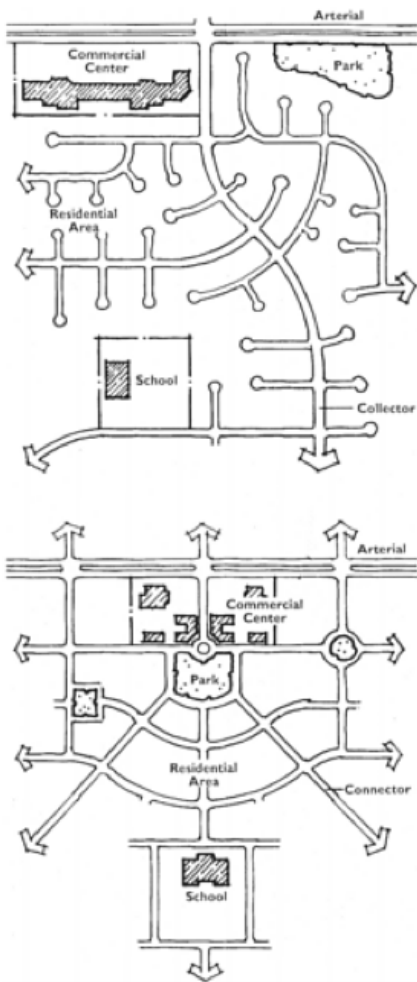
Figure 5,2: A dendritic or tree-like street network and a connected street network (Neal, 2003)

Principle: A highly connective street and path network provides opporunties for diverse route choices and supports different travel modes.

they argue for networks that are planned more equally and where, in important pedestrian zones, vehicular speeds are lowered and design interventions redistribute priorities (Carmona et al., 2010; DfT, 2007; Barton et al., 2010). The argument in favour of lower design speeds is based on the premise that standardized road networks, although designed to be 'safer', actually encourage higher speeds because of the familiarity and the false sense of security they engender in drivers.

In order to counter the automotive dominance of urban environments many designers and planners stress the importance of increasing the connectivity of networks through the urban fabric. The New Urbanists are strong advocates of the return to connected street networks and much of their work focuses on battling the dendritic street network that dominates North American suburbs (Duany et al., 2000). In the UK, government policy encourages local planning authorities and designers to consider connectivity on all new projects (DfT, 2007). At the same time, it is important to identify the elements that make up a successful connected network. While grid patterns invariably have higher connectivity than dendritic or tree-like ones there is not only one type of grid (Condon, 2010, Marshall, 2005). Grids can take many forms and do not always need to be the gridiron pattern that is familiar in North American towns and cities.

The reason a connected street network is preferable is that it provides choice, in particular route choice. Choice in urban design implies diversity; diversity of transportation options, built form, use and experience (Carmona et al., 2010). Therefore it is imperative that designers 'design for diversity' and create opportunities and reduce barriers to choice through their work. Marshall (2005) refers to this as the difference between connectivity and complexity. The key to achieving a connected and diverse network:

> "…is a morphological pattern that supports diversity. If chosen to connect up the different spaces and networks constituting the public realm, the morphology will provide the framework within which – over time – diversity and choice will flourish. Without appropriate morphology – a semi-lattice rather than a tree – this will be impeded from the outset" (Carmona et al., 2010 p. 103).

In order to achieve this, the public space network needs to support multiple users and uses. It needs to be able to accommodate both social spaces and movement spaces (Carmona et al, 2010). The State of Oregon's 1999 publication, *Main Street…when a highway runs through it: A Handbook for Oregon Communities* speaks directly to this issue. The handbook sets out design and planning guidelines for communities where the main street is also a state highway. It

emphasizes the importance of retaining active pedestrian uses and argues that when priority is given to the automobile these uses often disappear eradicating the vitality that made the main street a destination (Oregon Department of Transport, 1999). This sentiment is echoed in the more recent *Manual for Streets* (2007) published by the United Kingdom's Department for Transport. It suggests that a 'Place and Movement Hierarchy,' as shown in **Figure 5.3**, is devised in order to help design and plan for interconnected street networks. Rather than basing street design on modern highway engineering standards, which seek to categorize based on vehicle volumes, the new models propose a design strategy that is that based on intended use and focus. Some streets will invariably be used to move vehicles, while on others vehicles may be discouraged in favour of enhancing sense of place. There will always be overlap between different modal networks, but the key is to ensure the overlap achieves diversity rather than allowing the one user group's transportation choices to dominate.

This project will draw from this body of work to develop a movement network for Squamish that balances the priorities of different users while focusing on enhancing the pedestrian environment.

Pedestrian Networks

Closely aligned with the process of designing streets as places is designing them to be integral components of wider pedestrian networks. Improving pedestrian networks and experiences has increasingly become a focus across the disciplines involved in urban design because of "the desire to encourage non-motorized travel to reduce vehicle-miles and pollution emissions, and more recently to improve public health through increase physical activity in the form of walking" (Parks & Schofer, 2006 p. 250). This is reflected in a growing body of literature that attempts to quantify the effects of the physical environments on walking patterns and identify the type of physical environment most likely to encourage walking (Ewing & Handy, 2009; Lin & Moudon, 2010; Parks & Schofer, 2006; Sohn, et. al., 2012; Southworth, 2005). In this particular body of literature, significant emphasis is placed on the importance of destinations in encouraging people to walk (Ewing & Handy, 2009; Southworth, 2005).

Although a worthwhile final destination obviously influences walking patterns; the less tangible influence is the journey itself. "Pedestrian travel is rarely single-purpose: in going from one place to another, we stop to buy a newspaper or a bottle of milk; talk to a neighbour, colleague or friend; window shop; have a drink at a pavement café; or, more simply, enjoy a view or [people] watch" (Carmona et. al., 2010 p. 202) others. Gehl (2010) and Jacobs (1961) highlight the importance

Figure 5.3: Typical road and street types in the place and movement hierarchy (Manual for Streets DfT, 2007)

Principle: Prioritize pedestrians when planning balanced movement networks.

Principle: Destinations have the most significant impact on walking behaviour

Principle: Connecting key destinations accommodates necessary activities and trips.

Principle: People attract more people; design sidewalks and paths as social places.

Principle: 5 C's for Planning High Quality Pedestrian Networks
- Connected
- Convenient
- Comfortable
- Convivial
- Conspicuous

Principle: Design for 'protection, comfort, and delight' in the public realm.

of sidewalks as social meeting spaces within a community, pointing out that walking is one of the major activities that can turn a street from a road into a place. Jan Gehl (2010) argues that when sidewalks or pedestrian pathways are occupied by people they not only give 'space' an identity, they also attract more people. By changing the pedestrian experience – the journey – designers can begin to influence travel behaviour choices. The question therefore becomes: 'what can be done to ensure pedestrian networks are well designed to facilitate and encourage people to use them?'

Various authors have identified criteria that should be met in order to achieve a quality pedestrian environments (Gehl, 2010). The five C's: connected, convenient, comfortable, convivial and conspicuous, put forward by Barton et al., (2010) are particularly instructive because they focus on planning for high quality pedestrian networks; the focus of this study. Each identifies an important experiential quality. 'Connected' emphasizes that successful open spaces do not exist in a void; they are integrated parts of a larger network. 'Convenient' relates to the need for paths that are direct and connect important destinations. Although people may be willing to walk, they are much less likely to do so if the route is circuitous (Gehl, 2010). 'Comfortable' speaks to the design of the pathways themselves and how secure and relaxed people feel about using them. Are they wide enough for two people to walk abreast and still allow someone to pass? Do they feel safe at night? 'Convivial' reinforces the earlier theme of designing networks as social places, as well as, movement corridors. It speaks to the need for seating places, gathering spaces and a range of uses that support social interactions. Finally, 'conspicuous' refers to the legibility of the network. It reminds designers to consider how easily users can navigate through it, especially if they are not familiar with the area.

Complete Communities

The existing urban fabric and public realm in Squamish lacks the amenities that not only make compact living attractive but create a vibrant and active streetscape. For compact sustainable living to be a real possibility, the urban fabric Squamish needs basic amenities close to home and a quality public realm. Jan Gehl's most recent book, *Cities for People* (2010), details the qualities that make the public realm inviting and contribute to the creation of quality public places. His twelve qualities for good public spaces are organized into three themes; 'protection', 'comfort' and 'delight'. He argues that they also need to be addressed in this order. If people feel unsafe crossing the street or feel threatened, they will not adopt and inhabit a space, no matter how well it is deigned. Designing for 'comfort' is the second step in Gehl's process. By providing opportunities for activities such as walking, sitting, talking

and playing, Gehl suggest a place will invite people to use it. Finally, 'delight' focuses on the sensory experience of the place. Is it pleasant, aesthetically pleasing and human-scaled? The full list of Gehl's criteria is shown in **Figure 5.4**. They indicate where designers might look for opportunities to capitalize on existing amenities, but also speak to the need for integration of individual designs into a wider urban framework that prioritizes the human-scaled experiential qualities of a place.

Yet, the design and building of a quality public realm can only achieve so much. Without destinations people have little reason to venture into the public realm. Gehl (2010) highlights the reasons why people inhabit or are drawn to particular places. He specifically differentiates between necessary and optional activities; pointing out that the former will occur regardless of the quality of the surrounding environment, while the latter is significantly influenced by it (Gehl, 2010). This suggests that if a high quality public realm can be well integrated with the amenities that influence necessary activities, such as grocery shopping, a higher proportion of individuals are likely to use it. The Urban Task Force

Principle: Necessary activities will occur regardless of the quality of the public realm. Optional activities are easily afffected by the surrounding environment.

Protection	PROTECTION AGAINST TRAFFIC AND ACCIDENTS — FEELING SAFE · Protection for pedestrians · Eliminating fear of traffic	PROTECTION AGAINST CRIME AND VIOLENCE — FEELING SECURE · Lively public realm · Eyes on the street · Overlapping functions day and night · Good lighting	PROTECTION AGAINST UNPLEASANT SENSORY EXPERIENCES · Wind · Rain/snow · Cold/heat · Pollution · Dust, noise, glare
Comfort	OPPORTUNITIES TO WALK · Room for walking · No obstacles · Good surfaces · Accessibility for everyone · Interesting façades	OPPORTUNITIES TO STAND/STAY · Edge effect/ attractive zones for standing/staying · Supports for standing	OPPORTUNITIES TO SIT · Zones for sitting · Utilizing advantages: view, sun, people · Good places to sit · Benches for resting
	OPPORTUNITIES TO SEE · Reasonable viewing distances · Unhindered sightlines · Interesting views · Lighting (when dark)	OPPORTUNITIES TO TALK AND LISTEN · Low noise levels · Street furniture that provides "talkscapes"	OPPORTUNITES FOR PLAY AND EXERCISE · Invitations for creativity, physical activity, exercise and play · By day and night · In summer and winter
Delight	SCALE · Buildings and spaces designed to human scale	OPPORTUNITIES TO ENJOY THE POSITIVE ASPECTS OF CLIMATE · Sun/shade · Heat/coolness · Breeze	POSITIVE SENSORY EXPERIENCES · Good design and detailing · Good materials · Fine views · Trees, plants, water

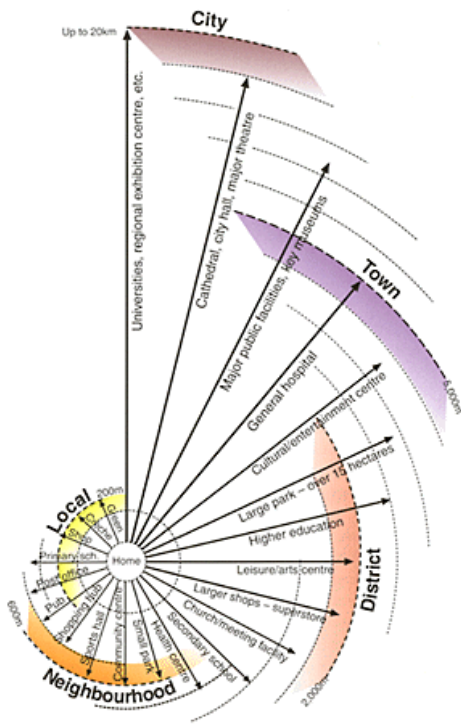**Figure 5.4:** Jan Gehl's 12 criteria for quality public spaces (Gehl, 2010)

Figure 5.5: Amenity distance wheel (Carmona, et al. 2010 - Originally from Urban Task Force, 1999)

Use	Population
Corner Store	2000-5000
Doctor's Office	2500-3000
Primary School	2500-4500
Bar/Pub	5000-7000
Post Office	5000-10,000
Local Shopping Centre	5000-10,000
Youth Club	7000-11,000
Community Centre	7000-15,000
Secondary School	7000-15,000
Church	>9000
Library	>12,000

Figure 5.6: Estimated population base requirements for different uses (Biddulph, 2007 p. 133 - Originally from Barton et al., 1995 p. 133)

(1999) advocated using amenity distance wheels, to illustrate out how close different amenities are to an existing or proposed community, to help understand how they are served (see **Figure 5.5**). At the same time, many urban designers advocate for planning and designing communities within a 5 to 10-minute walking radius of key services and transit nodes (Barton, et al., 2010 Biddulph, 2007; Condon, 2010; Gehl, 2010). Together these two tools provide a useful framework for analyzing and assessing current and proposed communities.

Tied to the need for amenities and services close to home, are the commercial needs of those services providers. For shops and services to be viable, they need a regular consumer base. Different services and amenities have different catchment requirements (see **Figure 5.6**). If the population base and densities do not support proposed uses, commercial spaces will remain vacant (Biddulph, 2007). Although the existing fabric in Squamish perpetuates and encourages low-density uses that would make designing these types of communities difficult, current and recent planning policies and guidelines developed by the District suggest that interest in more sustainable compact forms of development is increasing. These include the *Downtown Waterfront Concept Plan* (2005), the *Sub Area Plan for the Waterfront Landing Neighbourhood* (2006) and *the Squamish Downtown Neighbourhood Plan* (2008). Unfortunately, the 2008 financial downturn upset the real estate market in Squamish and slowed the momentum that drove these plans. It is possible, however, that through targeted design interventions that improve the public realm and pedestrian networks in Squamish, key development projects can be kick started. This assertion is supported by research in both the United States and the United Kingdom which has found that the monetary value of properties significantly increases when investments are made in quality urban design and public realm interventions on adjacent sites thus making redevelopment more viable (CABE, 2001; 2004; 2007; Carmona, et.al., 2002; Jerke, et. al., 2008).

Building on this research, this project will seek to develop an integrated high quality pedestrian network that supports and is complemented by future compact development in Squamish.

6.0 PRECEDENT STUDIES

The precedents analyzed and included in this section were chosen because they exhibited and dealt with one or more of the challenges posed by this design project. These included:

- Adjacency to transportation infrastructure;
- Prioritization of pedestrians over automobiles in the public realm;
- High quality walkable pedestrian experience;
- Density at a scale that is in keeping with the character of Squamish;
- Proximity and connection to local amenities; and
- Integration into existing fabric and street network.

Located on Vancouver's West Side, Kitsilano is a neighbourhood well known for its leafy streets and vibrant commercial corridors. Although typologically the neighbourhood appears to be made up largely of single detached housing as shown in **Figure 6.2**. In fact the opposite is true. Part of the success of the neighbourhood is that the housing is so diverse. Multi-family units are cleverly designed to look like single-family-detached houses to fit into the overall character of the area, as shown in **Figure 6.1**. This not only provides a diverse range of housing to different people's needs, it also means that many of the buildings are varied architecturally.

Kitsilano is well known for being a pleasant neighbourhood to stroll through, either on the residential streets, or along its commercial corridors, Broadway and 4th Avenue. This case study examined a number of street sections to determine what design factors might influence this. The first design element that becomes apparent is the abundance of green. Trees and planting not only line the street, they act as buffers between the pedestrians and the cars. As **Figure 6.3** shows the vegetated strips along Broadway significantly reduce the impact of the busy 4-lane road. Mature trees provide shade and a sense of enclosure. Secondly the wide sidewalks provide ample room for passing and for walking side-by-side. **Figure 6.3** also illustrates two of the ways that the design of the neighbourhood has made it feel more human-scaled and safer for pedestrians. Not only do the vegetated bulb-outs provide greenery, they also narrow the crossing distance for pedestrians between two sidewalks. In addition busy non-signalized crossings are demarcated with a painted white brick pattern that alerts drivers that pedestrians may be crossing, while at the same time letting pedestrians know the safest place to cross. Finally one of the most important elements is not something that has been expressly designed, it is the visual interest created by the variety and diversity along the street. On the residential streets each house and garden is slightly different. On the commercial streets, narrow frontages allow for changing window displays and signage every few metres.

Design Take-aways:
1. Use vegetation to buffer traffic.
2. Ensure sidewalks are wide enough to accomodate multiple users and uses.
3. Clearly mark crossings and design safe crossing points.
4. Provide variety and visual interest.

One Dwelling Unit   Three Dwelling Units   Storage (or other particular use)
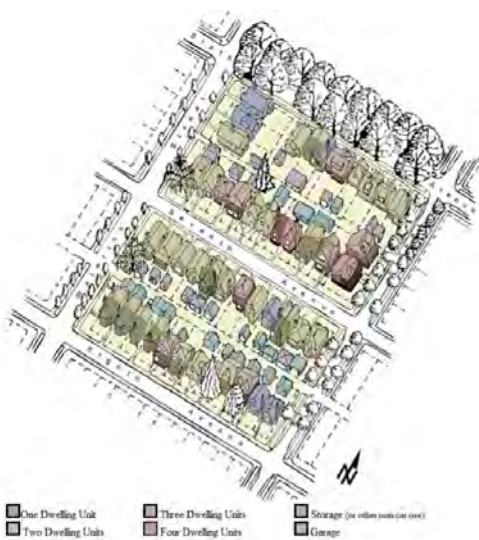Two Dwelling Units   Four Dwelling Units   Garage

Figure 6.1: Housing typologies of a typical Kitsilano block (Source: DCS)
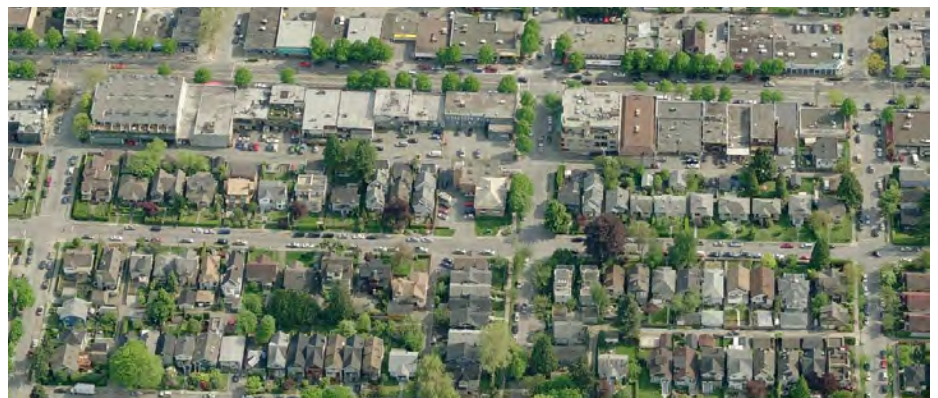

Figure 6.2: Birds eye view of a typical Kitsilano block (Source: Bing Maps)

Figure 6.3: Sectional analysis of typical Kitsilano streets (Image Source: Google Streetview)
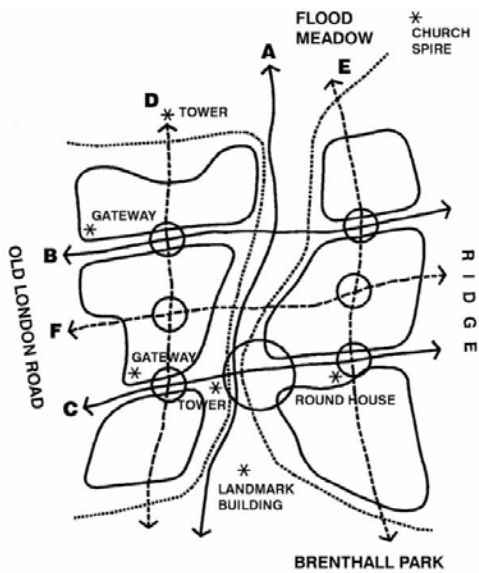
Figure 6.4: Main movement corridors and areas within Newhall (Source: Evans, 2003)

Designed by REAL (Roger Evans Associates Limited), Newhall is a suburban extension to Harlow New Town. At full completion it is expected to have a population of approximately 6,000 people (Evans, 2003). It has been designed and built in phases within the framework of an overriding masterplan. The plan used design codes to formalize the principles set out for the project. These principles were:

Conserve natural assets:

The designers identified that natural and green spaces become more significant in higher density developments and retained much of the site's original greenspaces. In addition the site was laid out so that each residence is no further than 60 metres away from the green network (Evans, 2008).

Create a legible street structure:

The scheme placed emphasis on developing a hierarchy of streets including mews, lanes, and avenues, designing these elements before consideration of traffic standards. This was done in order to create a network that was "first and foremost designed as a safe, convenient and pleasant public realm" (Evans, 2003).

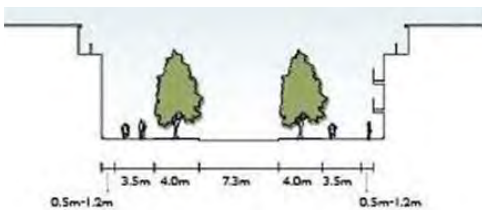**Figure 6.5:** Plan for Newhall (Source: CABE, 2011)

Figure 6.6: Newhall Street Section (Source: CABE, 2011)

Figure 6.7: Detail of Phase 1 masterplan for Newhall (Source: Evans, 2003)

Locate public focal points within the plan:

The design includes a hierarchy of spaces, with larger squares and greens located an the intersections of major routes and more informal block scale squares located throughout near minor intersections (Evans, 2003).

Define streetscapes and character areas:

The designers stressed the importance of design and detail throughout the public realm to ensure a consistency and quality that would give the scheme coherence (Evans, 2003). Throughout trees have been placed in the middle of roads and junctions to provide informal community gathering spaces. They are used as a tool to give drivers clues that they are entering an area where the pedestrian has priority (Evans, 2003).

Develop housing typologies for appropriate locations:

The masterplan for the site carefully considered the appropriateness of different typologies of building rather than densities. Although the results may have been the same, the approach let the designers create distinct characters for each area through the typologies employed (Evans, 2003).

Local distinctiveness:

Newhall is known for being a high quality example of a modern suburb. The designers were careful not to reproduce vernacular architectural forms; instead they adhered to a colour and material palette drawn from the local surroundings (Evans, 2003). This palatte helped to give the scheme an overall sense of cohesion.

Housing mix and live-work accommodation:

The designers sought to provide a range of housing to accommodate residents changing needs throughout their lives, making the community more diverse and varied (Evans, 2003).

Figure 6.8: Images of Newhall (Source: CABE, 2011)

Design Take-aways:
1. Incorporate existing natural amenities into the design and provide access to them.
2. Provide different housing types to meet resident's needs throughout their lives.
3. Design for neighbourhoods with their own identity while maintaining local character.
4. Provide meeting and gathering spaces of various scales throughout.
5. A high quality public realm supports higher density living.
6. Don't forget the parking. Design for it from the start so that it does not take over the public realm.

Figure 6.9: Birds eye view of Phase 1 and 2 masterplan (Source: Evans, 2008)

Figure 6.10 side labels (top to bottom):
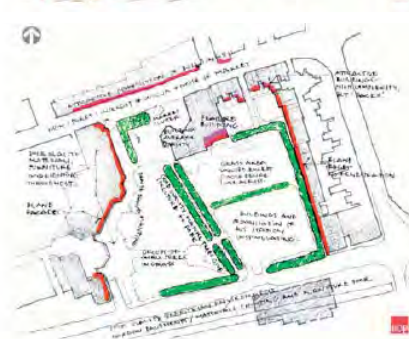Pedestrian Movement Restricted
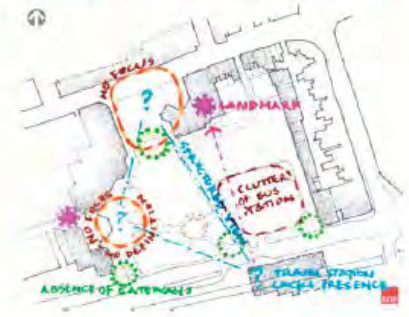
Lack of Local Identity

Safety and Security Concerns

Limited Range of Activities

Poor Quality Environmnet

Designed by Building Design Partnership (BDP) this project was part of a response by the local council to revitalize the town centre. "The poor environment had become linked to the decline of the borough's primary town centre, with dwindling sales, vacant shop units, poor investment and an increase in crime and antisocial behaviour" (BDP & LB of WF, 2006). Walthamstow lacked a strong centre and the project sought to create one by linking the recently improved transit hub with the retail heart using a public square and garden. As **Figure 6.11** shows the site acted as an anchor for the high street as a whole, connecting it into the larger transit network (BDP & LB of WF, 2006). By focusing on greater pedestrianization, improved lighting and signage the scheme has been an overall success (CABE, 2011; BDP & LB of WF, 2006). It has attracted further investment to the area and has improved safety (BDP & LB of WF, 2006).

The designers identified five major constraints with the existing site including:

- restricted pedestrian movement;
- lack of local identity;
- safety and security concerns;
- limited range of activities; and
- poor quality environment.

Each of these constraints was diagramed developing a spatial understanding of the site's weaknesses and opportunities (shown in **Figure 6.10**).

The stated objective of the scheme was "to create a public space that encourages activity throughout the year and acts as a new heart to the

The Town Square and Gardens

The High Street, encompassing the Street Market and Rosebank Villas pedestrianisation

The Bus Station

The Underground Station

Figure 6.10: Key constraints analysis of WTC (Source: BDP & LB of WF, 2006)

Figure 6.11: Figure ground and functional location of Walthamstow Town Centre Revitalization (Source: BDP & LB of WF, 2006)

Town Centre with an environment that is stimulating, safe and accessible to all" (BDP & LB of WF, 2006). Using this objective and the identification of the key constraints of the site the the following four principles were developed to help guide the design:
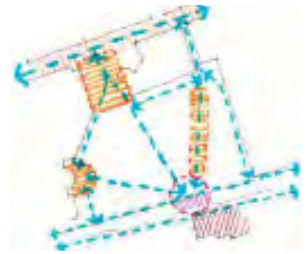
- easy access through the park;
- an exciting and recognizable layout;
- a feeling of safety… 24 hrs a day; and
- plenty to do… all year round.
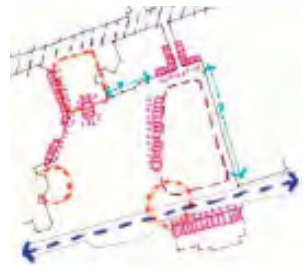
Once again these principles were diagramed and spatialized (see **Figure 6.13**). A spatial order and program was developed for the site that took advantage of the site's location, capitalized on key views and desire lines and guided the high levels of pedestrian traffic passing through (see **Figure 6.14**). The designers used the main desire lines across the site as the basis for their geometric layout (see **Figure 6.12**). The redesign incorporated and improved upon some of the exiting site amenities, such as the children's play area, while adding new programming to the busy area. The square provided a hard surface where events could be held, supported by new lighting and seating (BDP & LB of WF, 2006).

Figure 6.12: Masterplan for Walthamstow Town Centre Revitalization (Source: BDP & LB of WF, 2006)

Figure 6.13: Design principles for Walthamstow (Source: BDP & LB of WF, 2006)
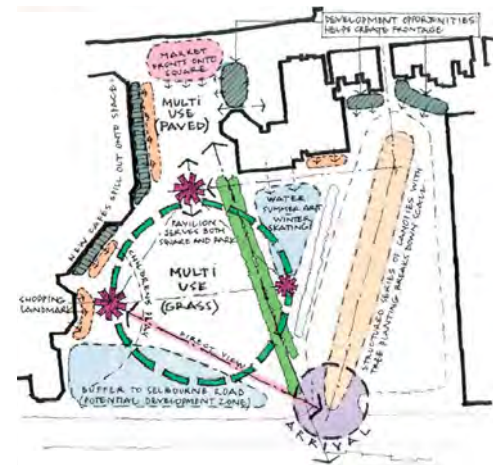
Figure 6.14: Spatial order of WTC Revitalization (Source: BDP & LB of WF, 2006)

Design Take-aways:
1. Consider the larger implications for the surrounding neighbourhood.
2. Connect key destinations and amenities clearly and directly.
3. Design multi-functional spaces for year-round use.
4. Provide meeting and gathering spaces of various scales throughout.
5. Use planting to reinforce important routes.
6. Incorporate good lighting.

Figure 6.15: Walthamstow Town Centre before and after redevelopment (Top BDP & LB of WF, 2006; Bottom: Bing Maps; Photographs: CABE, 2011)

7.0 Design Principles

Based on my review of the literature I have chosen to adopt Barton, Grant and Guise's five principles for high quality pedestrian networks to guide and inform my own design process. Focusing on pedestrian networks, this project will explore how the public realm can be used to achieve the goals of this project and enhance connectivity to and from downtown Squamish. **Figure 7.1** illustrates the relationship between the design principles and strategies I hope to us to achieve the goals of the project

PROJECT GOALS

- Develop an urban design framework that helps 'stitch' downtown Squamish and the surrounding neighbourhoods together.
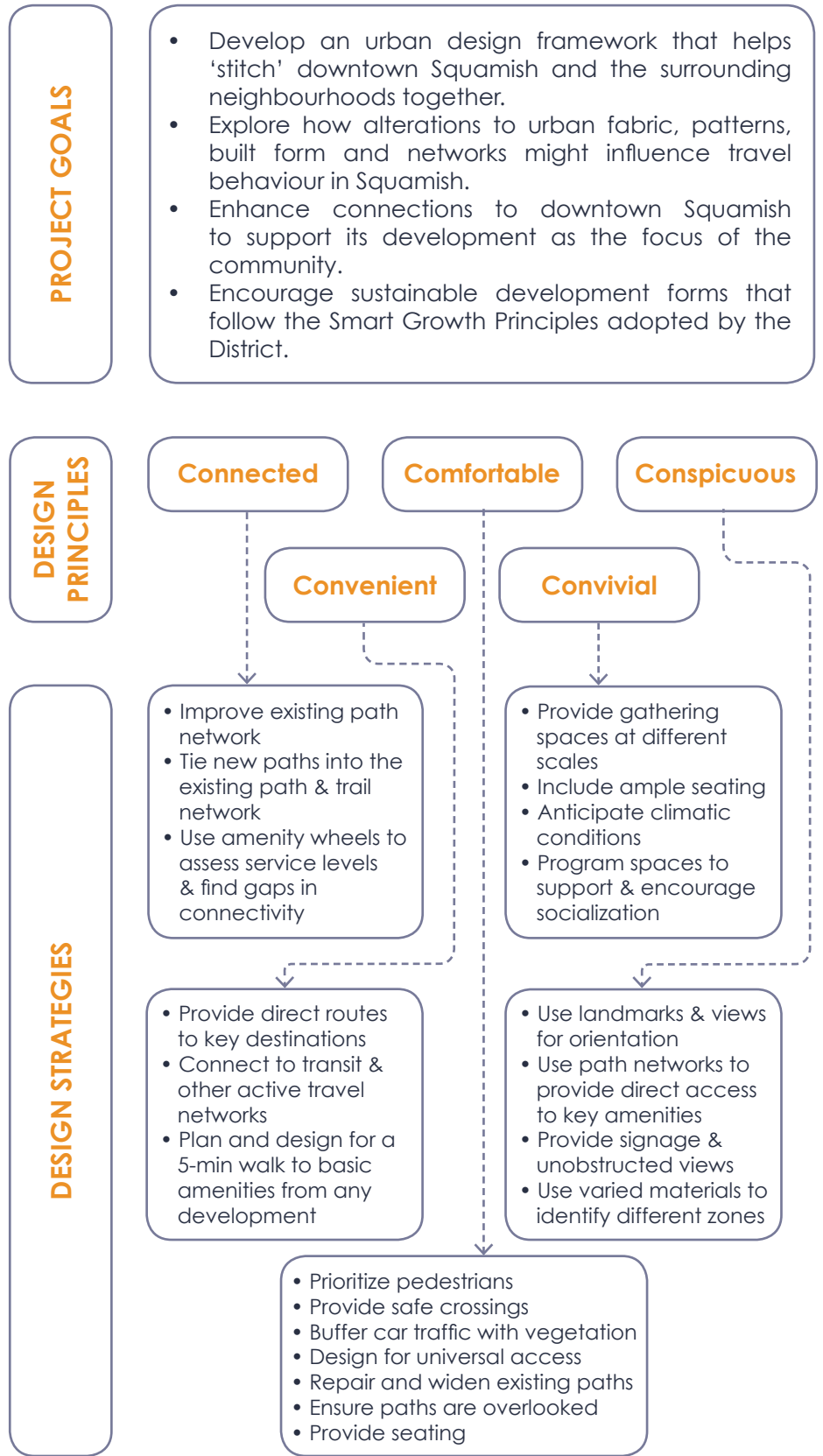- Explore how alterations to urban fabric, patterns, built form and networks might influence travel behaviour in Squamish.
- Enhance connections to downtown Squamish to support its development as the focus of the community.
- Encourage sustainable development forms that follow the Smart Growth Principles adopted by the District.

DESIGN PRINCIPLES

Connected   **Comfortable**   **Conspicuous**

Convenient   **Convivial**

DESIGN STRATEGIES

- Improve existing path network
- Tie new paths into the existing path & trail network
- Use amenity wheels to assess service levels & find gaps in connectivity

- Provide gathering spaces at different scales
- Include ample seating
- Anticipate climatic conditions
- Program spaces to support & encourage socialization

- Provide direct routes to key destinations
- Connect to transit & other active travel networks
- Plan and design for a 5-min walk to basic amenities from any development

- Use landmarks & views for orientation
- Use path networks to provide direct access to key amenities
- Provide signage & unobstructed views
- Use varied materials to identify different zones

- Prioritize pedestrians
- Provide safe crossings
- Buffer car traffic with vegetation
- Design for universal access
- Repair and widen existing paths
- Ensure paths are overlooked
- Provide seating

Figure 7.1: Project Goals, Principles and Strategies

8.0 SITE DESCRIPTION

Planning Context

The current population forecast for Squamish projects that the population will increase from 2006 levels of approximately 15,000 to 33,000 in 2031 (The District of Squamish, 2009). The District of Squamish *2009 Official Community Plan* (OCP) put forward a vision for the future of the community as it grows to accommodate this increase to be a leader in "social integrity, economic development, and environmental sustainability" (District of Squamish, 2009 p. 11).

In anticipation of these substantial population increases and in line with their vision for the future, the District adopted a 'Neighbourhoods, Greenways and Downtown First Concept' as part of the *2005 Growth Management Study*. This concept was organized into five elements:

1.   Compact Urban Form
2.   Protected Areas, Ecological Greenways and Blueways System
3.   Greenway System, Commuter and Recreational Trails
4.   Downtown First
5.   Mixed-Use Neighbourhood Nodes

Together with the Smart Growth Principles (see **Figure 8.1**), adopted by Council as part of the Smart Growth on the Ground planning process, these elements helped form the growth management strategies for the community and were incorporated into the OCP. The OCP set out a number of guiding principles, to help support this strategy; one of which, Principle 5: Transportation Choice, is a core focus of this proposal. It states that:

> The District will work towards providing a balanced transportation system that encourages transit, cycling, pedestrian and other modes

Smart Growth on the Ground Principles Adopted by the District of Squamish.
1.   Each community is complete
2.   Options to the car are emphasized
3.   Work in harmony with natural systems
4.   Buildings and infrastructure are greener, smarter and cheaper
5.   Housing meets the needs of the whole community
6.   Jobs are close to home
7.   The spirit of the community is honoured
8.   Everyone has a voice

Figure 8.1: SGOG Principles (District of Squamish, 2009 P. 25)

Figure 8.2: Bus Routes (Adapted from District of Squamish GIS Data)

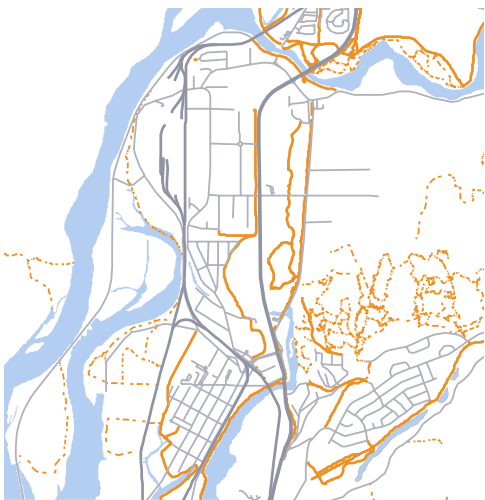**Figure 8.3:** Commuter Bike Network (Adapted from District of Squamish GIS Data)

Figure 8.4: Primary and Secondary Trails (Adapted from District of Squamish GIS Data)

of travel throughout the municipality that minimize greenhouse gas emissions.' (p.71)

This project will consider how the design of the built environment and multi-modal networks can be used to support the District's vision and enhance connectivity within the community.

Existing Networks

After identifying the lack of strong visual and physical connections between downtown Squamish, the town's alternative transportation networks were examined to identify gaps in service levels (see **Figures 8.2, 8.3 & 8.4**).

Upon initial examination, the bus network in Squamish appears to be quite extensive as it runs routes that service the vast majority of the community, as shown in **Figure 8.2**. But, on closer examination it proves to be woefully inadequate as a reliable means of transportation. Three buses run three different routes, once an hour (District of Squamish, 2011). Depending on such a service requires significant pre-trip planning and does not allow for spontaneous travel decisions. In addition, the District's recent 2031 Multimodal Transportation Plan (2011) notes that the service runs at a significant loss and explains that the District is in talks with BC Transit to determine the future of the service.

Squamish has a large mountain and trail biking community (Turnock, 2012). It is therefore unsurprising that it has an extensive commuter network as well (see **Figure 8.3**). Similarly the trail network in Squamish successfully connects residents from the different neighbourhoods directly to the rich natural landscape that surrounds the community (see **Figure 8.4**). Noticeably absent from both networks are designated connections into downtown (District of Squamish, 2009). These networks appear to require users to use on the auto-oriented and auto-dominated road network to connect to downtown.

The proposed project will focus specifically on improving the pedestrian network connecting directly to and from downtown Squamish through public realm interventions. Focusing on how connections to and from the downtown can be improved to better support a modal shift away from personal automobile use, is an good test case for how the District's large goal for the community as whole might be achieved. As the most urban part of the Squamish and the area where the District plans to focus higher density development (District of Squamish, 2009) the area is also an ideal locations for the types of amenities that support a high quality public realm as identified in the literature review.
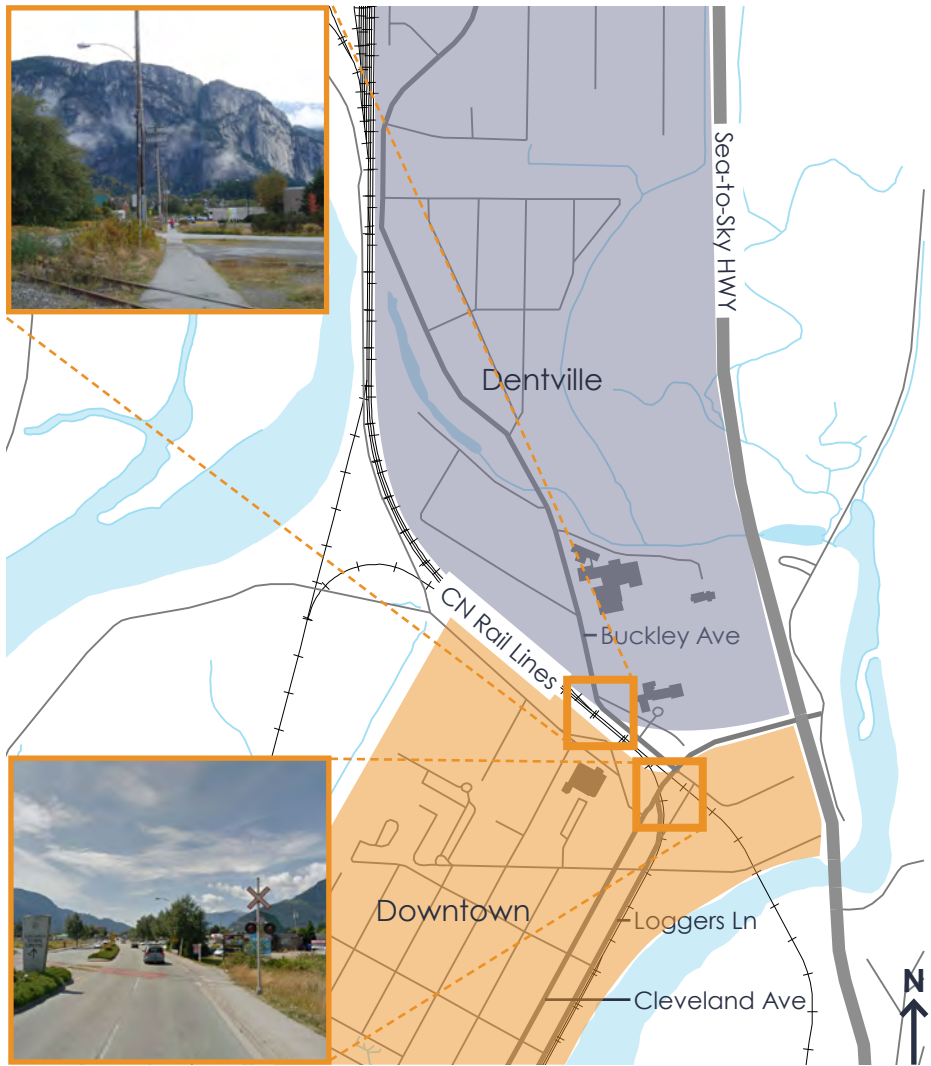
Figure 8.5: Informal railway crossing between downtown and Dentville (top photograph: Tatiana White; bottom photograph: Google Streetview; base map: adapted from District of Squamish GIS Data)

Adjacent to downtown, Dentville is a predominantly residential neighbourhood that is largely disconnected from the core by the railway tracks. With the local high school and one of the District's elementary schools located in the area, it is surprising that the connections between the two are not stronger and more established. Currently there are two routes that can be taken between downtown and Dentville. The first, the only formal crossing, follows the street network between Buckley Avenue and Cleveland Avenue. It is a busy circuitous route for pedestrians that follows large imposing roads with little buffering from the cars (see lower photograph in **Figure 8.5**). The second takes advantage of an informal pedestrian railway crossing between Buckley Avenue and Bailey Street (see upper photograph in **Figure 8.5**). Any attempts to increase connectivity to and from downtown will be closely tied to the urban fabric, built form and networks of Dentville.

Figure 8.6: 5-min radius from high school (Adapted from District of Squamish GIS Data)

Figure 8.7: 5-min radius from elementary school (Adapted from District of Squamish GIS Data)

Figure 8.8: 5-min radius from grocery store (Adapted from District of Squamish GIS Data)

As **Figures 8.6, 8.7** and **8.8** show, each of the three main amenities in the area – the high school, elementary school and Save-on-Foods grocery store – are within a very short walk of each other. If the railway did not bisect them they would create an obvious opportunity for a community centred node of activity. However, because the railway does bisect them, policy statements on the area often seem to consider them to be located in two distinct areas and any transition between them is ignored. The downtown area designation extends just to the north side of the rail tracks as shown in Schedule B of the OCP (see **Figure 8.9**). This has meant that the plans for downtown do not really consider how residents move between the two areas. Instead, they focus on the entrance to the town from the Sea-to-Sky Highway and largely ignore the potential experience of someone travelling south through Dentville.

The 2005 *Smart Growth on the Ground Concept Plan for Downtown Squamish* began to explore how the area around the rail tracks could develop and become a more integrated part of the community rather than a divider. It proposed a realignment of some of the streets and the integration of a multi-modal transportation node based around a passenger rail station as shown in **Figures 8.10** and **8.11** (District of
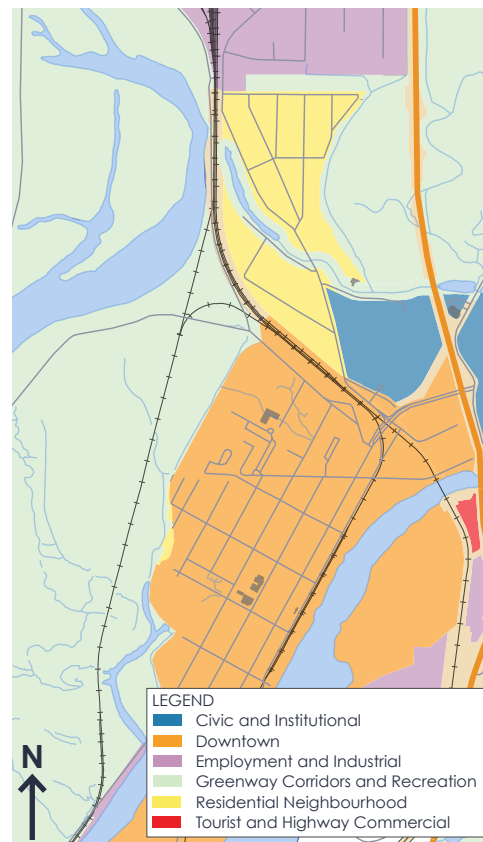

Figure 8.9: District of Squamish Land Use Designations (Adapted from District of Squamish GIS Data & OCP Schedule B, 2009)

Figure 8.10: Transition envisioned by the SGOG Concept Plan between downtown and Dentville (District of Squamish, 2005)

Figure 8.11: Multi-Modal Transit Hub envisioned by the SGOG Concept Plan (District of Squamish, 2005)
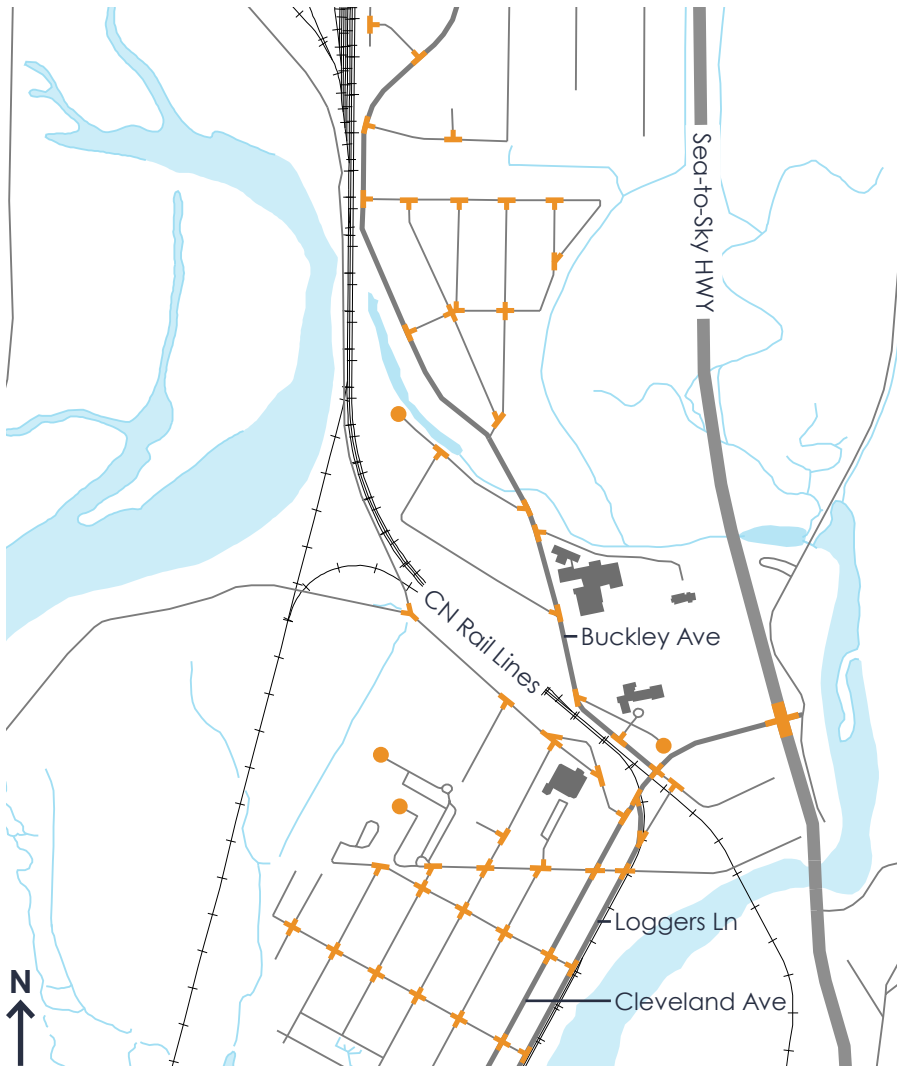
Figure 8.12: Street Intersection Typology (Adapted from District of Squamish GIS Data)

Squamish, 2005). However, planners from the District have indicated that since recent improvements have been made to the Sea-to-Sky Highway and there are no concrete plans for a regular commuter service along the rail line, such a node is unlikely to be built.

Although neither the street or the pedestrian network provides an effective connection into or out of downtown, it is quite connected within itself. As **Figure 8.12** shows, there is a high intersection density in downtown, whereas the grey network in Dentville just to the north, is dominated by loop roads that join into a single arterial road, Buckley Avenue. This street forms the backbone of the area north of downtown.

As **Figure 8.13** illustrates there are sidewalks on at least one side of the street throughout the downtown. On the other hand they are few and far between in the Dentville area. There is only a sidewalk on Buckley Avenue; it runs along one side of the street at any given point and is need
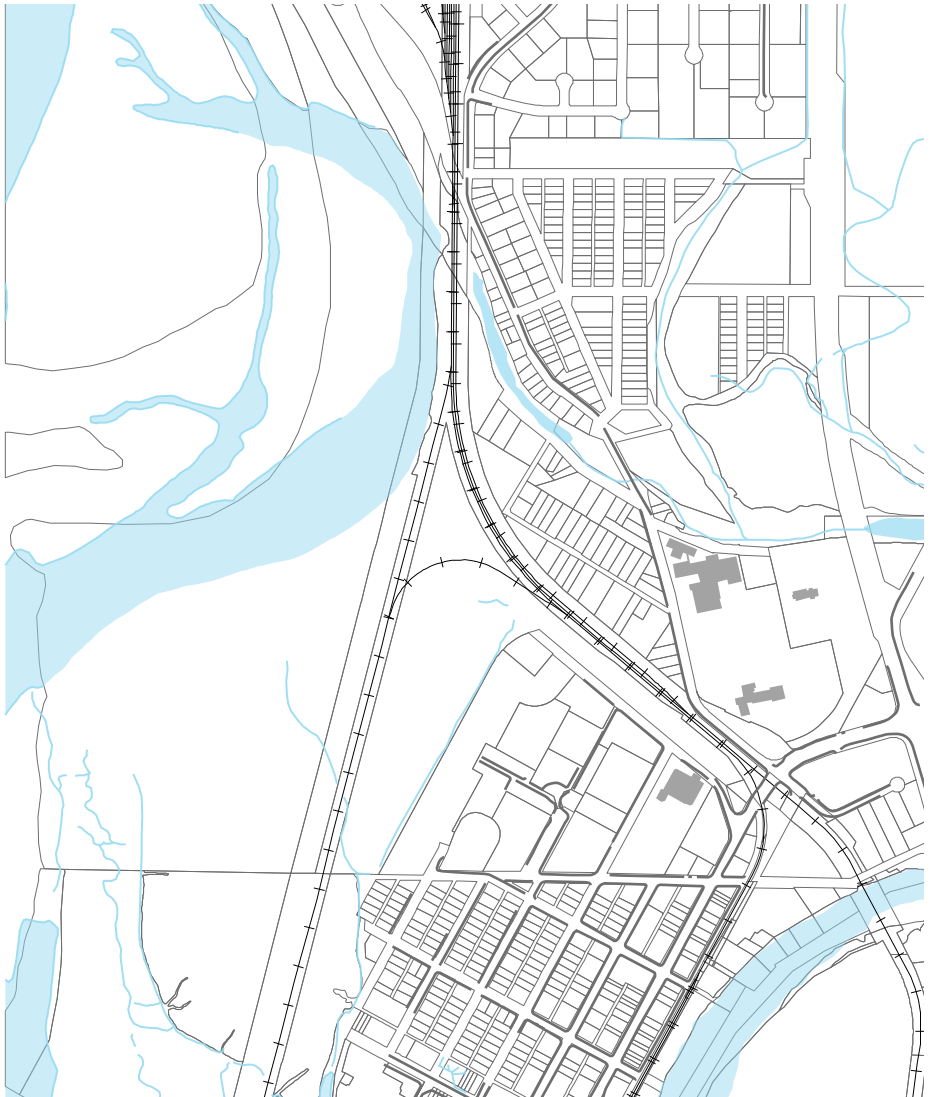
Figure 8.13: Existing sidewalk locations (Base map adapted from District of Squamish GIS Data)

of repair. This is especially concerning along the stretch adjacent to the schools at it runs along the opposite side of the road. The sequence shown in **Figure 8.14** illustrates a typical to school from downtown and the conditions experienced by pedestrians on a regular basis.

Not only is connectivity poor within the town, but as **Figure 8.15** illustrates even the entrance to downtown from the highway is unclear. It is dominated by parking lots and vacant spaces which do nothing to help to visitors travelling the highway to identify the downtown.

Through this site analysis it has become abundantly clear that the connectivity to downtown Squamish is inadequate. This project will focus on the transition area between downtown into downtown Squamish in an attempt to increase pedestrian connectivity by building on and enhancing the existing green and grey networks.
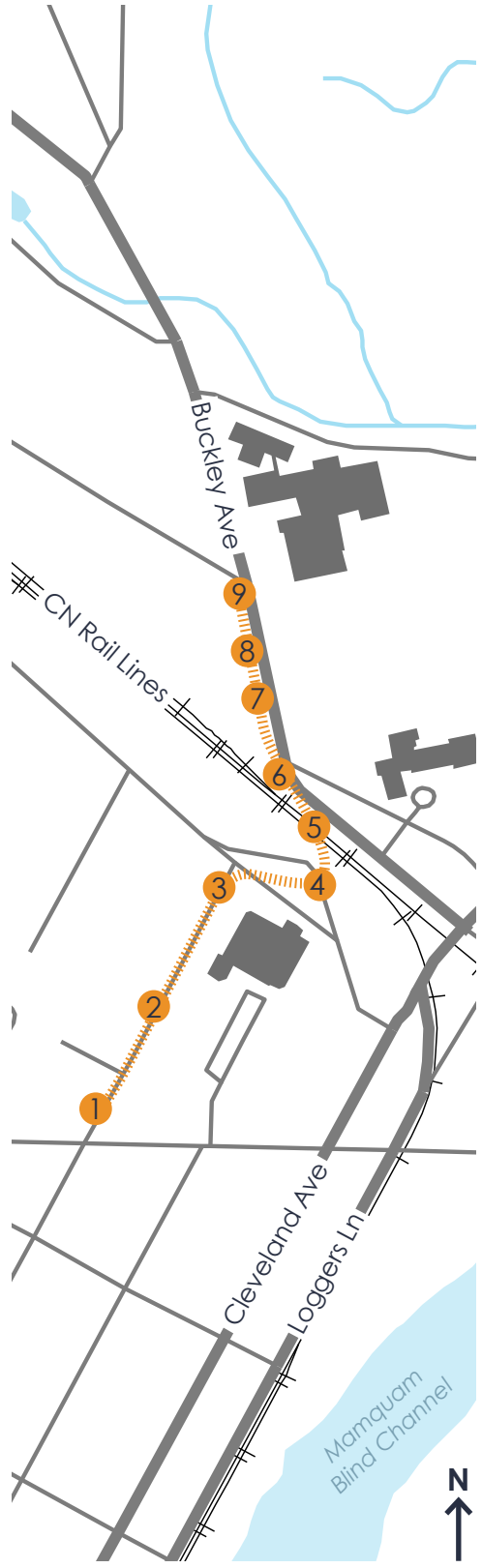
Figure 8.14: Serial vision diagram of a typical walking to school from downtown (Photographs: T. White; Route Map: Adapted from District of Squamish GIS Data)

Figure 8.15: Serial vision diagram of entering downtown Squamish(Photographs: T. White; Route Map: Adapted from District of Squamish GIS Data)

Areas Designated
Downtown
Commercial

Sea-to-Sky HWY

Mamquam
Blind Channel

9.0 Proposed Program

Figure 9.1: Wider green and grey network connections (Base adapted from District of Squamish GIS Data)

The proposed program for the project is to provide an integrated pedestrian network that connects residents to and from downtown Squamish. The focus area of this study is the transition zone between the downtown and the residential neighbourhood of Dentville. As shown in **Figure 9.1**, the area has the potential to be a key link between the major grey and green networks in the town.

In order to link these green and grey networks and enhance connections to and from downtown, I am proposing improving the pedestrian experience along the routes identified in **Figure 9.2**. The proposed green network connections would see a continuous route established between the Estuary Trails, Discovery Trail and along the Squamish River. The grey network improvements would see streetscape improvements as well as intensification and redevelopment of adjacent properties along the routes.

In order to achieve this, the existing at-grade railway crossing will require significant improvements and a new railway crossing will be required. Identified in **Figure 9.3**, the two crossings are envisioned to have very different characters to reflect their positions within the larger pedestrian network. The proposed new crossing, identified in green on **Figure 9.3** will be oriented towards recreational uses to reflect its connections to the existing trail network. The improvements to the existing at-grade crossing, identified in orange on **Figure 9.3**, will be much more urban in nature. This urban crossing will be designed as a node of community activity. It will build on the existing critical mass drawn by the two schools and the grocery store to support other amenities such as an alternative transportation hub and civic spaces. Complimenting the formalized crossing and improved public realm, proposals to intensify
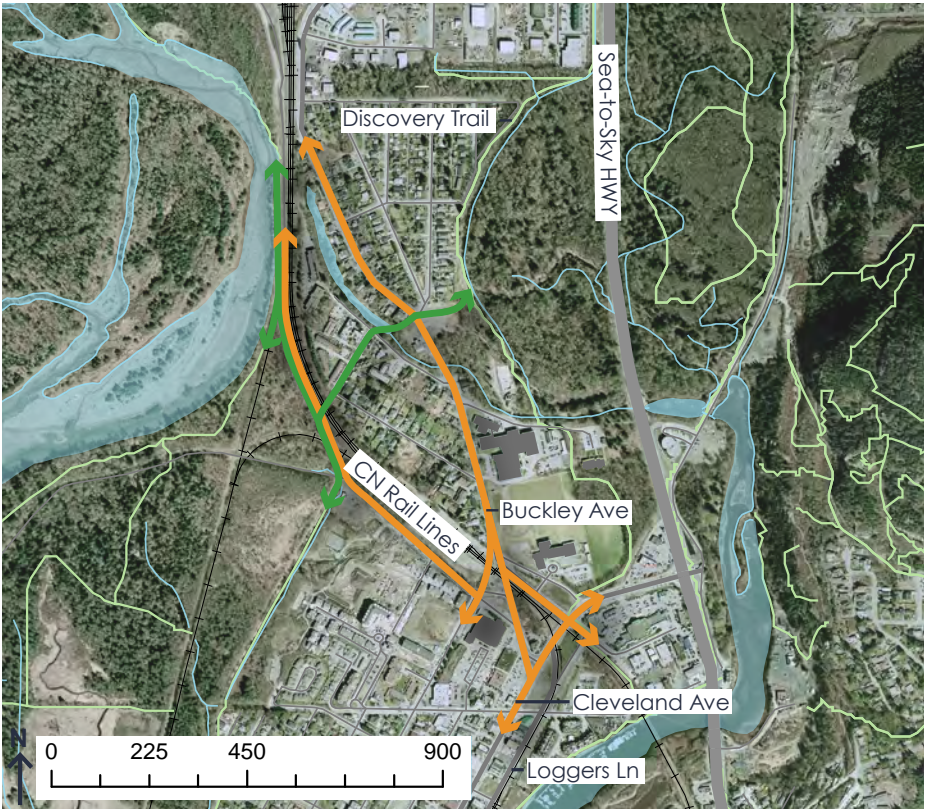
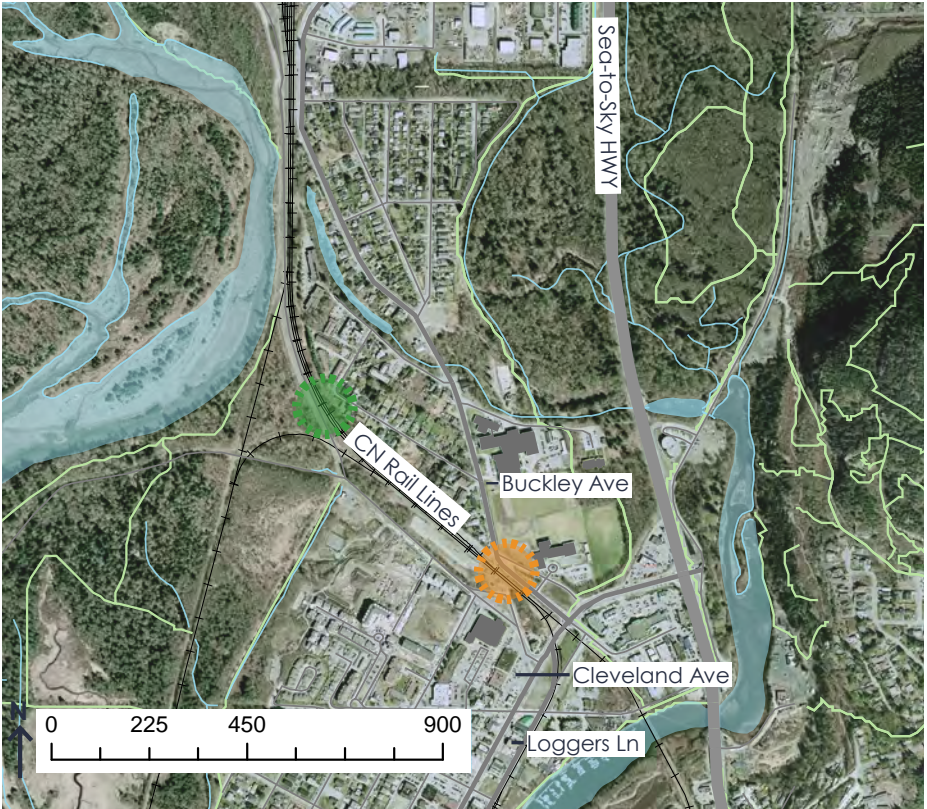**Figure 9.2:** Proposed connections (Base adapted from District of Squamish GIS data)

Figure 9.3: Proposed crossings (Base adapted from District of Squamish GIS data)

the surrounding area will be made. Areas for proposed review and intensification are identified in **Figure 9.5**. The existing development in these areas will be assessed to determine how well it meets the objective of supporting a high quality connected pedestrian network and where necessary, proposals for alterations and new development will be made accordingly. Not only will the existing residential area (identified in purple) be considered for redevelopment, the main shopping plaza (identified in brown) and open spaces (identified in green) will re-imagined to better support the pedestrian network.

Figure 9.6 identifies key local landmarks with the area. When viewed in plan it is easy to see that the area is dominated by parking lots and vacant lots. The fragmentation caused by these under-utlized spaces and the railway corridor make for a very poor public realm.

The historic road network evolution was analyzed through chronological aerial imagery to try to determine some of the reasons behind the development of this fragmented fabric. These changes are illustrated in **Figure 9.6** below. When examining the historic development patterns some of the reasons for the fragmented fabric become quickly apparent. These include the re-orientation of streets to meet the highway and in many case the former street alignments were simply left in place creating
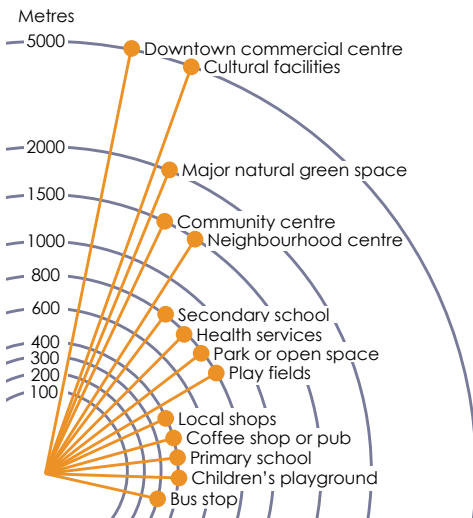

Figure 9.4: Proposed amenity relationships (Adapted from Urban Task Force, 1999)

Figure 9.5: Proposed areas for review and intensification (Base map adapted from District of Squamish GIS data)

the small parcels of vacant land that typify the area.

Proposals for intensification will be made based on the principles and lessons learned from the literature review and precedent studies. Additional residential development will seek to provide access to amenities that meets the standards shown in **Figure 9.4**. While improvements to the pedestrian network will use the 5 C's as a design principles (highlighted in **Figure 7.1**) to guide proposed interventions (Barton et al., 2010). Public spaces will be designed using the principles set out by Jan Gelh (2010) of 'protection', 'comfort' and 'delight' to develop high quality, integrated, and successful spaces (see **Figure 5.4**).

Figure 9.6: Study Area Landmarks (Base map adapted from District of Squamish GIS data)

Maps labeled 1959, 1976, 1990, and 2013, each with "CN Rail Lines" label and a scale bar showing "0" to "500 m".
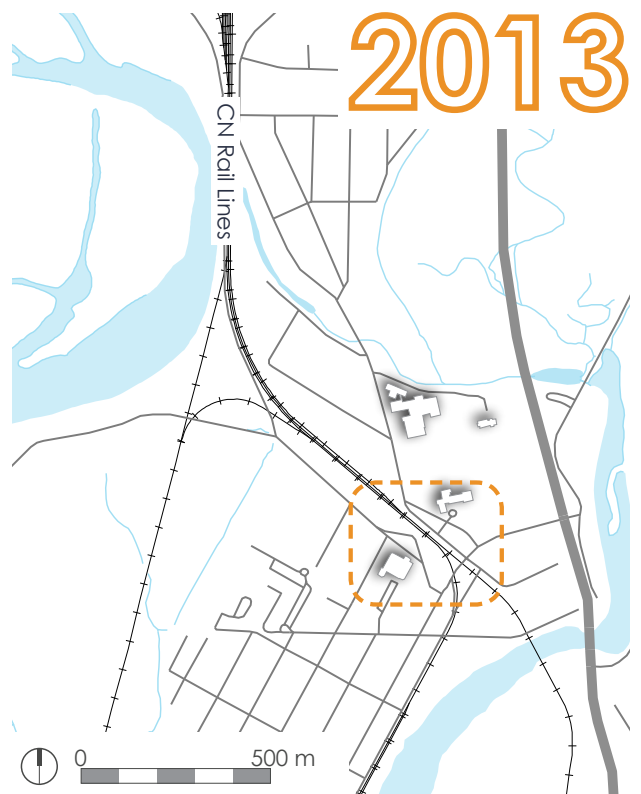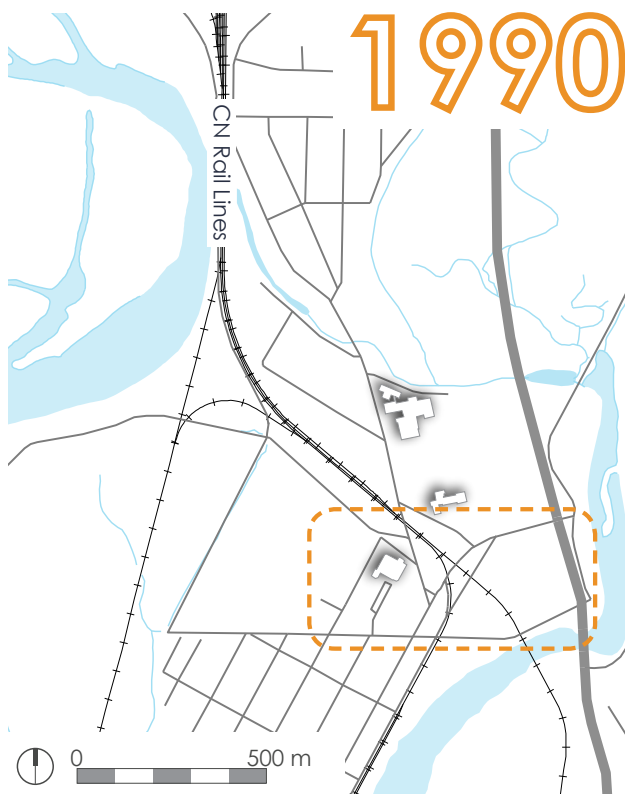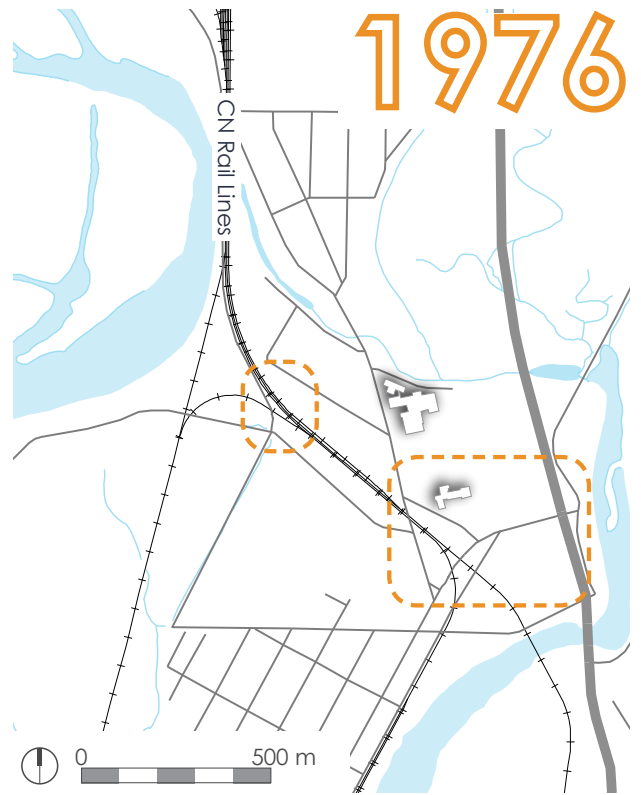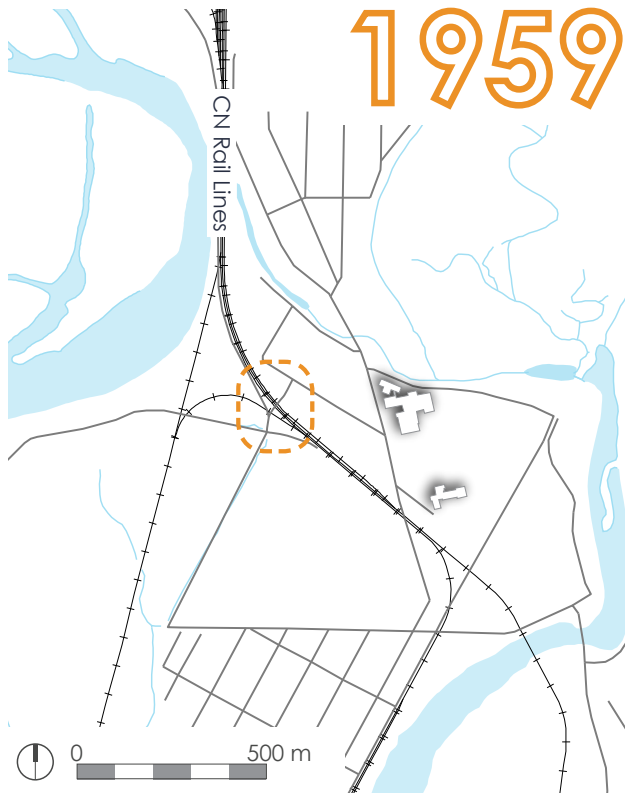
Figure 9.7: Historical road network alterations (Base map adapted from District of Squamish GIS data)

10.0 Proposed Urban Design Framework

This design intervention focused on trying to understand why the experience of Squamish's public realm is so poor by developing an urban design framework that focuses on the enhancing the gateway into Downtown Squamish from the highway and improves pedestrian connections within the town, especially the connections to the elementary and high schools across the railway tracks.

It took an approach that tried to weave grey and green network connections with the open space networks and view corridors as diagramed in **Figure 10.2**. The goal of the project was to develop framework that helps 'stitch' downtown Squamish to the surrounding neighbourhood and encourages pedestrian activity.

Three key changes to the grey network were proposed. These are the extension of 3rd Avenue across the rail line, the extension of 2nd through the Save-On Block and a direct pedestrian crossing to Squamish Elementary, and finally the re-orientation of the intersection of Bailey Street and Cleveland Ave. These are shown in **Figure 10.3**.

The proposed public realm improvements sought to make connections to the existing trail heads shown in **Figure 10.4**, take advantage of the underdeveloped land at the entrance to town, both public in dark pink and private in light pink highlighted in **Figure 10.5**. The key mountain views shown in **Figure 10.6** were also important in influencing the development of the framework.

Together these elements laid the groundwork for the development of the proposed framework shown in **Figure 10.7**.

Figure 10.1: Fragmented public realm of Squamish with the view of the Chief from the rail tracks. (Photo: T. White)
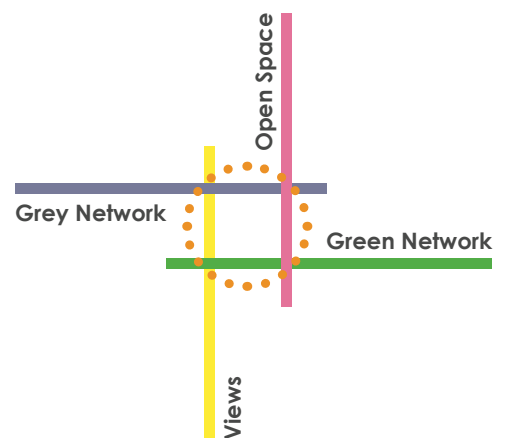

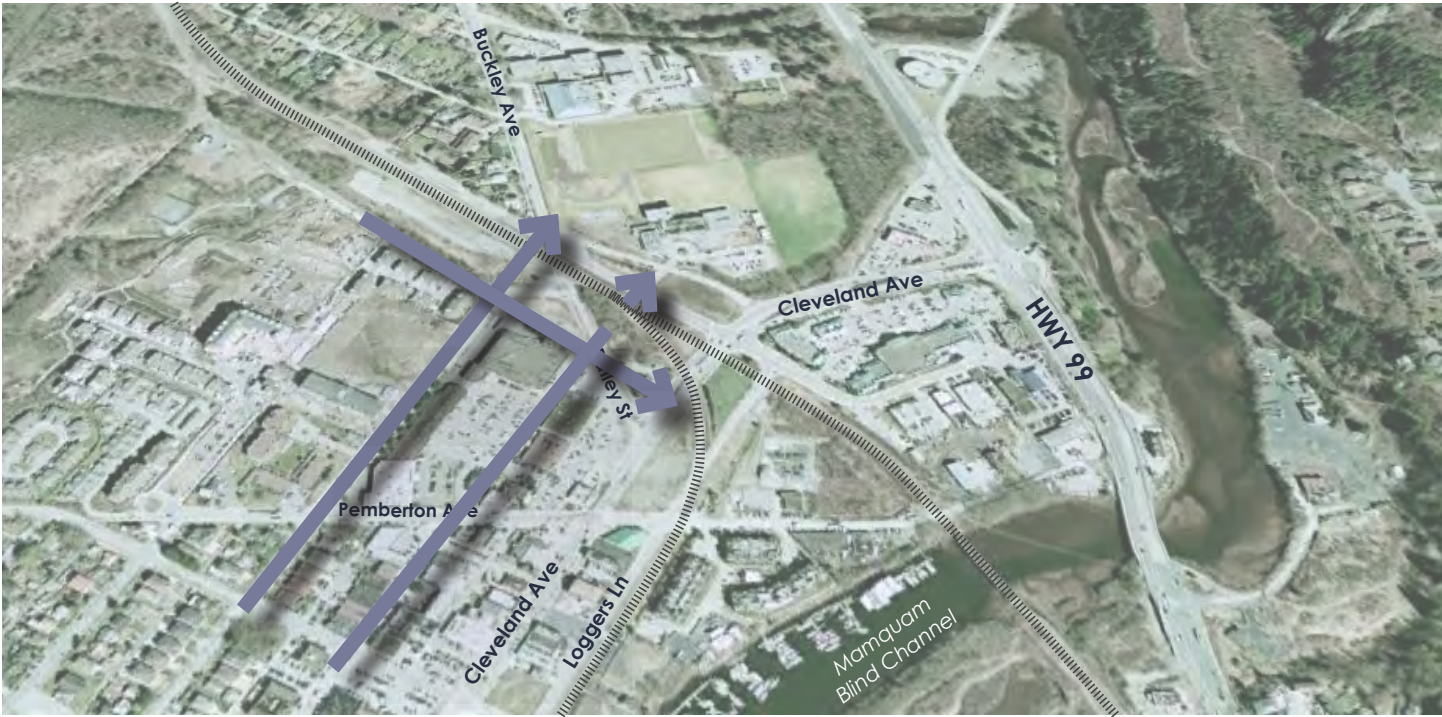**Figure 10.2:** "Darning" strategy concept diagram

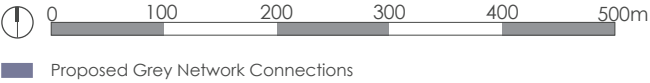**Figure 10.3:** Potential grey network connections

0   100   200   300   400   500m

■ Proposed Grey Network Connections

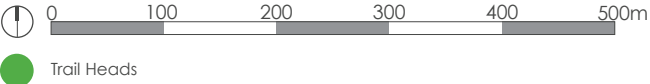**Figure 10.4:** Disconnected trail heads

0   100   200   300   400   500m

● Trail Heads
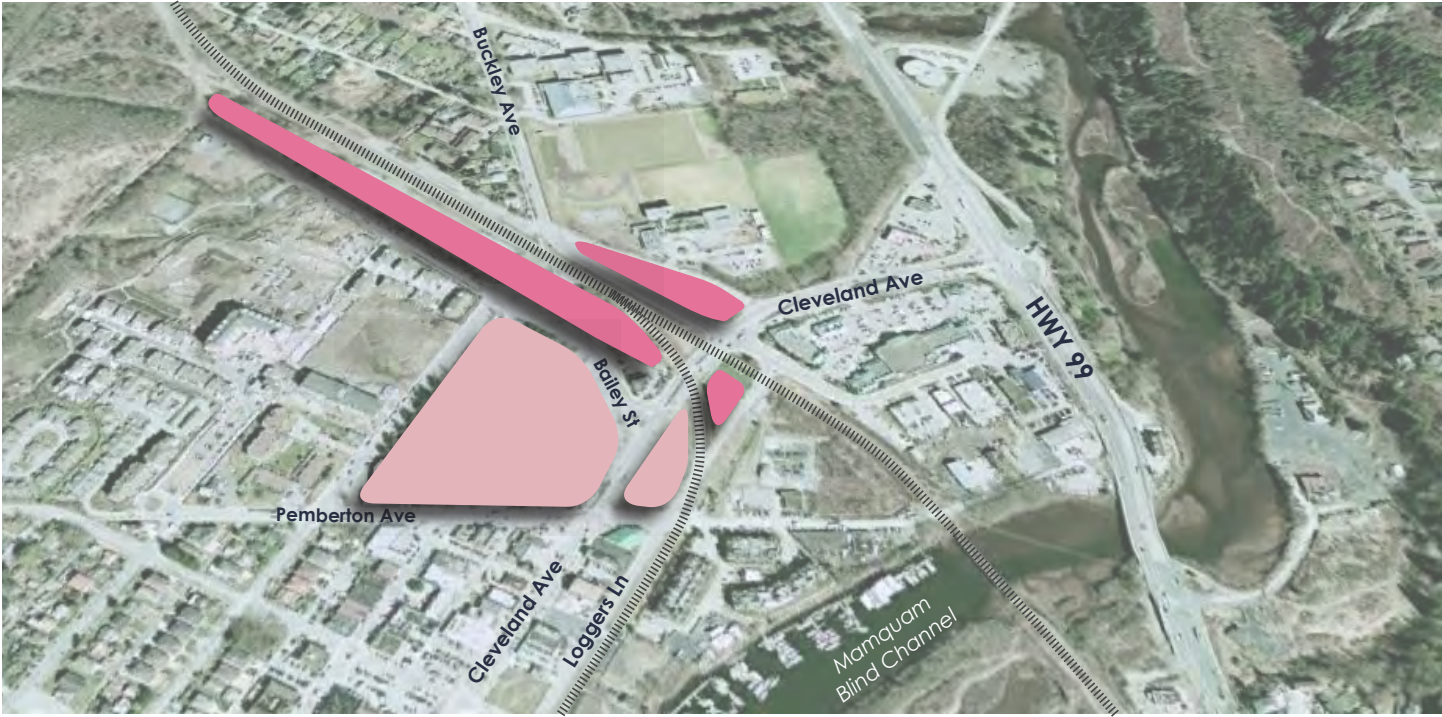
Figure 10.5: Vacant and underutilized spaces at the entrance to town.

0   100   200   300   400   500m

● Public Land   ● Private Land
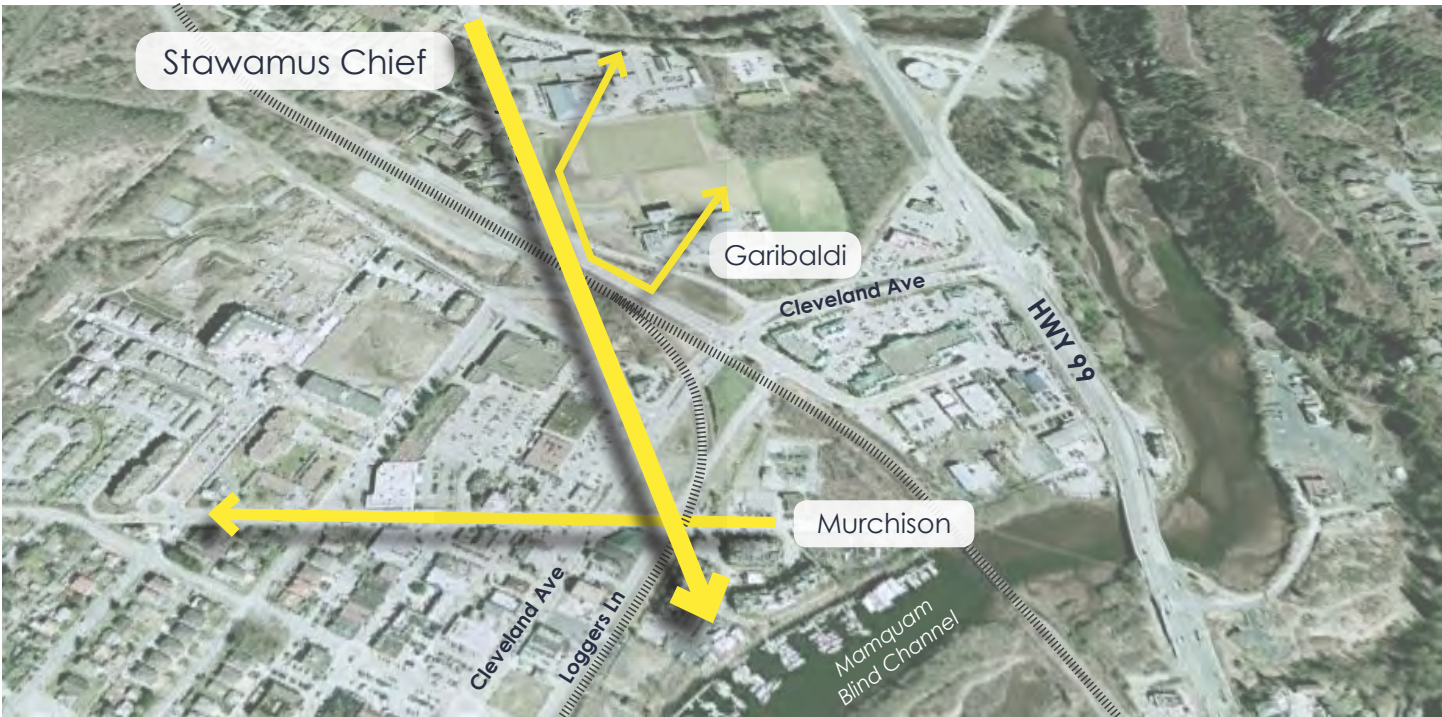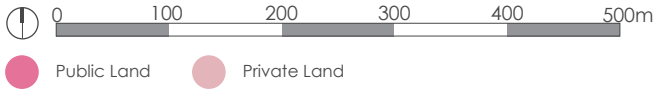
Figure 10.6: Key view corridors

0   100   200   300   400   500m

Key View Corridors
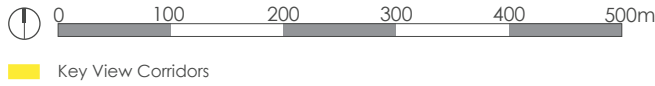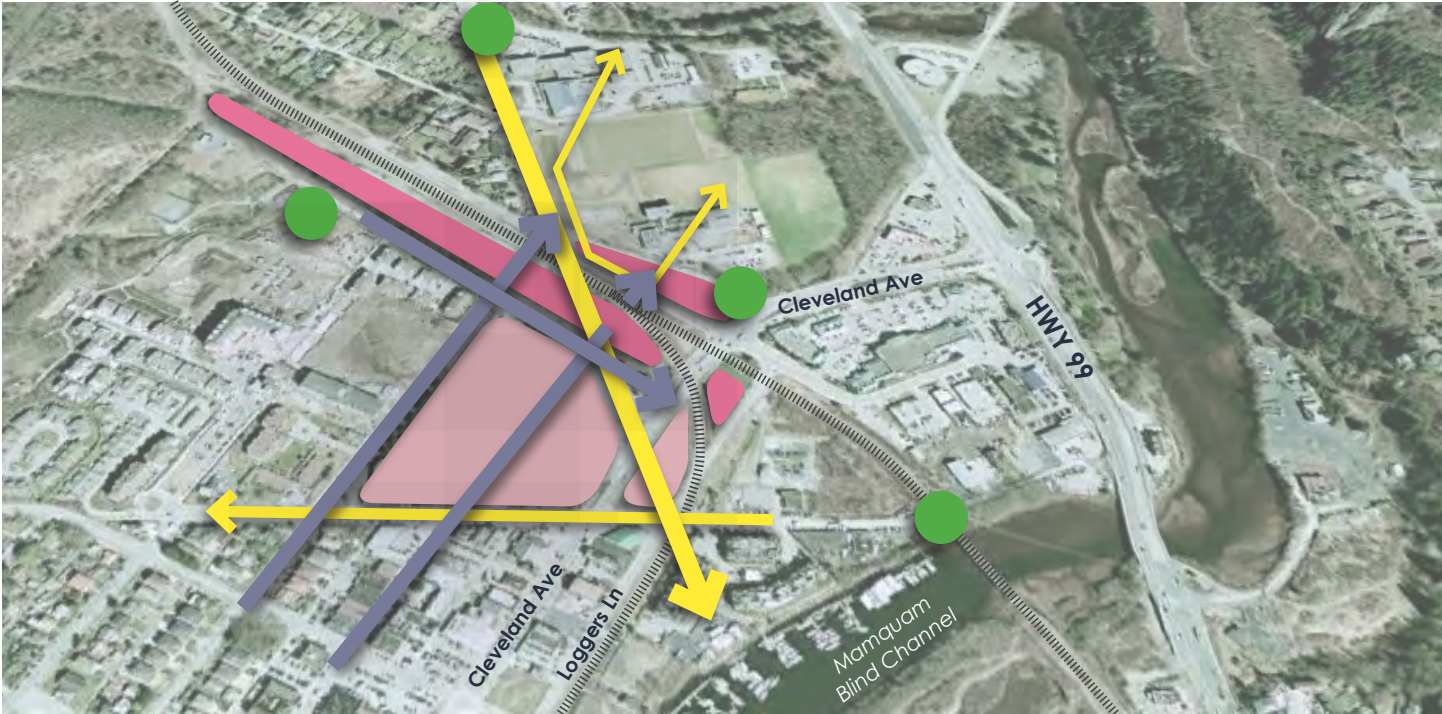
Figure 10.7: Urban fabric pattern.

0   100   200   300   400   500m

Figure 10.8: Proposed land use framework

0   100   200   300   400   500m

The land use framework shown in **Figure 10.8** that is built around four main themes with particular focus on developing a gateway to the Downtown shown in Purple. The framework proposes any future commercial development focus along Cleveland. It proposes that future residential development be focused in the downtown to help create the critical local mass to support new and existing businesses and to begin to create the types of complete communities that encourage walking over driving.

The time series illustrated through **Figures 10.9** to **10.14** imagines a phased development of the proposed interventions. It sees the town slowly evolving from its current condition shown in **Figure 10.9**. To improved pedestrian facilities along existing corridors and the beginnings of a modest community park.

Figure 10.11 shows the proposed changes to the road network being implemented and further and the development of the community gateway node. As the economy grows, **Figure 10.12** imagines the development of commercial spaces along the eastern side of Cleveland Ave.

The proposed redevelopment and relocation of the Save-on Grocery store from its current location, to a more prominent one on Cleveland Avenue is shown in **Figure 10.13**. The proposal for this new store would see the significant mass of the grocery store ringed by smaller units that reflected the smaller fabric of Squamish's main street downtown. **Figure 10.14** illustrates the imagined complete redevelopment of the area and the conversion of the surface parking lots to residential infill.

Figure 10.9: Existing Urban Fabric

Figure 10.10: Improved Pedestrian Connections

Figure 10.11: Development of Community Gateway

Figure 10.12: Development along Cleveland Ave

Figure 10.13: Relocation of Save-On Foods, Focus on Cleveland Ave & Residential Infill

Figure 10.14: Full Build-Out and Redevelopment of Underutilized Parking Lots.

Many of these moves are simple, they involve installing sidewalks to make walking to school safer, and street trees to provide shade and visual interest as shown in **Figure 10.16** and **Figure 10.17**. In other cases it might simply involve creating green buffers as shown in the visualization for the Loggers Lane Trail **Figure 10.18**.

The proposed framework in not a quick fix, nor would Squamish likely be able to support this level of development in the immediate future. It is envisioned a phased process that focuses on the improvements to the public realm first. By focusing on public realm improvements Squamish can not only become a more pedestrian friendly place, but also develop an identity for visitors that reaches beyond the MacDonald's on the Highway.

Figure 10.16: Proposed Buckley School Walk

Figure 10.17: Proposed Estuary Trail Connector

Figure 10.18: Proposed Loggers Lane Trail

Figure 10.18: Proposed Urban Design Framework (Plan)
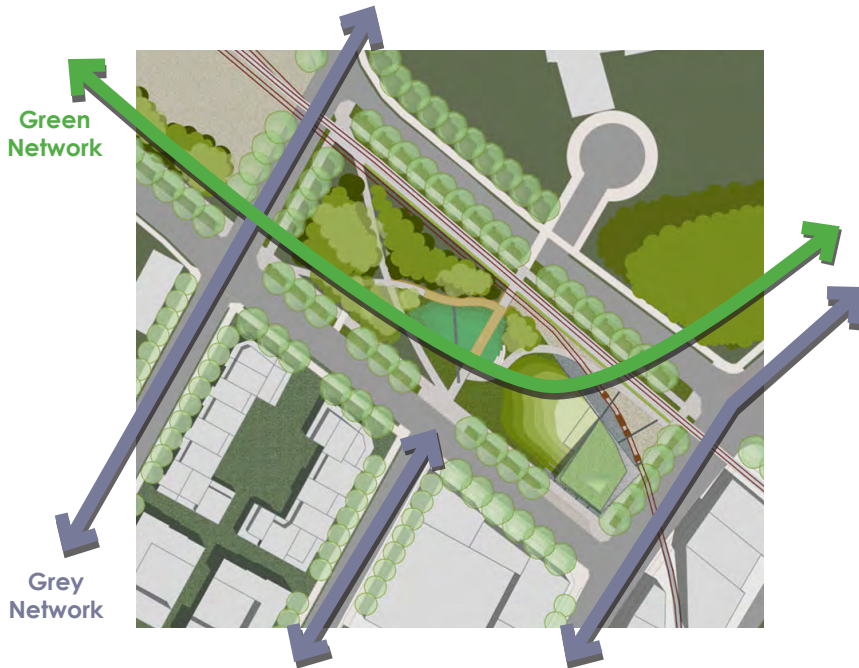
Figure 10.19: Park as a Connector
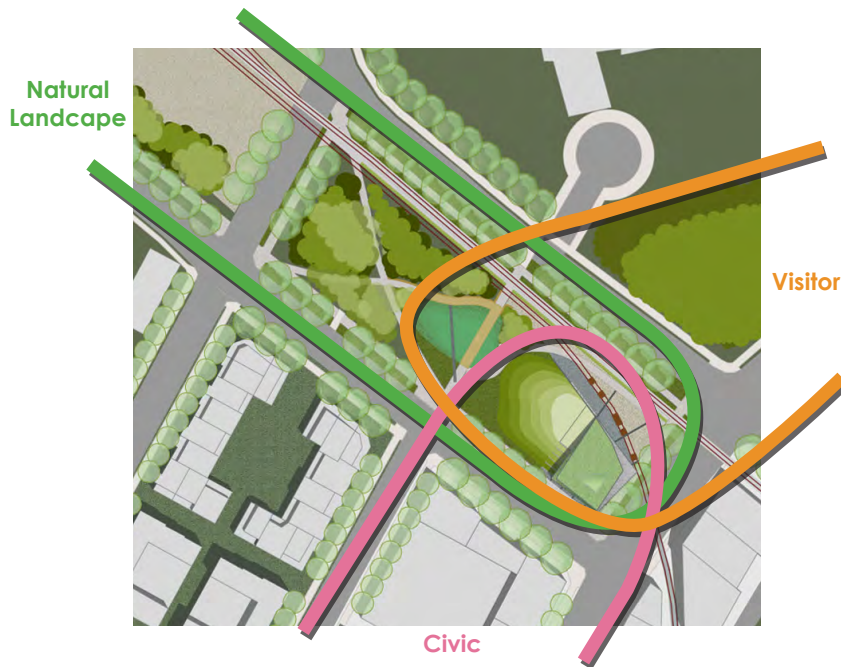
Figure 10.20: Park as a Place Creator

The key public realm component of this proposal is a park. It builds on its location and program as a welcoming space at the entrance to town to incorporate of a space for the greyhound bus to stop in town and facilities for passengers, which do not currently exist. And in the future, if passenger rail ever does come to Squamish, it is perfectly situated to expand on this function.

Figure 10.21: Proposed Park as Connector Exploration

Chief Viewing Bench
and Boardwalk

To Squamish
Elementary

Temporal
Stepping
Stones

Pond
Seating

Grassy
Knoll

Gateway
Sign

Railway
Seating

Gateway
Plaza

Greyhound Stop

0   25   50   100m

In addition, the proposed community hub, is envisioned as a multi-functional space, that could be rented out, or even house the farmers market during the winter months. Its form, set into a grassy knoll, is meant to reflect Squamish's relationship with its natural surroundings.

The urban face of the building, incorporates playful oversized signage that can be climbed and becomes an attraction in of itself. The plaza acts as an outdoor extension of the building, incorporating oversized moveable seating, set into the railway tracks that, on a sunny day would make a great place for high school students or those stopping on their way to up to Whistler to eat their lunch and hang out shown in **Figure 10.22** through **10.25**.

The middle portion of the park illustrated in **Figures 10.26** through **10.29** pictures a different type of walk to school than the one that currently exists. It imagines a journey that celebrates the changing seasonal landscape and would be enjoyable for both children and their parents as they walk them to and from school. Not only will the trees reflect the changing seasons, but a boardwalk and stepped seating allow children to experience and observe the changing water levels and wildlife of the infiltration pond.

A series of temporal stepping stones create a slight detour and connect to an elongated bench oriented to take advantage of the southern exposure and view of the Chief, thus reconnecting visitors to the larger landscape (**Figure 10.29**). The placement of the stepping stones further emphasizes this view. Their positioning, means that during significant rainfall events, crossing the pond via this route might not be possible, thus their name temporal stepping stones. Set against the view of the chief, a symbol of geological time, they connect back to the larger surroundings and remind us that the landscape is always changing, as does our relationship with it (**Figure 10.28**).
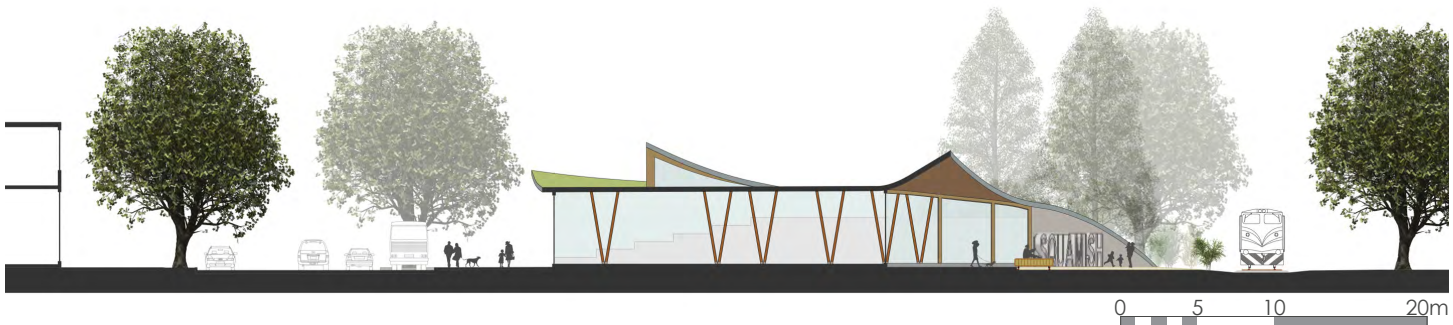

Figure 10.22: Celebrating Squamish's Railway Heritage through Public Space

Figure 10.23: Gateway Plaza, Welcome Signage and Railway Bench Visualization

0   5   10   20m

Figure 10.24: Sectional elevation of relationship between Railway Benches and the active rail line running along beside the site.

Figure 10.25: Proposed Community Gathering Gateway

0   5   10   20m

Figure 10.26: Section through Boardwalk and Infiltration Pond

0   5   10   20m

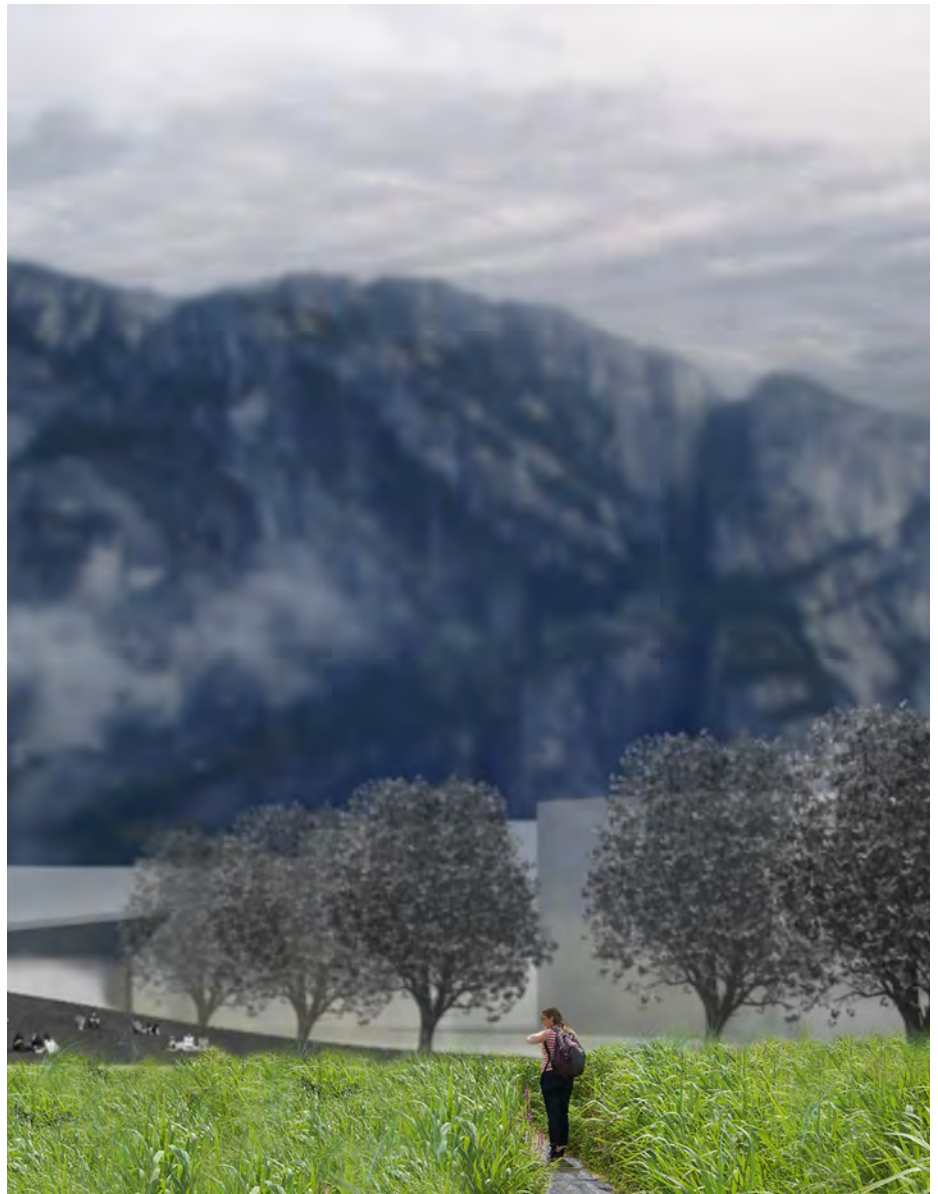Figure 10.27: Existing view of the Chief

Figure 10.28: Visualization of proposed view of the Chief from Temporal Stepping Stones

Figure 10.29: Section through Temporal Stepping Stones with elevation of grassy knoll.

0   5   10   20m

By using design to stitch Squamish together and darn it into its surrounding landscape at various scales the proposed interventions provide much needed public realm amenity space for the residents of the town. They pique the interest of people traveling along the Sea-to-Sky Highway drawing them into the town itself, and finally provide an urban design framework for future residential and economic development to take place within the town.

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