

Ironic Reformation

St. Catharines: A City in Limbo

By

Eric Schlange, B.A.S.

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*Dedicated to my Opa,
... the one guy who never backed down.*

Abstract

Traditional methods of construction have failed to acknowledge the interconnectedness between politics, economy society and space. This thesis proposes that hybrid methods of radical reconstruction are required for a genuine transformation of a city's identity.

Aldo Rossi, an intellectual critic on the failure of the modern movement, claimed that a city is a unified element—an overall synthesis of its different parts.¹ The decommissioning of two General Motors factories located in the heart of St. Catharines imposed pressures of change upon this one-dimensional city.

Sensible redevelopment processes will be necessary to improve the greater vitality of society and architecture in St. Catharines. By re-using standardized elements found on-site, reconstruction of these elements will narrate the architectural transformation of the General Motors factories and create a catalyst for the transformation of identities.

¹ Rossi, Aldo, and Peter Eisenman *The Architecture of the City* Cambridge, Mass MIT Press, 1982 Print, 33

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Preface

To the readers of this thesis, I feel it is important that I briefly describe how this body of work sparked my curiosity.

The work reflected in this thesis, rooted in discussions with a hometown friend who goes by the name, Smith. All but few Wednesday evenings throughout the summer, Smith, a musician and graduate from OCAD University and I would meet on a park bench in a suburb of southern St. Catharines to split a six-pack of *Smithwick's*. The first time that we met on this bench marked the first summer after our respective first year school terms away from home. Energized, ambitious, and interested in the new paths we decided to embark on, our bench discussion focussed primarily on our newly developed architectural and artistic perspectives.

The uncapping of the first *Smithwick's*, set off the first discussion of re-tracing our lives and how we developed our unique perspectives on life in St. Catharines. Smith and I would reminisce about attempts to escape our awkward existence in an enigmatic post-industrial city. One such story happened at the age of thirteen, and having only known each other for a handful of months, we set off on our first conquest. Where better than the Niagara escarpment, which geographically, contained the southern footprint of St. Catharines? After building our fair share of tree forts, natural barricade's, and forest furniture, we would, more times than not, return to see them in a state of demolition. It began to seem that escape and organic inventions were difficult achievements to sustain. The very last radical construction Smith and I constructed was necessarily in the backyard of my parents' house—an undesirable location for escape—nevertheless, if we wanted our creation to last, we had to make this compromise.

The second *Smithwick's* was uncapped. We began questioning why people would destroy our creations of escapism and not just use them for their own means. At this moment we realized that we, Smith and I, we are quite different from the others; different from those who destroyed our constructions but also different from most of our peers who remain uninterested in utilizing their imaginations to design and invent while they still had them. We noticed that the perspectives of other residents in St. Catharines seemed to be short-sighted. This notion did not generate from the

strange looks we received while sitting on a park bench with a *Smithwick's* in hand, but from the difficulty experienced in trying to discuss differing perspectives on life with our peers.

Unaware of how the last Smithwicks unsealed itself, our in depth conversation has now turned into laughter as we have found humour in how we even ended up speaking so dramatically about such subjective topics. Who are we to be speaking so seriously about life in St. Catharines anyway! As the Smithwick's appeared to have evaporated into thin air, the sun set; our bench talk came to a close. Five years later, Smith is a part time barista and full time artist in Glasgow, Scotland. Myself—well, typing away at my last University document, in Ottawa, Ontario. Smith and I—we escaped.

The research of this thesis was derived from feeling the need to research the aspects of why, since the age of thirteen, I wanted to escape St. Catharines—or at least the idea of St. Catharines. I do not intend to influence other people to look at the city and criticize it as Smith and I have. Alternatively, I intend to propose an architectural intervention to keep the next Smith's and Schlange's invigorated by the city. I believe that all architectural interventions should aim to provoke. By studying the relationships, society has with its buildings and vice versa, cultural and architectural strategies will be examined and proposed to wake a city in limbo.

Introduction

St. Catharines is a city conveniently located between the 'Greater Toronto Area' and Buffalo, New York. In the late 1800's the 'Welland Canal' was constructed to connect Lake Ontario with Lake Erie. The Welland Canal went through the downtown core of St. Catharines and provided an opportunity for industry to flourish. However, in 1932, a newer canal was constructed along the fringe of the city and the original canal, which once brought prosperity to the inner city, was destroyed and replaced by highway 406. Since then, industry has had a difficult time adjusting to the displaced transportation route, and most industry, or whatever is left of it, has moved toward the fringe of the city.

Unfortunately, this industrial narrative has shaped the socioeconomic and architectural landscape of St. Catharines. Today, the industrial prosperity in the region is missing and the monotony of the city's architecture is unmasked. Other forms of production have been implemented to create employment. Now call centers, retail service centers, retirement homes and car dealerships are beginning to make up St. Catharines economic and architectural landscape. St. Catharines is in a state of crisis.

When the identity of a city undergoes transformation, the boundaries of its totalizing identity can blur and the intervention of its abandoned past can play a large role in the social and architectural transformation of that city. Due to the growing popularity of offshore manufacturing, the cutbacks in General Motors revenue have forced the decommissioning of St. Catharines' greatest symbol of the labour movement. The 1.2 million square feet of industrial space once generated identity in St. Catharines. This thesis proposes a redevelopment project for the General Motors factories to influence the creation of a hybrid identity for St. Catharines. Through the architectural intervention, methods of reconstruction could form a catalyst for collective participation in the transformation of St. Catharines identity.

Enigmatic Identities

actac → ← Realization

The post-industrial era has forced many North American cities to undergo urban and social symptoms of identity crisis and recently to attempt to re-vive or even salvage this once celebrated sense of prosperity. The industrial revolution heralded major changes in the motivations of social politics, but also in the built environment. The accessibility of fast track construction methods was a key vindication of the industrial movement, which thus lead new constructions to homogenize their components. The goal of maximizing economic values begins to hinder the maximization of cultural values. Political and economic systems suppressed competing ideas to ensure their own survival, sub-consciously winning the hearts of the citizens.¹ Homogenized environments have become civilizing apparati to guide an accelerated employment base and building output.² Consequently, our environment has begun to negate individual values and differing trains of thought in society.

• **Gyroscopic Horizons,**

A plane's gyroscope creates an artificial horizon line for the pilot, Denari often eliminates the physical earth as datum or locus of experience, turning to cultural, economic, and graphic forces as points of departure for his work

Neil Denari, in his book *Gyroscopic Horizons*[•], claims that immediate effects of the conflict between the built environment and culture can be experienced in two ways. One relates to an apparition; “like a drunk walking in an earthquake, sometimes we do not notice the undulation of movement”—the second is

¹ Kaplan, Ken, and Ted Krueger *Mosquitoes: A Handbook for Survival* New York: Princeton Architectural Press, 1993 Print, 8

²Clear, Nic *Architectures of the Near Future*. Hoboken, N J Wiley, 2009 Print, 11

comparable to “a ferocious beast; consuming us at every turn.”³ These simultaneous phenomena stream through most cities and can subsequently produce positive, neutral, or negative effects. Since industrial capitalist developments create rapidly-built cities based on the condition of the economy, the cities are highly susceptible to transformational shifts in identity; if the market falls, the vitality of the city falls with it. This thesis asks, what occurs when the number of non-production workers increase and outnumber blue-collar workers in an industrial and manufacturing town? How will the change in consciousness and collective attitudes of all the labour workers affect the city when local production dies? When a city is built on a dying industrial capitalist market, will the weakening of the market cause an even greater weakening of a city’s identity?

Urban symbols or architectural monuments that represent the industrial narrative of a city are subject to pressures of change. Whether these forces are natural or synthetic, we may begin to see one-dimensional cities concede to these pressures and undergo symptoms of identity crisis. When this type of crisis arises, many solutions may look back to a pre-crisis era to solve the associated anxiety to re-establish the once coherent, past identity.⁴ This type of speculative recovery from utopian demise becomes an attempt to re-obtain uniformity in the city by retaining or disguising the visible forms of the passage of time. This form of resolution or regeneration, however, has appeared to turn full circle, closing in on itself.

Society now requires and depends on consumption to ensure the survival of production.⁵ The subsequent resistance or failure to realize what society has become will hinder initiatives that attempt

³ Denari, Neil M. *Gyroscopic Horizons*. New York: Princeton Architectural Press, 1999. Print, 8.

⁴ Dan Phillips on Creative houses from reclaimed stuff." www.ted.com. Web. 20 Mar 2011.

⁵ Packard, Vance. *The Waste Makers*. New York: D. McKay, 1960. Print, 6.

to solve the current identity crisis many North American cities face. The question remains; will these particular types of cities aim to regenerate and revitalize their industrial structures, or will they continue to build a model solidifies capitalist notions of survival?

Pressures to expand production and consumption have forced North Americans to create a 'hyperthyroid'⁶ economy that depends on constant stimulation and reckless exploitation of money and resources.⁷ *Planned obsolescence*[•] and *accelerated depreciation*[⊖] have become the leading tactics of stimulation.⁸ These strategies do not only influence the shapes of products and architecture, but also the mental attitudes of the consumers, which, as a result, represent the embodiment of a throwaway society. By allowing symptoms of progress to interact directly with our well-being, we rapidly inundate our living environment with junk. However, what should our junk obsession say about society and architecture? Does this make us junk-people whom further produce 'junkspace'⁹?

We must re-consider why we build things in the first place; these concepts range from a simple shelter to keep us away from the harsh environment to a construction that has the effect of negatively impacting our environment and our bodies. Architecture has undeniably suffered the same commodification as other constructed artefacts. The creation of waste in the building industry is due to the fact that houses have also become a commodity. Dan Phillips', a craftsman who re-builds houses with junk, stated in a Ted Talk, *Creative houses from Reclaimed Stuff* that "cause of waste is

• "We make good products, we induce people to buy them, and then next year we deliberately introduce something that will make those products old fashioned, out of date, obsolete. It isn't organized waste, it's a sound contribution to the American economy"

Vance Packard in *Waste Makers*, p 54

⊖ "An office building, for example can depreciate faster in its early years than in its later years. The result of this is that a syndicate that has built a big office building can "write off" most of the cost of this building in the first seven or eight years after completion- so that it becomes most advantageous to the syndicate to sell the building after seven or eight years and let the next owner start the same process all over again"

Peter Blake in *God's Own Junkyard: The Planned Deterioration of America's Landscape*, p 54

⁶ *Hyperthyroid* is a term used by Vance Packard, to explain an economy that can be sustained only by constant stimulation of the people and their leaders to be more prodigal with the nation's resources

⁷ Blake, Peter *God's Own Junkyard: The Planned Deterioration of America's Landscape* New York: Holt, Rinehart and Winston, 1964. Print, 28

⁸ Packard, Vance *The Waste Makers* New York: D. McKay, 1960. Print, 6

⁹ *Junkspace* is a term used by Rem Koolhaas to explain what remains after modernization has run its course or, more precisely, what coagulates while modernization is in progress, its fallout

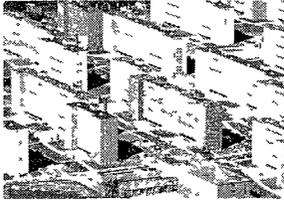


Fig. 1.1: Pruitt Igoe, St. Louis, MO.
<http://news.stlpublicradio.org> 2010

Although Charles Jenks, in 'The Language of Post-Modern Architecture' claimed that the demolition of Pruitt Igoe in St. Louis, was "the Death of Modernism," North American cities however, continue to see these forms of buildings erected

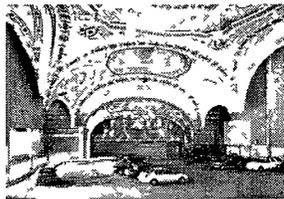


Fig. 1.2: Beautiful Michigan theatre, converted into parking lot. <http://atdetroit.net> 2010

Ironically, this lot is located on the site of Henry Ford's first office

buried in our DNA. Human beings have a need for maintaining the consistency of the imperceptive mass of wasteful practices.¹⁰ This need hinders invention and innovation, which can interfere with new ideas. Design processes become standardized, reproducing 'innovation' (Figure 1.1). A value system based on economics causes architects, planners, and designers to provide tyrannically driven rationalizations for projects; the form and use pre-determined by real-estate speculation. As a result, these projects begin to turn project goals away from creating a space for humane existence.¹¹ Anti-recession stimulus has produced pressures in developments that wipe out the one remaining incentive to construct a good building, namely, the pride of ownership. This thesis speculates that these progressive and economic influences on construction will inevitably outweigh the importance of a region's unique assets and that demolition of historic buildings will follow to allow for expedient developments—such as parking lots for big box stores (Figure 1.2).

In James Scott's book, *Seeing Like a State: How certain schemes to improve the human condition have failed*, civic interventions are seen as nothing more than speculative apparatus' that aim to organize society and ensure progress will continue.¹² Has the pre-meditated disposability of our constructions led to disposability of individuality and community? Is architecture imagination, or simply a strategy to provide shelter for its repressed and myopic inhabitants? Has this negligence orchestrated the fall of our cities and the disappearance of genuine community identities?

The desire to preserve the past has become a popular preoccupation in recent years. Preserving parts of the city without questioning may lead to the demise of a city, or, furthermore, an

¹⁰ "Dan Phillips on Creative houses from reclaimed stuff" www.ted.com Web 20 Mar 2011

¹¹ Goodman, Robert *After the Planners* New York: Simon and Schuster, 1972 Print, 94

¹² Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* New Haven: Yale University Press, 1998 Print

• “Identities are transformational, sliding and shifting in an ongoing complex stream of becoming, in the continuum of living.”

Peter Lang in *Mortal City*, p.48.

identity crisis of its components•. The combination of *processed spaces*¹³ and society’s desire for continuity has produced a cultural condition that creates a social hegemony. Unfortunately, this limits the architect from creating extra-ordinary projects.

The way a city responds to its own identity crisis differs across cultures and places. A key factor is the prevailing forces that have affected the city and its adaptability to its remaining context. For example, Los Angeles and Las Vegas used two opposite strategies in their attempts to emerge from an identity crisis. Los Angeles is a city that has undergone a very severe expansion due to an economic boom in the oil and steel market that produced a doubling in population from 570,000 to 1,200,000 people in between the years of 1920 and 1930¹⁴. Massive urban sprawl allowed an explosion of commercial and industrial construction (Figure 1.3) to flourish as Los Angeles quickly grew to become a city of nearly five million. The prevailing industrial identity of Los Angeles has not hindered heterotopic building output from being harmoniously injected into an area where the architecture is a residue of the past.



Fig. 1.3:
Miscellaneous Building
in Venice, CA.
Author.



Fig. 1.4: Venice Canals
in Venice, CA.
Author.

Charles Jencks coined these Los Angeles pockets of difference as “identity areas,”¹⁵ areas that are highly defined and other fluid districts, where variety is the rule and difference or heterogeneity thrive at many levels (Figure 1.4). Not one identity area mimics or reproduces another, thus generating a sense of *pluralism*¹⁶—within differing cultural enclaves.

¹³ Is a term used by Rem Koolhaas to describe the repetitive building output of space (architecture) in Junkspace.

¹⁴ Moffatt, Riley. *Population History of Western U.S. Cities & Towns, 1850–1990*. Lanham: Scarecrow, 1996. Print, 41.

¹⁵ Jencks, Charles. *Heteropolis: Los Angeles, the Riots and the Strange Beauty of Hetero-Architecture*. London: Academy Editions, 1993. Print, 7.

¹⁶ *Pluralism* is a term used by Charles Jencks to describe cultural and political differences that manifest in radical eclecticism in architecture.



Fig. 1.5. Venice, CA, transformed suburban homes. Author.

Las Vegas, on the other hand, is a city that Mike Davis describes, “as though some inconceivable alien organism has fallen upon the old depot town...squatting there athwart the tracks and infecting everything with some incurable unidentifiable but not altogether disagreeable virus.”¹⁷ The [not-so] glamorous ‘cityscape’ of Las Vegas, has maintained its tropical paradise aesthetic in the middle of the desert.¹⁸ The conglomerated form of an epitomized modern society (Figure 1.6) entertains intoxicated two-day tourists, poker sharks, slot machine maniacs, clowns, and locals in pseudo Manhattans (Figure 1.7), Parises, Sphinxes, and pyramids. What truthfully remains, however, is complete social disjunction between life on and away from ‘the Strip,’ where life off of the strip is sterile and life on the strip is hypnotized. The identity of Las Vegas is no longer that of a prospering railroad and mining town; instead, it is an alien identity. Materializing the urban paradox of excess, genuine survival, and urban alienation, Las Vegas has ironically become a desirable destination that continues to draw tourists from around the world. Its balance between the preservation of original identity and the life support brought to it by the new ‘strip’ creates a synthetic sense of prosperity, which informs the complications that will arise if redevelopment does not follow the genuine forms of transformation proposed by this thesis.



Fig. 1.6: Pawn Shop Line-Up at 8a.m. North of Las Vegas Strip
-Author



Fig. 1.7: New York, New York on the Las Vegas ‘Strip.’
Author

¹⁷ Rothman, Hal, and Mike Davis *The Grit Beneath the Glitter: Tales from the Real Las Vegas* Berkeley: University of California Press, 2002. Internet resource, 3

¹⁸ All species of palm trees, flowers, brush, and even trees are planted along the strip, but what is not widely known is that each plant is replaced every two or three weeks due to their inability to stay fresh and colourful. Though fed plentiful amounts of fresh water each day, it is still not sufficient. The effects of sustaining an unsustainable plant life, in a report issued by National Geographic, [Lake Mead May Dry Up by 2021](#) (Feb 13, 2008), researchers at San Diego's Scripps Institution of Oceanography have predicted that “there is a 50 percent chance Lake Mead will run dry by 2021 and a 10 percent chance it will run out of usable water by 2014.”



Figure 1.8. North Las Vegas derelict house and parking lot. Author.

Transformation is undeniably no easy task when one is attempting to improve or create collective shifts in identity by means of architectural intervention. The Las Vegas model has proven that alien intervention to a city in crisis will not only infect its visitors with identity crisis, but will also infect those who were born and raised in the once prosperous railroad town. •

- *“No city in American history has ever changed its clothes as frequently or as rapidly as Las Vegas. No place has ever grown so fast in so many ways without allegiance to any of the forms of identity its past.”*

Mike Davis in
*The Grit Beneath the Glitter: Tales from
the Real Las Vegas*, p 1.

This thesis proposes that the task of transformation should be limited to the area of intervention and build upon its existing identity. Personal experience, existing relationships and the ability to relate to the specific defined problems of a particular region are critical attributes an architect must hold prior to approaching particular opportunities. However, through re-appropriation, the potentials of abandoned architecture can create and invigorate an area.

Meet St. Catharines

St. Catharines

When industry flourishes, and a city is prosperous, you have a city of vibrancy, full of life—most importantly, however, full of jobs. . .

...meet St. Catharines twenty or so years ago.

Though most of it was before my time, St. Catharines history included a bustling downtown core and surrounding areas. Like many other Canadian cities, the design of the majority of the buildings had absolutely no intentions of provoking the imagination; however, during times of industrial prosperity, it did not seem to matter. When this city was fuelled by economic energy, its people had energy, were active and were involved in maintaining the city's vibrant spirit. The energy of people and community did not engage in cultural provocation, fostering instead a sense of pride in their properties making them unique and beautiful, which masked a homogenized environment. The recession in the early 1990's and an increasing popularity of off-shore labour in the manufacturing industry, created job insecurity for many residents of St. Catharines.

A city that once pulsed with industry is now in limbo and an identity crisis is now upon St. Catharines.



Figure 1.9: Downtown St. Catharines in 1905. <http://www.mccord-museum.qc.ca>. January 2011.

Contrary to popular belief, St. Catharines never wanted to become known for what it has become:

a retirement hotspot for Torontonians, as one of the top five cancer centers in Canada,¹⁹ or the 57.3% obesity rate that led to it being awarded the 2001 'Canada's Fattest City Award.'²⁰

The identity it once celebrated seems nearly impossible to regain.

¹⁹ *Chronic Diseases and Healthy Behaviour*. www.niagararegion.ca. 2001.

²⁰ *Fattest & Fittest, St. Catharines leads the fat parade*. *The Globe and Mail*, July 21, 2001.

Program Development: Part I

This thesis proposes a re-imagining of a decommissioned General Motors plant in the heart of St. Catharines. Its program is revealed through architectural and textual vignettes that respond to the theoretical ideas proposed in the preceding texts.

♦ For scope and locations explained in this sub-chapter refer to Floor Plans in Appendix Panels 2, 3 & 4

[560 m²] Main foyer

[36 m²] Reception desk

[18 m²] Reception office

[1750 m²] Evolution of Industry Museum

[120 m²] Mobile installation space

[600 m²] Exhibit space

[220 m²] Observatory space

[2720 m²] Museum of Reconstruction

[290 m²] Exhibition space

[110 m²] Celebrated exhibition space

[100 m²] Service space

[115 m²] Kitchen and dining space

[5500 m²] Storage Space

[4560 m²] Salvaged Structure Space

[30 m²] Service Lift



Figure 1.10. Section perspective of the museum space and organic cultivation. Author.

The Museum:

◊ *exploring St. Catharines*

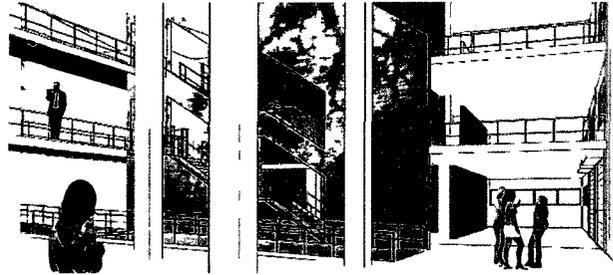


Fig. 1.11: Interior vignette of Lobby. Author

◆ *For scope and locations explained in this sub chapter refer to Floor Plans in Appendix Panels 2, 3 & 4*

Upon entering the lobby, (Figure 1.11) visitors have the option to explore a museum focused on the evolution of St. Catharines. The eastern side of the museum provides documentation on industry in St. Catharines, including factories that are still operating and others that have vanished or are in a state of abandonment in St. Catharines. The addition on the third floor of the museum provides an observatory for reflection as one looks out upon the transforming eastern General Motors site and the wartime housing development beyond. (Figure 1.12).

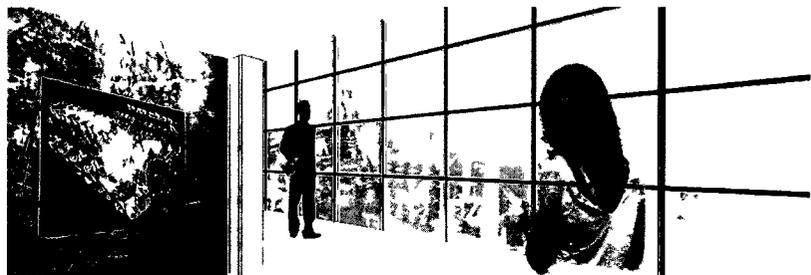


Fig. 1.12: Interior vignette of observation space. Author

The narrative begins to shift, however, as the visitor moves westward; physical artefacts from the factories documented in the previous wing are on display, but have undergone transformations into works of art and architecture. Exhibition circulation weaves in and out on a diagonal, creating tension between the existing industrial grid and the installations which remain within the rectangular containers of space. As space opens up towards the west end of this wing, a grand space reveals itself, providing visitors with a view of two celebrated installation spaces. (Figure 1.13)

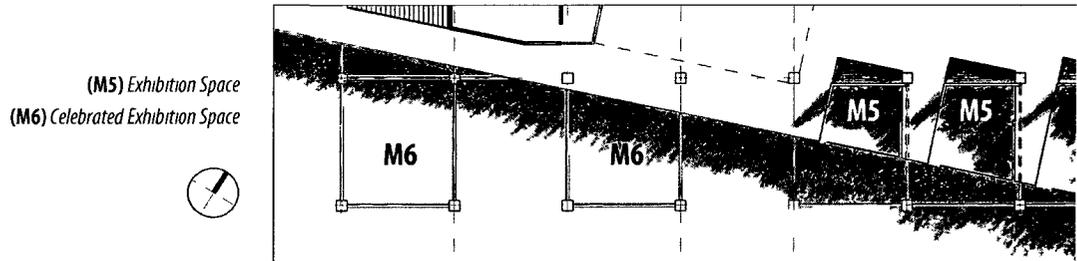


Fig. 1.13: Scope of celebrated exhibition space. Author.

Along the second floor, in the most western portion of this project, the mezzanine protrudes into a greenhouse space, providing access to the service spaces for the museum. As one travels into this space, the plant life of the greenhouse alludes to the tension and cycle between construction and decay (Figure 14).



Fig. 1.14: Interior vignette of museum service space. Author.

By being inserted into the exposed grid of the existing General Motors factory, with little architectural intervention, the museum allows for reflection on the past while questioning the changes brought about by those actions.

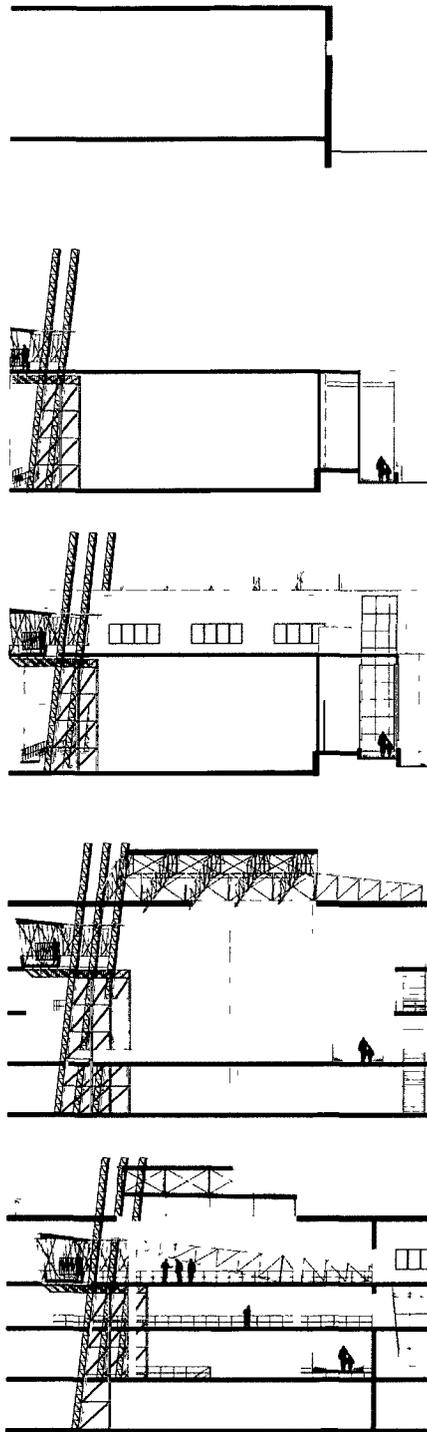


Fig. 1.15: Visitor progression sections. Author.

Defined Bystanders

Architectural Transformation

The blight surrounding St. Catharines seemingly fits the bill of a monotonous society where variety is limited and perhaps non-existent. Municipal systems and council committees continue to turn down attempts that propose anything out of the ordinary.²¹ Realization of the transforming urban growth and decay will continue to go unrecognized if developments continue to follow a homogenizing model. Prior to presenting an architectural resolution that will provoke society into accepting alternative models, the architect must first clearly identify whom the prospective participants are in the transformation to follow.

Missing or breaking the connection between culture and our lives has led to a loss of imagination.²² The shaping of the product or mental attitudes, aforementioned in planned obsolescence, has spawned not only a throwaway culture of physical goods, but a disregard for our own spirit as well.²³ As architects and engineers fulfil the expectations and values of industrial influences, their monotonous designs influence our expectations of how to design, build, or live our lives.²⁴

²¹ Many developments have been rejected—from skating rinks in the downtown core, to the renovation of a 1905 Opera Theatre (it was demolished instead. Diamond and Schmidt's design proposal for a major urban renewal project in the harbour front of St. Catharines was rejected in 2008. Local firms have focussed primarily on car dealerships and retirement homes.

²² Berman, Marshall. *All That Is Solid Melts into Air. The Experience of Modernity*. New York: Simon and Schuster, 1982. Print, 24

²³ Packard, Vance. *The Waste Makers*. New York: D. McKay, 1960. Print, 54.

²⁴ Dan Phillips on Creative houses from reclaimed stuff." www.ted.com. Web. 20 Mar 2011.



Figure 2.1: Wartime house in downtown St. Catharines. Author.



Figure 2.2. Downtown St. Catharines: Boarded up storefronts. Author

We must also question if St. Catharines would even exist without expansion of industry between Toronto and Buffalo. As Pre-fabricated wartime houses (Figure 2.1), presently reside amidst a rotting core of abandoned factories and empty storefronts in St. Catharines (Figure 2.2). Employment has shifted away from heavy industry and manufacturing to service industries such as call centers and retail malls, which, like most cities, grow on the periphery of the city (Appendix 1). Subsequently, the downtown core has reached a vacancy rate of ten percent, the highest it has been since 2000, and has raised a red flag regarding the future of this "Garden City."²⁵ In 2005, *The Globe and Mail* took note of this crisis and called St. Catharines "*the Garbage City*."²⁶

St. Catharines is what remains after prosperity, architecture and society have proven to be as disposable as the market, when a city has outgrown or outlived an industrial and technologically driven past that has dominated the public consciousness and the imagery of the arts.

• "the Apollonian dream state, in which the world of day veils itself and a new world clearer, more comprehensible, more moving the Apollonian illusions. . ."

Friedrich Nietzsche in *Birth of Tragedy*, p.41.

⊖ "From the innermost depth of nature, then we have a glimpse into the essence of the Dionysian. . . Dionysus objectifies himself"

Friedrich Nietzsche in *Birth of Tragedy*, p.18.

As the process of standardization of construction continues, it begins to resemble mass production. Friedrich Nietzsche in *The Birth of Tragedy* claimed that cultures approach the world from two different perspectives; one of them is the Apollonian perspective • — a very crisp, premeditated, intellectualized and perfecting train of thought, while the other is Dionysian perspective ⊖ that revolves around the basis that intuition includes organic texture and human gesture.²⁷ The Apollonian perspective makes its appearance primarily in the building industry. Plato puts the Apollonian model

²⁵ "St. Catharines Downtown Association." <http://www.stcathdowntown.com/economy>. 2005.

²⁶ Terrence Belford. *St. Catharines: the Garbage City*. <http://www.theglobeandmail.com>. 2006.

²⁷ Nietzsche, Friedrich W. *The Birth of Tragedy and the Genealogy of Morals*. Garden City, N.Y: Doubleday, 1956. Print, 18.

into perspective, when he expressed that we all have a perfect idea that we want to achieve in our creations and we thus force our natural environment to accommodate that dream.²⁸ Since the industrial revolution has provided contraptions that can do, forthrightly, anything we want them to do, the utopian model is the basis of this notion of perfection. However, developers, government, and stakeholders make compromises when they realize they cannot afford that dream and begin to make rash decisions that will substitute quality with affordability. Now, the look-alike of that dream becomes standardized, mass-produced, packaged, and arranged for rapid distribution and easy financing in order to be sold off as fast as possible.²⁹

Collective participation in the transformation of a city is a difficult strategy; this is mostly due to the constraints imposed by people's social and physical environment. Restrictive environments manipulate its citizens and subvert the expression of the individual to the will of the system.³⁰ A community can only think of what it knows. This thesis will question how an intervention in an abandoned section of an industrial city can successively transform or influence the will of its citizens to engage and consider a diversified and desirable city for all demographics. How would citizens learn to deal with the freedom offered by a new perspective on what constitutes a building? Ironically, Hebert Marcuse, the author of *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society*, claims that although the imagination has

²⁸ Dan Phillips on Creative houses from reclaimed stuff." www.ted.com. Web. 20 Mar 2011.

²⁹ Blake, Peter. *God's Own Junkyard: The Planned Deterioration of America's Landscape*. New York: Holt, Rinehart and Winston, 1964. Print, 28.

³⁰ Goodman, Robert. *After the Planners*. New York: Simon and Schuster, 1972. Print, 140.

envisioned the idealized state of utopia, our imagination is also capable generating new ideas, and reconfiguring the familiar.³¹

Rethinking traditional methods of urban renewal can provoke public imagination and rehabilitate the identity of citizens otherwise in limbo. However, which path will St. Catharines choose to take? Will the expansion of call centers and abandonment of truly historic relics continue to mimic a path similar to that of Las Vegas? Or will St. Catharines follow the model occurring in Los Angeles, where the city has alternatively salvaged and celebrated once-prosperous districts, thus allowing a re-energized society to put a unique stamp on their place and time, such as occurred in the regions of Venice, Culver City, North Hollywood, West Hollywood, Santa Monica, Downtown, and Koreatown. Overcoming an industrial identity is possible through the creation of a hybrid identity that makes the city a genuinely unique place.

Homi Bhabha, the author of *Location of Culture*, examines the subcultures that perform within and outside of the totalizing boundaries of society*. Performing within the limits and margins of society, culture operates on the fringe of the mainstream, subverting predetermined identities to produce new forms of meaning and strategies of identification. Hybrid identities³² can be influenced in the architecture of Los Angeles. The re-developments of suburban homes are not creating something new or alien from the genetic history of the architectural elements, but are alternatively adapting to the existing conditions of culture, unbinding themselves from the limits of convention.

*"the agency of identification is never pure or holistic but always constituted in a process of substitution, displacement or projection"

Homi Bhabha in
Location of Culture, p 312

³¹ Marcuse, Herbert. *One-dimensional Man: Studies in the Ideology of Advanced Industrial Society*. Boston: Beacon Press, 1964. Print, 115

³² Hybridity is a term used by Homi Bhabha in *Location of Culture*, and is used to describe the "perplexity of the living as it interrupts the representation of the fullness of life, it is an instance of interation, in the minority discourse, of the time of the arbitrary sign—the 'minus in the origin'—through which all forms of cultural meaning are open to translation because their enunciation resists totalization" (Bhabha p 315)

The reclamation of historic structures is a tactic that can positively transform St. Catharines and possibly the greater part of Niagara. The fall of industry in the area is affecting more than just St. Catharines; the entire Niagara peninsula is experiencing plant closures including nearby Thorold, Welland, Port Colborne and Niagara Falls. We must present some form of hope for the future of Niagara, before it becomes tagged as the 'Rust Belt' of Ontario. Critical reclamation is necessary and timely and the method will necessarily not follow the typical economic or traditional model previously described. •

• *Coop Himeublaui states that architecture should exempt "Palladio and other historical masks, because we don't want architecture to exclude everything disquieting. We want architecture to have more. We want architecture that bleeds, that exhausts, and that revolves, and even breaks, architecture that burns, those stings, that rips, that tears under stress."*

New Spirit in Architecture, p 36

1, 200,000 Square Feet

On December 23rd, 2010, St. Catharines' greatest symbol of the labour movement closed for business.³³ Occupying a total of 43 acres of land, General Motors decommissioned this factory site that covers over 630,000 square feet of plant space on the west side of Ontario Street, and 637,000 square feet on the east.³⁴ This plant was one of the few industrial buildings to be built in the late 1800's that was still operating in 2010.

The closure marks one of the most significant events of the modern era in St. Catharines. Once the primary employer in the city, General Motors, was responsible for employing fourteen thousand workers.^①

With over one million square feet of abandoned industrial brownfield, the site in the downtown region of St. Catharines will certainly determine the fate of revitalization in this city for decades.

³³ "By the end of the month, a manufacturing era that began 110 years ago with McKinnon's Dash and Metal Works finally ends. Thousands came to the city with the promise of work at McKinnon industries and later General Motors. Its success grew a community and many side businesses. For Decades, its success and the prosperity of St. Catharines were inseparable." Quote taken from the St. Catharines Standard, article written by Monique Beech called "Mapping out a Future," December 21, 2010.

³⁴ Doug Herod, End of an Era on Ontario (Street). St. Catharines Standard. Feb 27, 2010

^① This thesis proposes that personal experience and intimate knowledge is vital in making a proposal for intervention. The author was raised by parents native to St. Catharines. His mother, father, grandfather, and uncle have all worked in this particular factory.



Fig. 2.3: View of decommissioned west General Motors Powertrain Division factory. Author.



Fig. 2.4: View of the decommissioned west General Motors Powertrain Division factory. Author.

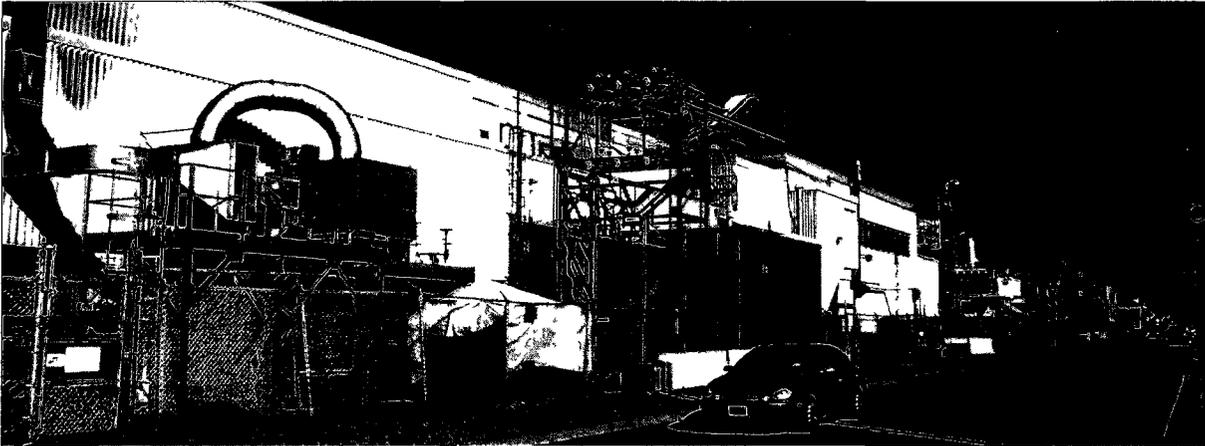


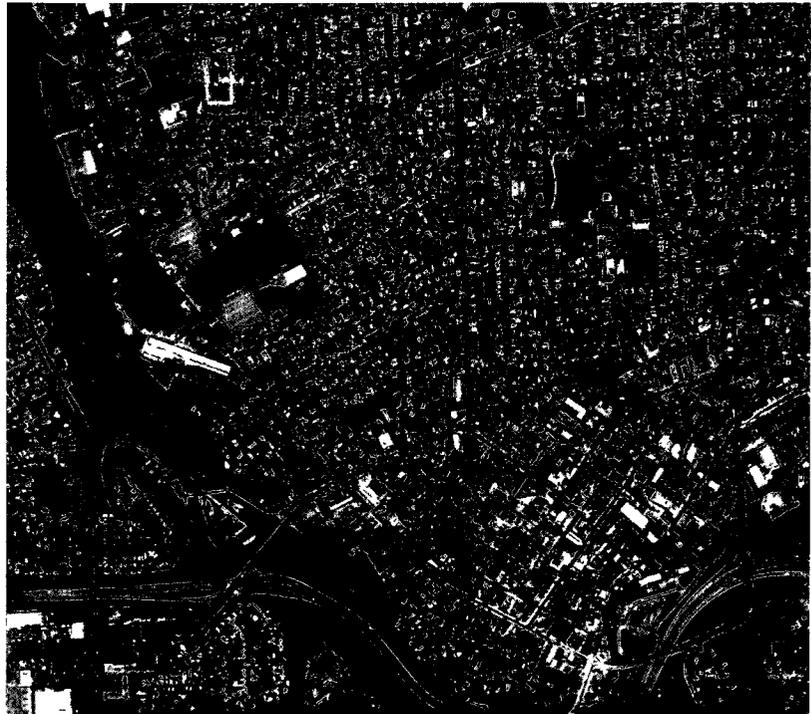
Fig. 2.5: View of the decommissioned east General Motors Powertrain Division factory. Author.



Fig. 2.6: View of the decommissioned east General Motors Powertrain Division factory. Author.

Location

The abandoned General Motors factory is set within a neighbourhood of repetitive wartime housing located on the edge of the downtown core (Figure 2.7). The vitality of this neighbourhood has been in a downward spiral since the early eighties when urban sprawl began to grow. Due to the economic downturn that greatly affected the North American automotive manufacturing industry, St. Catharines' once largest employer has not hired new employees since 1994 and has since then laid-off or 'bought-out' the majority of its employees (Figure 2.7).³⁵



◆ For map of St. Catharines:
refer to Appendix 1.

Fig. 2.7: Site in relation to wartime housing and downtown core of St. Catharines.
<http://maps.google.ca/>. 2011.

³⁵ Doug Herod, *Niagara Cannot Rely on GM for its Future*. St. Catharines Standard. Dec 8, 2005

Due to its acute proximity to the downtown core, a host of vivid memories remain with those who have worked in the factory.

So...

*Resident Bob White, a former employer of General Motors and Resident of St. Catharines, said "For anybody who worked at Ontario Street (plant), it's a dramatic feeling because that building's been there for more than a hundred years. . .Bottom line: If you're an Ontario Street guy you always think of General Motors St. Catharines as being Ontario Street. . . It has a huge heritage and we're proud of that heritage."*³⁶

... 'ERE...

*"Niagara needs to say goodbye to GM and hello to the "the new domestics," says a leading town planning authority. You cannot rely on GM for your future. . .there is no crisis in the automotive industry, but there are regions in crisis."*³⁷

... 'ERE...

-*"Are you finally realizing how big of a piece of shit this thing is?"*

-*"No, no, I already knew that. . . I am a student documenting it for a redevelopment project."*

-*"Redevelop it?! Tear this piece o' shit down. . . We don't 'wanna' see this thing around anymore." – Local Passer-by*

³⁶Herod, Doug "End of an Era on Ontario (Street)" St. Catharines Standard Feb 27, 2010

³⁷Herod, Doug "Niagara Cannot Rely on GM for its Future" St. Catharines Standard Dec 8, 2005

Program Development: Part I

◆ For scope and locations explained in this sub-chapter refer to Floor Plans in Appendix Panels 2, 3 & 4

[250 m²] Celebrated Service Spaces

[860 m²] Exterior Study Zones

[210 m²] Ruin Courtyard

[650 m²] Green Courtyard

[7190 m²] Study Zones

[2220 m²] Concept Studio

[2475 m²] Organic Studio

[2495 m²] Prototyping Studio

[1345 m²] Organic Cultivation

[1305 m²] Greenhouse

[40 m²] Greenhouse Service

[780 m²] Office Spaces

[50 m²] Main Foyer

[10 m²] Reception Space

[75 m²] Museum Administration Offices

[505 m²] Entrepreneur Offices

[55 m²] Meeting Rooms

[80 m²] Service Space

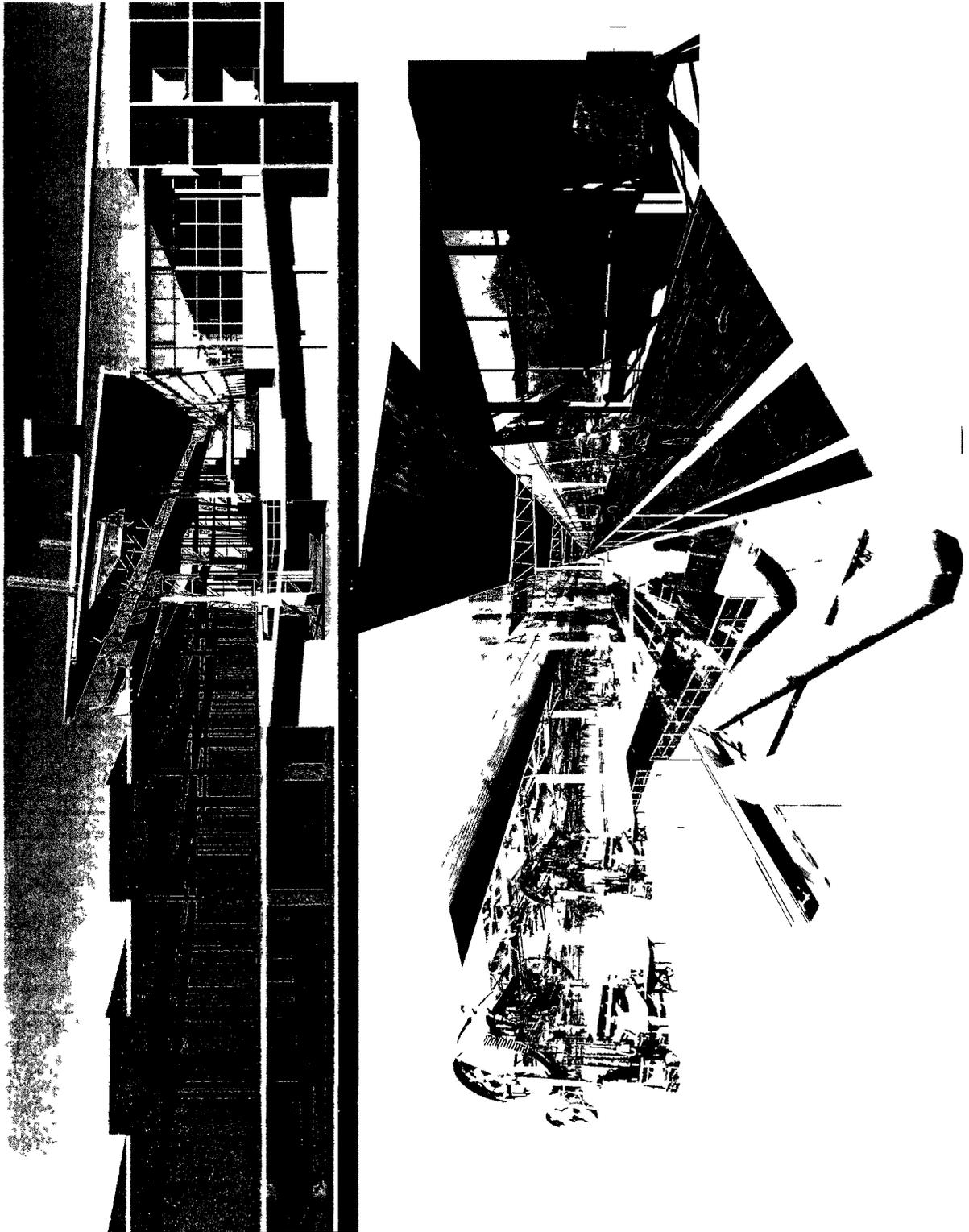


Figure 2.8. Section perspective of service, study and office spaces. Author.

Program Development Part II

♦ For scope and locations explained in this sub-chapter refer to Floor Plans in Appendix Panels 2, 3 & 4

This section of the thesis returns to the passage through the modified General Motors building, taking up where we left off, just past the entry space and museum.

Moving north from the entrance foyer, a catwalk penetrates study spaces and office spaces. Inhabitants are able to observe the operations that happen in these spaces, however, partially obstructing their sight are old automating machines, service equipment and exterior study zones. As one continues to travel upwards on the ramp, the narrative of the research process begins to reveal itself.

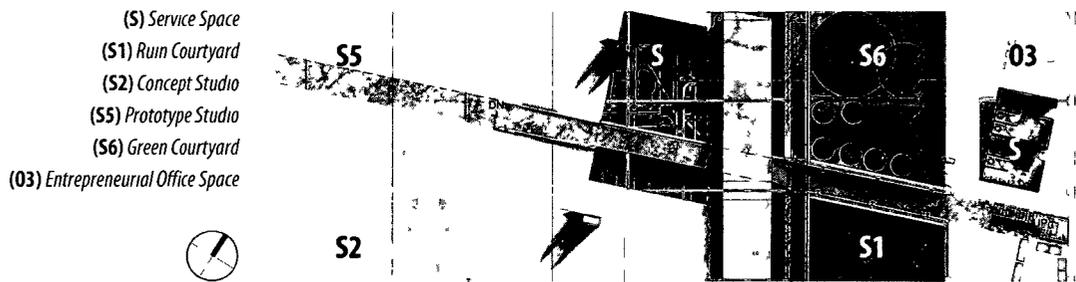


Fig. 2.9: Plan detail of obstructions. Author.

The decommissioned automating machines, service piping, and exterior study zones are functional strategies that break up an open floor plan and create sound barriers for students deep in thought. The students are reusing skills once employed in the General Motors plant and learning how to manipulate and reconfigure objects, traditions, and the limitations of their skill. The space for skill development is juxtaposed against offices for entrepreneurial practice and the collision between theory and practice is unveiled (Figure 2.10).

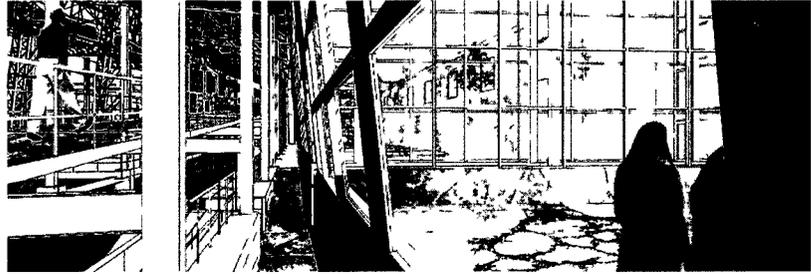


Fig. 2.10: Exterior buffer zone for study. Author.

While students are considering the reuse of existing structures and materials, opportunities to reconfigure the design process become possible, especially where standard and normalized parts are re-purposed. The parts, in this case, contribute to otherwise unimagined alternatives for the remaking of new spaces in the city. To narrate this process architecturally to visitors travelling along the ramp, they are confronted with the service spaces, structures and mechanical equipment which may or may not be functioning in the operations in this facility (Figure 2.11).

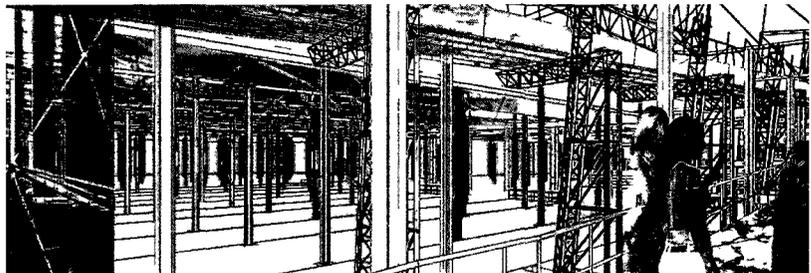


Fig. 2.11: Zone for Planning. Author.

While the narrative of re-making progresses, visitors continuing their journey along the ramp experience a significant moment in the program of the building. After travelling through the study zone, they are provided an opportunity to interact with the full range of participants in the ongoing reconstruction project.

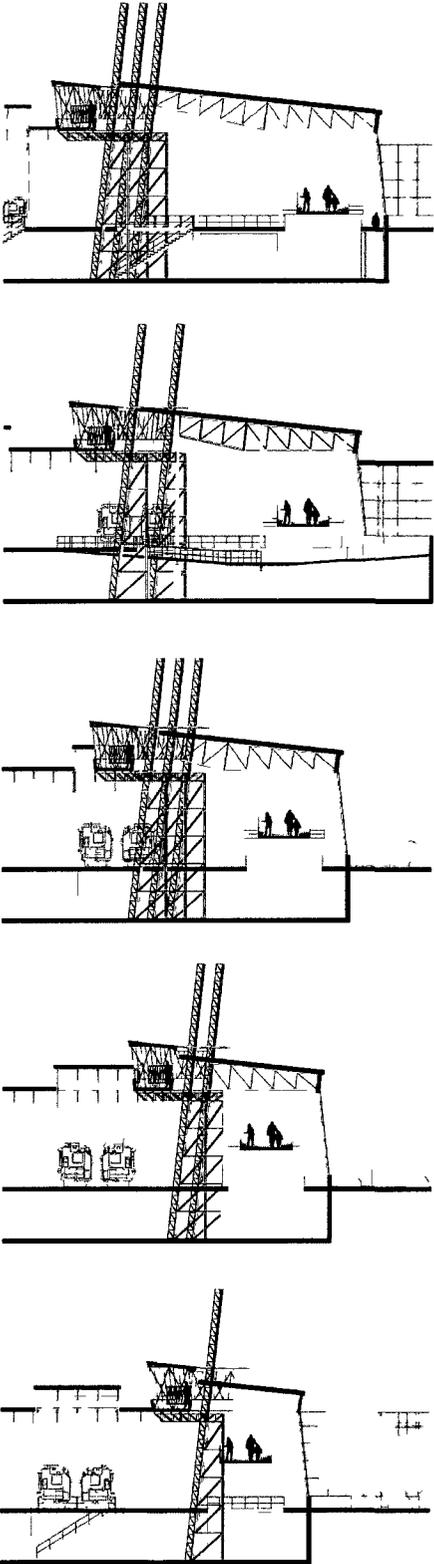


Fig. 2.12: Visitor progression sections. Author.

Challenging Pedagogy

Realization ← Real

The unwillingness to address or face a failing legacy that previously defined St. Catharines, has consequently left the General Motors plant vacant. Several schemes for the redevelopment of the site have been proposed and begun, and then halted due to controversy, reported by the local newspaper, *The St. Catharines Standard*.³⁸ The current consensus is to leave the factory 'as is' until General Motors "picks up again," and then move back in.³⁹ Although industry in the area has slowly declined, there is still a sense of denial about this failure amongst the residents. On the other hand, there may be reason for optimism. Gil M Doron, in *A Global Derive*, studies the potency of dead zones in cities and claims that these 'white zones' for future planning can transmit energies and potential, housing an alternative present reality. These white zones are what he describes as voids; no-man's land, terrain vague, derelict areas, residuum and wastelands.⁴⁰ These spaces currently remain unplanned and are lacking architecture, raising the question: how can an intervention use the site and its context to creatively address the potential of white zones while utilizing its energy to its greatest potential?

³⁸ The future of the 43-acre property is a huge question mark for a city that is bleeding industrial jobs and can't grow outwards because of the Greenbelt. The current city council recently voted to keep the land designated industrial in the city's new Official Plan, despite a staff recommendation to keep its options open. Not all candidates for St. Patrick's ward agree with that decision, however Kizera would love to see a new industrial giant — or an existing one — reinvigorate the old plant and fill it with thousands of workers/potential tavern customers. But he's not convinced it will happen. "What are we talking about bringing in there, realistically — green technology? The auto sector again? Or are we just going to leave it empty for years and hope?" he asked sceptically, from a table in the venerable pub. "Whatever you do with the property, it has to bring jobs, it has to bring people to the area. That's what we need." Quote taken from the *St. Catharines Standard*, article written by Monique Beech called "Mapping out a Future," December 21, 20010.

³⁹ Herod, Doug. "Niagara Cannot Rely on GM for its Future." *St. Catharines Standard* Dec 8, 2005

⁴⁰ Borden, Iain, and Sandy McCreery. *New Babylonians*. London: Wiley-Academy, 2001. Print, 83

The design task must embrace the radical potential of these spaces, the community's limited knowledge of this potential and the power of change. Traditional developments, in many of our Canadian cities, have conformed to design proposals that primarily focus on short-term economic benefits. We must begin to reconfigure the way we look at the city to re-activate society. The boundaries and margins of the pre-assumed urban text must be transgressed, invaded, and deformed.⁴¹ Boundaries and margins, however, never fully disappear in identity transformation but rather remain in a hybrid state.

With the introduction of an extra-normal design proposal, a certain destabilization will occur and become a significant part of the transition process. In Jean-Paul Sartre's, 'Being and Nothingness', he speaks of the divided self—how human beings act differently when they are alone, separated from expectation patterns, or other influences foreign to our 'self'.⁴² What people will begin to do is feel the need to react to these pressures and begin fulfilling expectations on how they should act or live their life. These expectations are accommodated in the building industry as well. This is how monotonous architecture in our suburbs, our retail complexes and other buildings in the city begin to multiply. Urban dwellers sub-consciously identify with not their own attributes, but instead a city's predetermined narrative, and react to the existing conditions of a city.

• In his Ted Talk on *Creative houses from reclaimed stuff*, Dan Phillips uses the analogy of eating spaghetti, chewing with our mouth open, making noises, scratching ourselves, then when someone comes in, we eat the spaghetti they way they expect us to.

The alteration or agitation of our realm of references can be seen in the works of *Hippies in the Drop City Movement* and in the works of artist Gordon Matta Clark. 'Drop City' in Colorado, used

⁴¹ Bhabha, Homi K. *The Location of Culture*. London: Routledge, 1994. Print, 296.

⁴² Dan Phillips on *Creative houses from reclaimed stuff*. www.ted.com. Web. 20 Mar 2011.

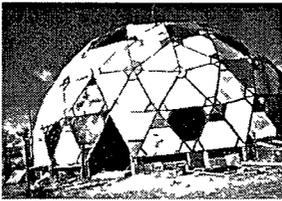


Fig. 3.1: Theatre Dome in Drop City in Southern Colorado.

Jencks, Charles, and Nathan Silver
Adhocism Venice, CA Environmental
Communications, 1974 Print, 86



Fig. 3.2: 'A Split House.'

Lee, Pamela M, and Gordon Matta-Clark
Object to Be Destroyed: The Work of Gordon Matta-Clark Cambridge,
Mass MIT Press, 2000 Print, 21

• "In an attempt to combat 'neglect and abandonment' in all its forms, he asserted his right to 'improve the property, to transform the structure in the midst of its ugly criminal state into a place of interest, fascination and value'"

Mark Sladen in
Panic Attack! Art in the Punk Year, p, 12

waste objects to build Buckminster Fuller-inspired Geodesic domes (Figure 3.1). While displaying methodologies over ideologies their intention is not to show how the future will work, but instead, they show how people, and not systems, can make the future work by giving freedom in society a visual expression.

Gordon Matta-Clark, one of the main figureheads of 'anarchitecture', uses the analogy that "property and identity are deeply intertwined". In his piece *'Split House'*, he demonstrated how property constitutes a relationship to society and how the notion of property is bound to the terms of its use; consumption and waste (Figure 3.2).⁴³ When he literally cuts a building into two halves, people suddenly take notice of the violation of the 'object to-be-destroyed.' If there were no intervention, the building would escape from our memory, and exist without creating any critical thought or public provocation. What we can extrapolate from these two works is that the disruptions and detriment of comforting repetitious patterns of thought and behaviour are disorienting society. •

In Mark Wigley's manifesto *Agitation!: See What Architecture Is Shaking*, he notes that society cannot idealistically evolve in one direction forever. Nothing ever stands still, and if it does, it risks moving backwards and collapsing in on itself.⁴⁴ Like the Hippies and Matta-Clark intervened in their community, architects can begin to deform normative practices not only in their work, but also in how they work. In becoming disloyal to their own disciplinary norms, architects will redefine their clients, programs, construction methods, and challenge their own ethics.

Sidestepping normal rules for resolving crisis in space and society must begin by imposing on expressionless, empty and

⁴³ Lee, Pamela M, and Gordon Matta-Clark *Object to Be Destroyed: The Work of Gordon Matta Clark* Cambridge, Mass MIT Press, 2000 Print, 58

⁴⁴Wigley, Mark *Agitation! See What Architecture Is Shaking* Amsterdam, The Netherlands Archis Foundation, 2006 Print

• “By limiting itself to strident articulation of the pure architectural elements of space, structure and program, modern architecture expression has become a dry expression, empty and boring- and in the end, irresponsible.”

Robert Venturi in *Learning from Las Vegas*, p.57.



Fig. 3.3: Berlin Free Zone Woods, Lebbeus. *Radical Reconstruction*. New York: Princeton Architectural Press, 1997. Print, 34.

boring, and in the end, irresponsible spaces[•]. Now— architectural tradition becomes an ‘Anarchitecture’—a school that embraces anti-convention, applies forces on the academic discourse of progress, in an attempt to produce a reconfigured path for heritage and to raise awareness of alternatives to the status quo.

Lebbeus Woods, arguably the founder of anarchitecture, epitomizes the anti-conventional architect. His work demonstrates the revitalization of power and potential in urban ruins by embracing yet another dimension of human existence (Figure 3.3).⁴⁵ His works are focused on re-inhabiting the existential remnants of war and natural disaster; they are not celebrations of the actual deconstruction of an established order, nor do they symbolize or commemorate it.⁴⁶ His interventions accept the destruction with a certain pride in what has been suffered and lost, but also in what has been gained. His approach embraces the vulnerabilities and the strengths of the left-over remnants. When conventional buildings shatter for the first time, the building faces physical transformation and must be reinvented. Although societies in crisis remain cautiously optimistic about the regeneration of a city currently in shambles, Woods captures the potential released by the glaring weaknesses and the inconsistencies of the built environment.

• “When history ends, memory begins.”

Aldo Rossi in *Architecture of the City*, p.7.

The ruin symbolizes memory in Woods’ work[•]. Neither restoring nor replacing the ruin, he has layered methods of ‘radical reconstruction’ that call for the production of idiosyncratic space as what he coins ‘free spaces.’⁴⁷ His approach for radical reconstruction requires the salvage of ruins to provoke ingenuity. The idiosyncratic reshaping of the materials, which will be adapted to the ruin, has same effect on the inhabitant. Since conventional methods will not

⁴⁵ Woods, Lebbeus. *Radical Reconstruction*. New York: Princeton Architectural Press, 1997. Print. P.18

⁴⁶ Woods, Lebbeus. *War and Architecture*. New York, NY: Princeton Architectural Press, 1993. Print, 11.

⁴⁷ A term used by Lebbeus Woods, to describe spaces that suggest new forms of thought and comprehension, and suggest new conceptions of space that confirm the potential of the human to integrate itself, to be whole and free outside of any pre-determined, totalizing system.

follow this method of resolution, nor can money pay for the metaphysical recovery, resolution is solved by the members of the infected society itself.

In Nuremberg, Germany, Gunther Domenig provides a cunning example of radical reconstruction in the *Documentation Center*—an adaptive-reuse project that invades Adolf Hitler’s 1929 Congress Hall, which sits alongside the monumental Coliseum designed by his architect, Albert Speer.⁴⁸ Fascist architecture, particularly as displayed in most of Speer’s work, embodies ideological design elements that are physical and symbolic representations of strength and power.⁴⁹

What makes the Documentation Center a radical form of reconstruction is the juxtaposition of ideological design and the proposed modern substructure. Existing concrete and brick structures, which at times can reach five feet thick, remain untouched at all but one moment—the entrance (Figure 3.4). The sloping corridor penetrating the Congress Hall is composed of architectural elements such as steel, glossy aluminum cladding and glass, which are all alien materials to the existing building. Since the corridor manages to intervene in the fascist architecture while barely using or touching the existing structure, it seems as though the renovation boldly refutes it.

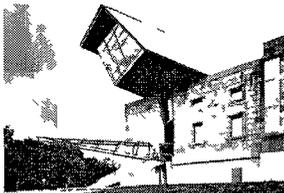


Fig. 3.4: Documentation Center
Mostaedi, Arian *Building Conversion & Renovation* Barcelona Carles Broto i Comerma, 2003 Print

The works of architects Lebbeus Woods and Gunther Dominig have approached the urban artefact uniquely. Both architects however, designed radical architectures that embody tension, including the tension between decay and rebirth or renewal.

⁴⁸ Mostaedi, Arian *Building Conversion & Renovation* Barcelona Carles Broto i Comerma, 2003 Print

⁴⁹ Sudjic, Deyan *The Edifice Complex: How the Rich and Powerful Shape the World* New York: Penguin Press, 2005 Print

The defunct General Motors site has similarly become a monumental 'found object,' or to what Aldo Rossi has called a skeleton⁵⁰ in the city. The proceeding transformation of this skeleton will become a useful analogy for the design process that will link the understanding of our historic identity, once as a functioning operation of spot workers creating block engines for General Motors, to a proposed program for a sub-cultural center. Processes of adaptation and mutations to the skeleton will record time and events that affect identity. The re-development process can begin to demonstrate new sets of spatial codes that adapt to and around pre-existing conditions of the found object. The site and the existing factory can thus become a palimpsest that records of a series of registrations and superimpositions of different places and times, seen at the same place and time.⁵¹

The particular physical limitations attributed to the found object create new relationships between the sites and objects that were formerly seen as 'static and fixed'. By re-exploiting static and fixed elements found in the existing building as well as the reconfigured parts of the East factory, the design could produce a counter-narrative that speaks to the transmutability of architecture. •

• *"Contrary to some theories, both design and nature are radically traditional, they work with subsystems that have existed in the past. All creations are initially ad hoc combinations of past subsystems, nothing can be created out of nothing"*

Charles Jencks in *Adhocism*, p 39

This thesis proposes re-use of decaying elements as a catalyst in the reconstruction of identities. As political and cultural uncertainties continue to appear, due to the failure of the utopian promise, boundaries between authority and legitimacy will blur. An intervention of the General Motors Plant on Ontario St. must attempt to coax people back into working with urban residue—rather than against it. By interrogating the very foundations of what city has been, currently is, and could prospectively be, the design

⁵⁰ A term used by Aldo Rossi, to describe what remains of a building through its life and death. Although a skeleton is not living once it loses its function, its form remains intact. The new function of the skeleton is now responsible for recording time in its many deformations.

⁵¹ Glusberg, Jorge. *Deconstruction: A Student Guide*. London: Academy Editions, 1991. Print, 84.

proposal will attempt to present alternatives to the residents of St. Catharines and allow them to envision the residue of an outlived identity within the city as an opportunity for re-birth.

A Center of Reconstruction

The program of the General Motors factory can now be re-defined. Negative economic and social influences on our environment, explained in Chapter 1, and the resultant monotonous architectures explained in chapter 2, have contributed to the need to reconstruct hybrid alternatives in architectural production.

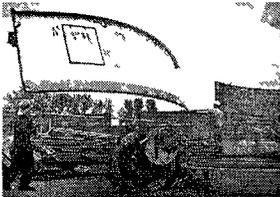


Fig. 3.5: Disassembly of General Motors building on Welland Street.
St. Catharines Standard

reconstruction of the east factory

In this thesis, the architectural design process will also undergo the processes of reconstruction by limiting itself to found material on the site. The eastern factory, initially built in 1925, has since undergone expansions in 1938, 1940, 1941, and 1945⁵² leaving a conglomeration of standardized structural and cladding elements. By disassembling the east factory, these elements become the basic elements for the re-development of the west factory as the plan involves improvising with the materials available (Figure 3.5-3.12).

The intervention will invade and adapt to the existing set of conditions in the west factory.

⁵² McKinnon Industries Limited. McKinnon chronology, "GM in Canada, the early years" Videocassette, 1970

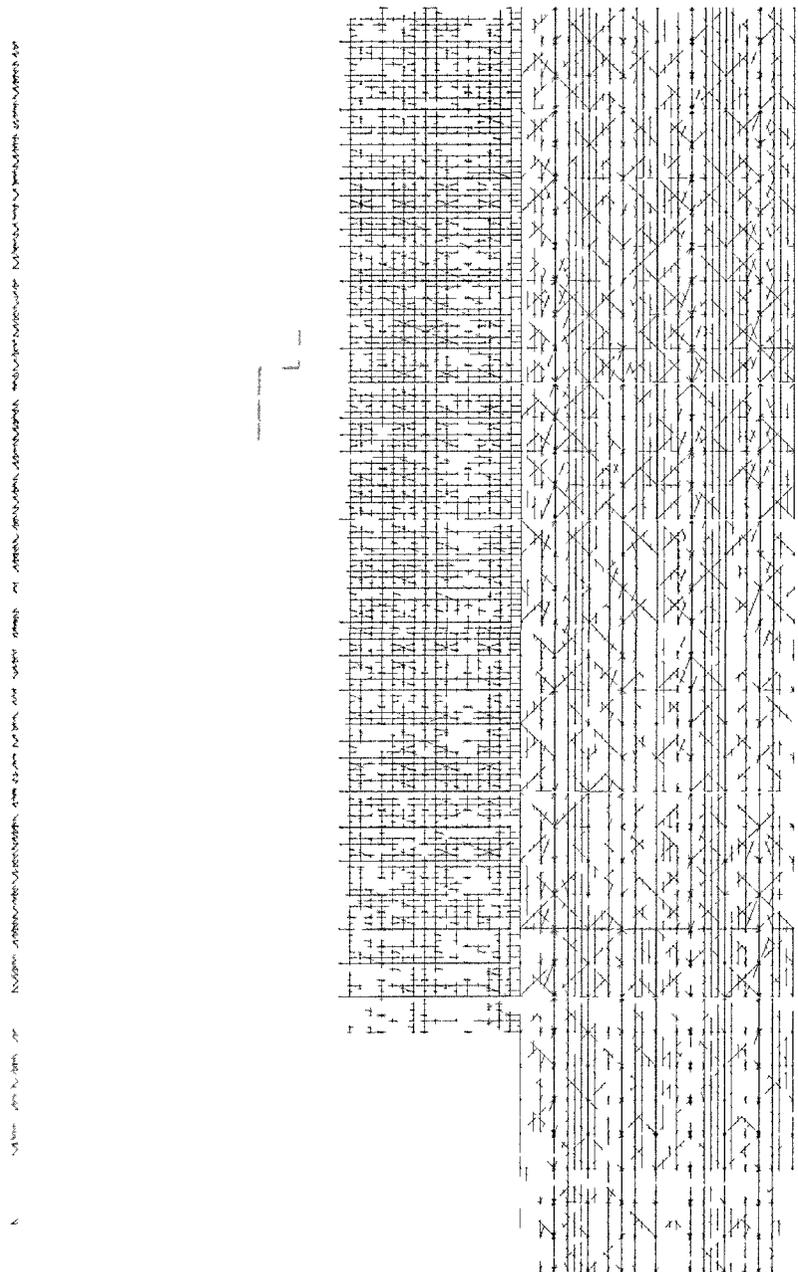


Figure 3.6. Truss inventory of east General Motors Factory. Author

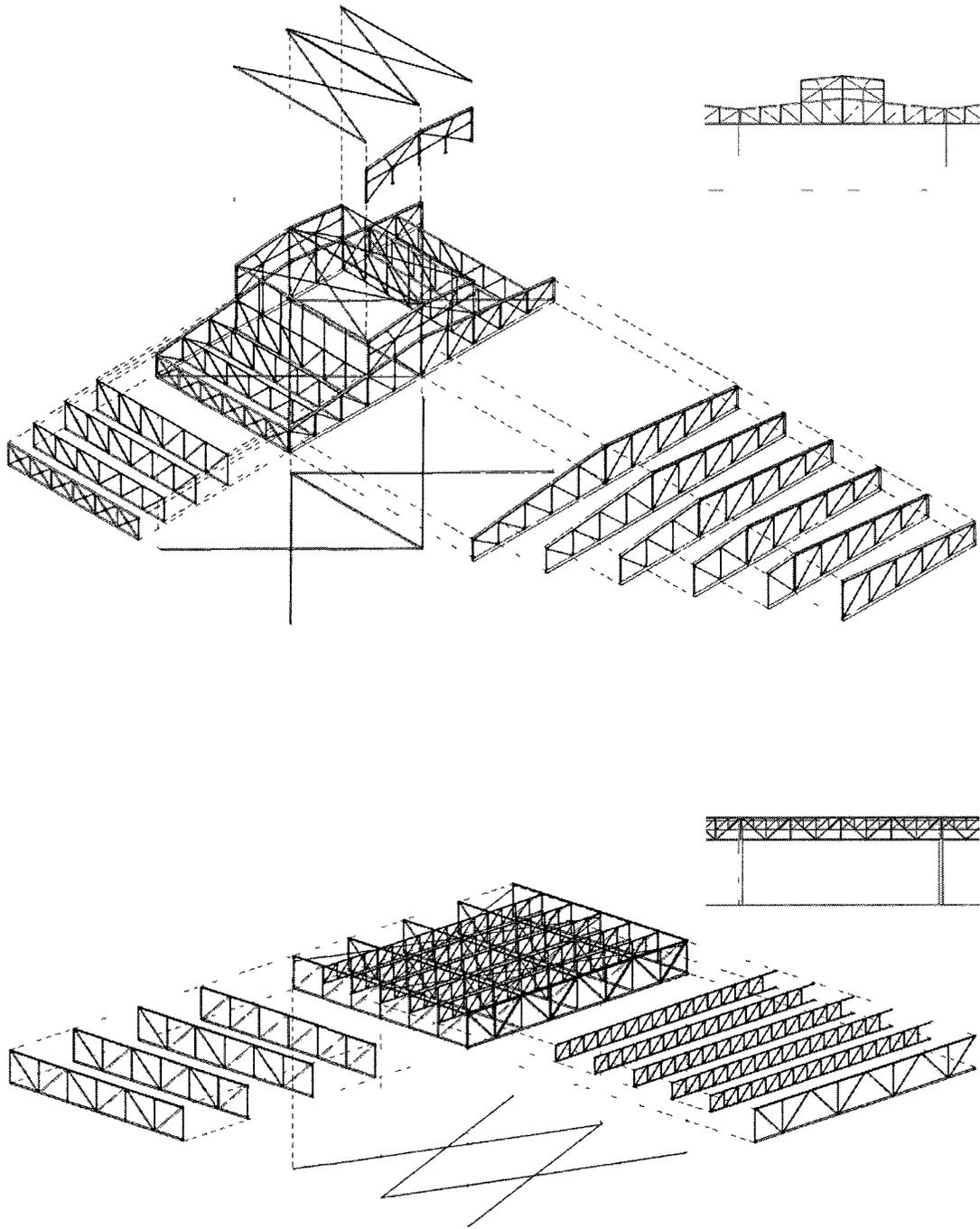


Figure 3.7. Truss systems of east General Motors Factory. Author.

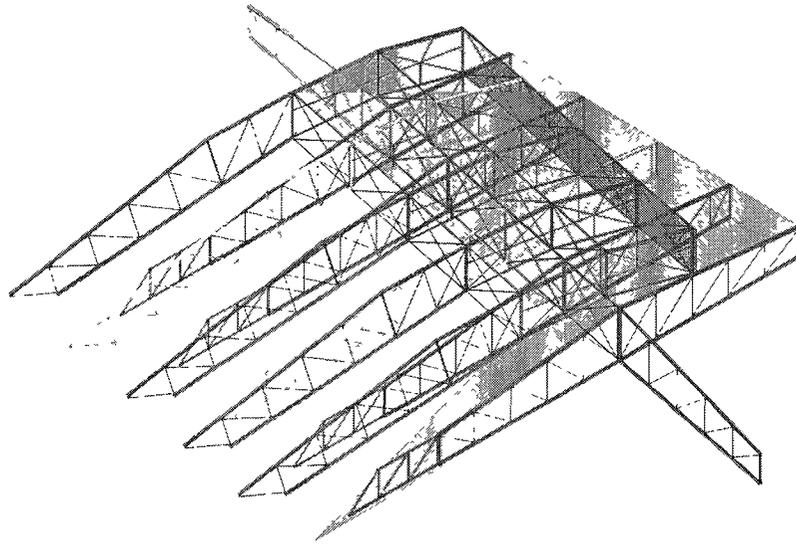


Figure 3.8. Reconstructed roof structure for main foyer. Author.

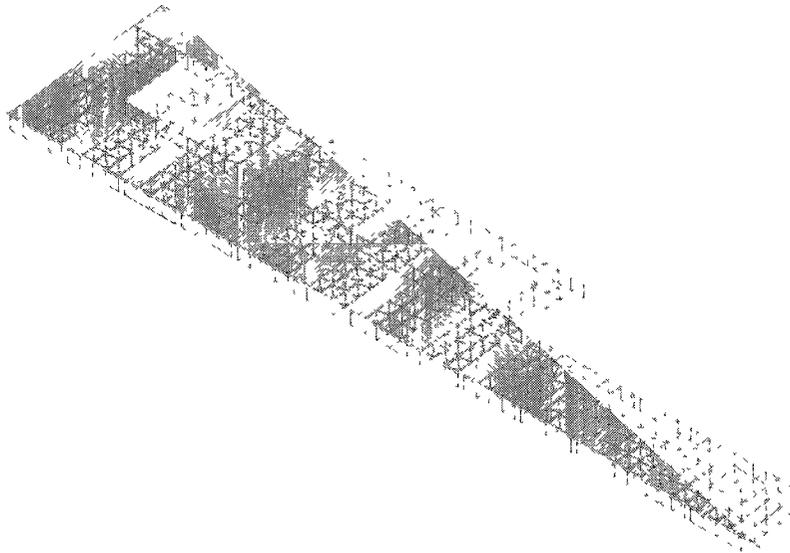


Figure 3.9. Reconstructed roof structure for museum. Author.

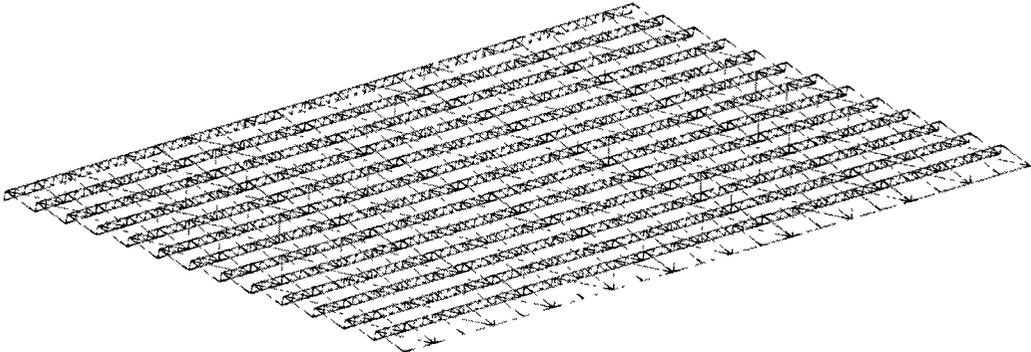


Figure 3.10. Reconstructed roof structure for greenhouse. Author.

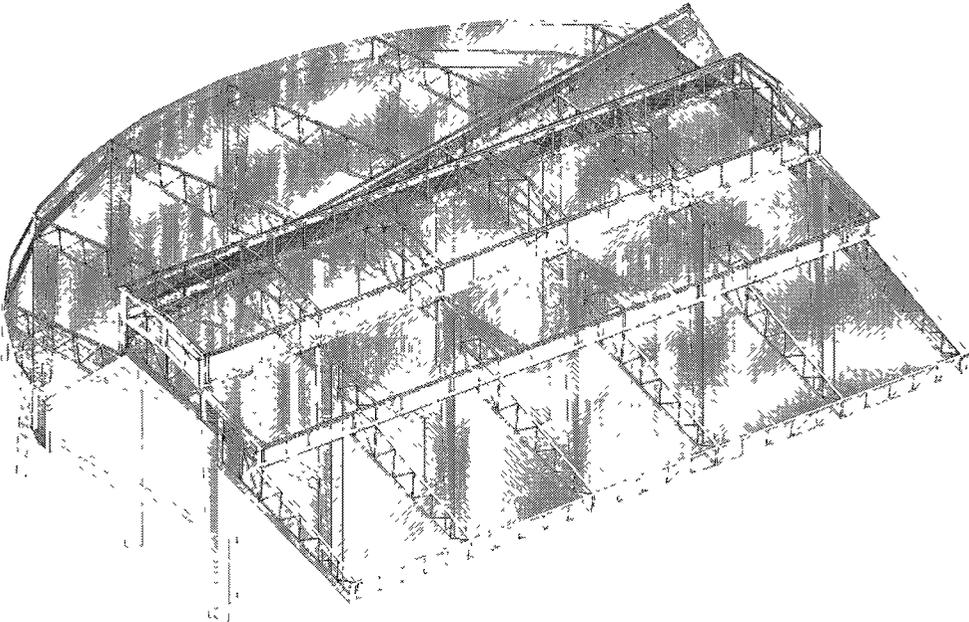


Figure 3.11. Reconstructed roof structure for education space. Author.

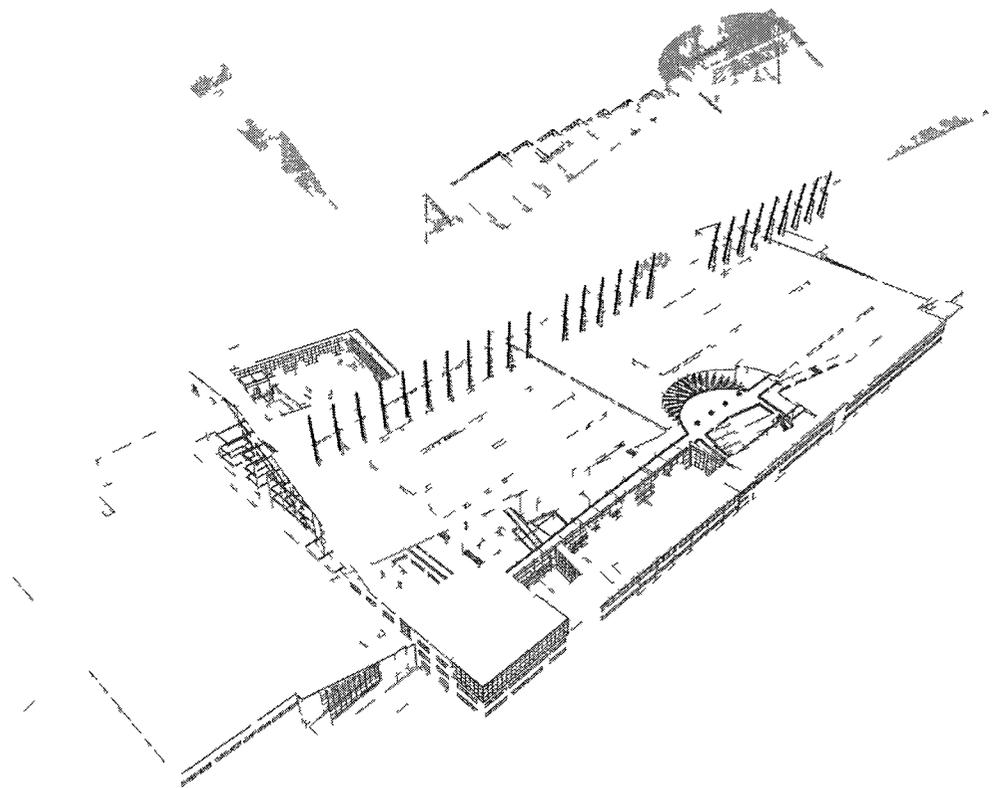


Figure 3.12. Axonometric drawing of reconstructed roof locations Author

◆ See Appendix 5 for site plan locations.

Re-use of existing infrastructure, such as the water treatment plant, steam generation and roads, will also take place. ◆

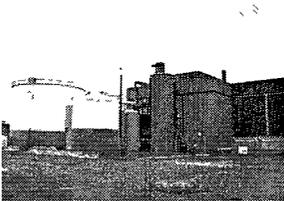


Fig. 3.13: On-site water treatment facility. Author

To the south, a water treatment facility that treated the waste water of the manufacturing process and recycled it, will also be reused (Figure 3.13). To build a hybrid plumbing system that will redirect the water from the adjacent creek and treat it on site for use within the *The Centre of Reconstruction* and the surrounding community.

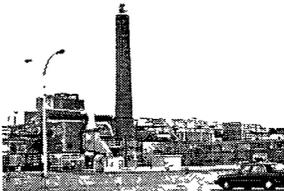


Fig. 3.14: On-site generation facility. Author.

The Boiler and Steam Generation building (Figure 3.14) is located to the east and re-used to heat the building via existing radiators, while using the excess steam to power the machines on site and pressure wash the equipment. This building will re-open for the same functions in the new program.



Fig. 3.15: On-site forges foundry. Author

Lastly, to the North, the forge foundry (Figure 3.15) where raw steel scrap metals were broken down and re-forged will be adapted to house a re-forging facility to make new building components or new pieces using the existing skill sets of the forge craftsmen.

Reconstructive Methodologies

The programmatic element called the *School of Reconstruction* provides incentive for participants to discover to learn about how to construct, design, draw and build products from scratch. Raw materials used in the school exercises are discarded everyday objects and leftover materials from the east factory. The forge foundry will be the site for these workshops and provide the proper infrastructure for larger scale projects. Reconstructive methodologies discovered through this hands-on process create living exhibitions whose guiding principles are derived from improvisation and play. The skills used and developed in these workshops are based on the skills of the General Motors workers and will help them find new uses for their trades, namely rebuilding the heart of their city. Workshops for conceptualizing and studying, modelling and prototyping, and machining and manufacturing, will provide space for 'reconstructors' to let their imaginations run free.

- *"Engineering should be a medium for creativity, not computation, but this requires recognition that "the destination it leads to is less important than the process of making it"*

Marshal Berman in
All that is Solid Melts into Air, p 242

Re-defining the Program

The re-defined program of the General Motors complex will also cater to the broad community of St. Catharines. The museum, market space, and exhibition spaces in the facility provide non-exclusive space for the public—inviting all to re-engage, re-think, and re-inhabit an the old, defunct General Motors factory, thus becoming part of the reconstructive discourse.

Re-configuring the Space

Re-configuring the General Motors factory marks the beginning of an attempt to create an engaging public space among the residents of St. Catharines. The design process and the passage through the building introduce options for rethinking spaces of identity within a community outside standard developments and big box construction.

Program Development Part I

♦ For scope and locations explained in this sub-chapter refer to Floor Plans in Appendix Panels 2, 3 & 4

[310 m²] Public Exchange Space

[1110 m²] Library

[30 m²] Library Reception

[20 m²] Library Service Space and Administration

[180 m²] Study and Reading Space

[330 m²] Stacks

[540 m²] Presentation Space

[230 m²] Floor Seating

[190 m²] Bench Seating

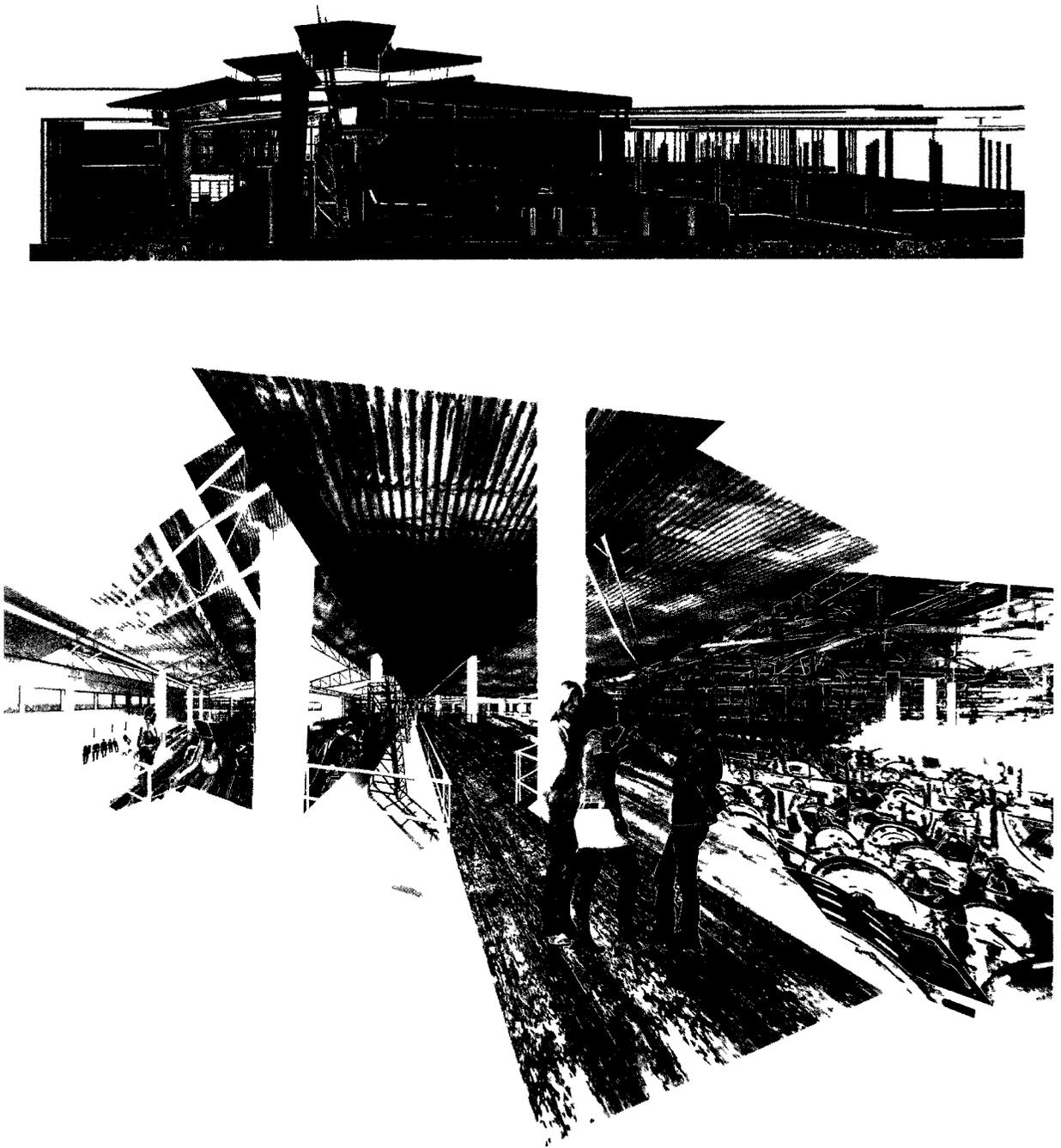


Figure 3.16. Section perspective of presentation spaces, and workshops. Author

Program Development Part II

When the geometry in plan interconnects, three different programs interconnect (Figure 3.17).

The intermingling of re-constructers from St. Catharines and the academy allows for an exchange of debate and discussion between the three different perspectives—each holding distinct bodies of knowledge.

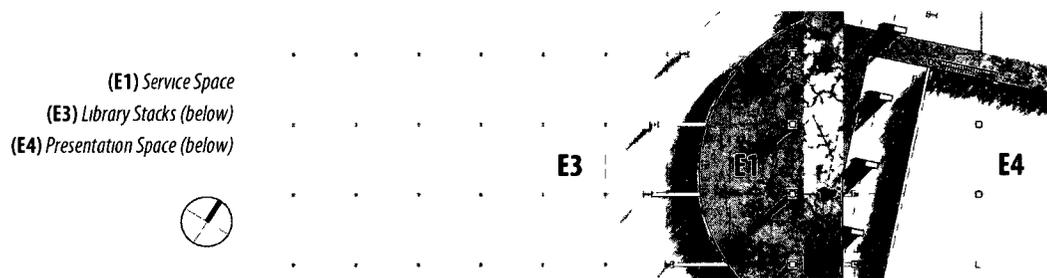


Fig. 3.17: Plan detail of exchange space. Author.

Meanwhile, students on the ground floor will be accessing information in the literature located underneath (Figure 18), re-configuring it for their own means as they gain confidence in their own development. Forthcoming processes found in their reconstructive strategies will be displayed and criticized in the presentation area.

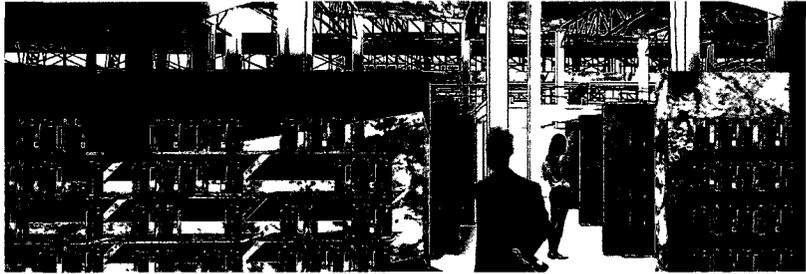


Fig. 3.18: Interior Perspective of library. Author.

Intersecting the grand exchange space is a service corridor that has sliced through the entire building. Since the floor elevation of the visitor ramp has been elevating throughout the course of the circulation route (Appendix 6), the intersection compresses the arcade space below, emphasizing its presence. Here, inhabitants finally have an opportunity to witness the function of the peculiar structure penetrating the Center of Reconstruction (Figure 19)—an exchange of raw materials from the eastern General Motors factory, but also, their own junk.



Fig. 3.19: Interior perspective of intersection. Author.

Once the visitors cross the path of the circulation of salvaged goods, they will finally realize how these materials are utilized in the reconstructive methods presented.

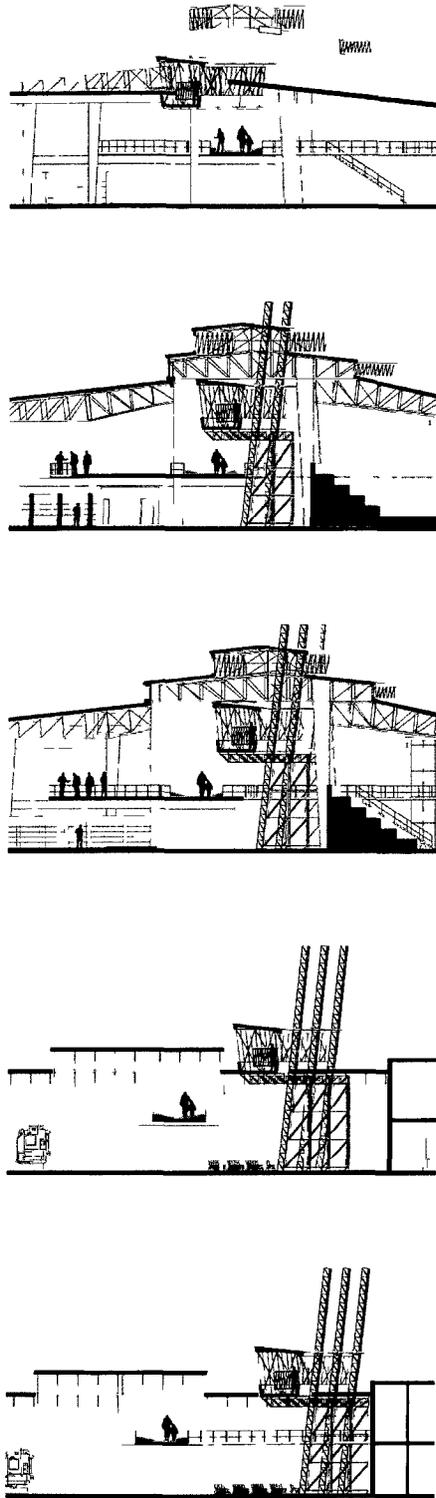


Fig. 3.20: Visitor progression sections. Author.

Intervening & Inventing **Resolution – Reformation**

Incentives for radical shifts in the train of thought, acceptance, and reconstruction of the General Motors factory are essential in order to attract the potential reconstructive ‘amateurs’ of St. Catharines. Urban interventions will motivate personal transformation and influence citizens to go out and develop the skills that can generate new ways of thinking about their immediate environment.

The city of St. Catharines has just approved the construction of an Art-Centre in the Downtown core; however, this is a University development and exclusive to students in the Arts. The Centre of Reconstruction offers the non-artists of St. Catharines a site to explore the re-purposed spatial identities. More importantly, over 600,000 square feet of space provides them an opportunity to re-discover their own imagination. In order to gain confidence in their own piece of mind, a learning environment will provide those who decide to participate in debates. The scavenged elements from St. Catharine’s’ waste provide the necessary junk for those who wish to participate to re-examine the cycle of consumption that has created much of the current condition and identity crisis.

Re-purposing, and recombining found objects requires a modification of their original prescribed attributes. The mutability of the existing sets of conditions found in waste requires an improvised process that necessitates resolution. The processes involved allow re-constructivists to not only re-discover the potentials in the discarded elements of architecture and other

products, but also to exercise their own discursive processes through intuitive re-design. Idiosyncratic design processes and reconstruction debunk prevailing conventional methods prescribed in chapter three.

Carol Becker, the author of *The Subversive Imagination*, explains that there is part of the human psyche that remains invulnerable to social repression. When that part is accessed through the process of the reconstruction, it can be articulated and explored regardless of how fragmented the surrounding reality may be.⁵³ As mentioned in chapter one, Apollonian perspectives will manipulate our natural environment to fit our transient desires for perfection. These standardized 'look-alikes' of 'perfection' and have inundated our current environment. This is where our Dionysian perspective of the world can take on an interesting role. There is a new [un]natural resource in the decaying and outmoded built environment. Society must begin to utilize what the current environment contains and not only tolerate but embrace imperfections throughout the transformation of identity. While accepting the defunct resources that quickly consume life in St. Catharines as the building blocks for transformation, reconstruction must bring about new functions from within these elements.

Re-discovering the ability to work with the found object, (transforming, diverting and subverting) while using its restrictions to our advantage, can also make for good practice in working with codes or limitations in the architectural profession. Reconfigured architecture and personal transformation will eventually collide and intersect with the inevitable regulations of building design. By juxtaposing the limits of convention and the physical limits of the found object, the General Motors site will demonstrate the

⁵³ Becker, Carol. *The Subversive Imagination: Artists, Society, and Social Responsibility* New York: Routledge, 1994. Print, 123.

significance of restrictions while redefining spaces and re-configuring substructures.

• *“The more immediately political the work of art, the more it reduces the power of estrangement and the radical, transcendent goals of change.”*

Carol Becker in
The Subversive Imagination: Artists, Society, and Social Responsibility, p.120.

⊖ *“While the alteration of certain typological elements over time is a stimulus to invention, it is also the effect of memory on type, which allows for the new process of design.”*

Aldo Rossi in
The Architecture of the City, p.18

• *“Show me! Don’t tell me!”*

Tom Dubicanac,
Architectural Professor at Carleton
University

By subverting urban waste systems, the design processes of the students working in the Center of Reconstruction will re-appropriate discarded objects and create something new—which becomes a mechanism of change endowed with the political and cultural intent of the maker[•]. Through the alteration process[⊖] developed in their work, the existing conditions of an object or architecture can fuse with the memory of personal relationships and history, and will give the reconstructed designs significance beyond the original functions. Here, modifications to the original object, which previously had a static or fixed identity, can serve as a catalyst for invention.⁵⁴ By using ad-hoc⁵⁵ processes and materials at hand throughout the architectural design process, the modifications exercise the notion of subversion and portray the personal intention and narrative developed by the maker. This thesis is an attempt to catalyze re-appropriation methods to display alternative means of visual communication for citizens in limbo, while exhibiting alternative means for production and dissemination.⁵⁶ The physical products of reconstruction intend to let the physical transformation of elements tell the story[•].

The re-purposed spaces, functions and structural elements in this redesign for the General Motors factory, intend to signify the importance of memory in rehabilitation. The factory as a whole has now become an object that embodies its own transformed identity,

⁵⁴ Rossi, Aldo, and Peter Eisenman. *The Architecture of the City*. Cambridge, Mass: MIT Press, 1982. Print, 18.

⁵⁵ Ad Hoc is a term used by Charles Jencks to explain a process where problems are met as they occur, using solutions at hand rather than waiting for an ideal solution. Application uses the materials in play, architecture, city planning, art, and design.

⁵⁶ DIY, Collage in Punk, Steampunk etc.

while simultaneously celebrating the memory of its former selves.⁵⁷ By proposing a re-appropriation of existing spaces of the west factory building and re-using elements ad hoc such as structural components, flooring, railings, and corrugated steel from the disassembled east factory, the project becomes evidence of what Aldo Rossi describes as operating on the skeleton of history. The General Motors factory has transformed. No longer an abandoned factory in the Niagara region, it is now an analytical and experimental apparatus used to analyse and measure the identity of one self, and our environment.⁵⁸ Design elements that adapt and liberate society from monotonous architectural compositions in the decaying factories can juxtapose the elements of decay and wastefulness. Stimulation of the stagnant social and architectural environment in St. Catharines will enable citizens to be aware of their individual importance in the process by encouraging them to imagine what might elevate them beyond the current blight.

The re-activation of a culture uninspired by architecture, transformed through methods of re-appropriating the monotonous developments leftover from industrial capitalism, can form a distinct image of recovery that reaches beyond what is possible in most other cities. •

• *In today's world, it is the particularity of image and event that begins to separate cities, in the process creating identities more powerful than any skyline.*

Neil Denari, in
Gyroscopic Horizons, p. 69.

The reformation of society once required a manipulative design, which engineered people's actions, stabilizing and securing utopian promise. Since this tactic of design has continuously failed, *The Center of Reconstruction* proposes the opposite; namely through architectural and reconstructive methods, to apply pressure on the failing industrial identity of St. Catharines by intervening in the

⁵⁷ Former selves here is used to explain the conglomeration as a tool and die factory as the previous occupant to the building, McKinnon Industries Limited, and as Powertrain Division factory for General Motors. When the Centre of Reconstruction becomes decommissioned, it too will be a 'former self' in the next reconstruction of the site.

⁵⁸ Rossi, Aldo, and Peter Eisenman. *The Architecture of the City*. Cambridge, Mass: MIT Press, 1982. Print, 7.

abandonment of a historical monument. The re-invention of the General Motors site embraces its failure, exposes it and at the same time, presents an appropriate new program for the city of St. Catharines.

Will it help those who experience these spaces to recognize the liberating and revolutionary energies of architecture and reconstruction, not only in *The Centre of Reconstruction*, but also in the surrounding environment of St. Catharines? The liberating sub-structure that penetrates the existing grid of an industrial factory is a proposal to provide a unique atmosphere through re-assembly of spaces within spaces in an attempt to provoke critical thinking amongst the bystanders of transformation in St. Catharines.

Program Development Part I

◆ For scope and locations explained in this sub-chapter refer to Floor Plans in Appendix Panels 2, 3 & 4

[770 m²] 1:1 Detail Presentation Space

[315 m²] Physical Display Space

[160 m²] Floor Seating

[295 m²] Space for Video Installation

[1460 m²] School of Reconstruction

[145 m²] Reconstruction Lobby

[110 m²] Reconstruction Administration

[525 m²] Reconstruction Classrooms

[110 m²] Reconstruction Meeting Rooms

[60 m²] Service Spaces

[6700 m²] 1:1 Workshop

[3510 m²] Space for Machining

[300 m²] Machine Repair Shop

[230 m²] Reconstruction Scrap Salvage Spaces

[160 m²] Service Lift Space

[880 m²] 1:1 Exterior Exhibition Space

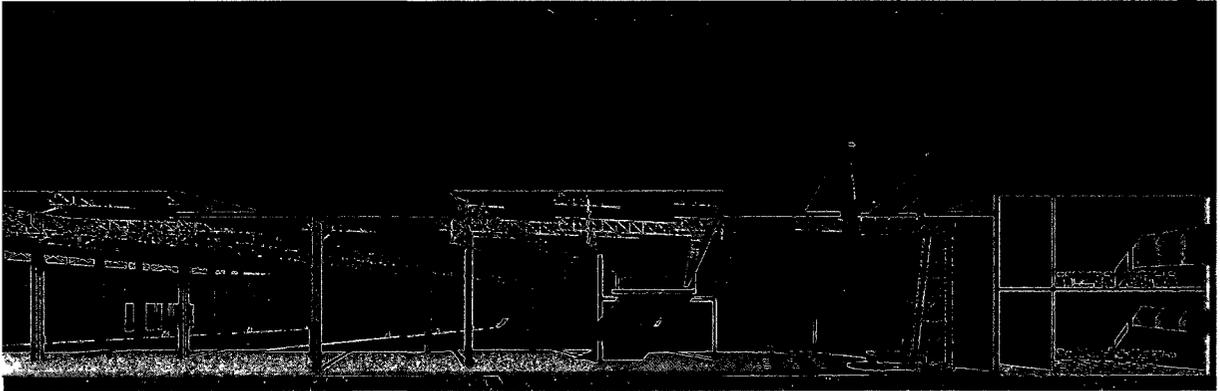


Figure 4.1. Section perspective of the workshops and full scale presentation spaces. Author.

Program Development Part II

Moving on from where we left off; the visitors have made their way past the exchange space.

Visitors and students studying in the center of reconstruction next enter the part of the building where ideas and conceptions become real life experiments.

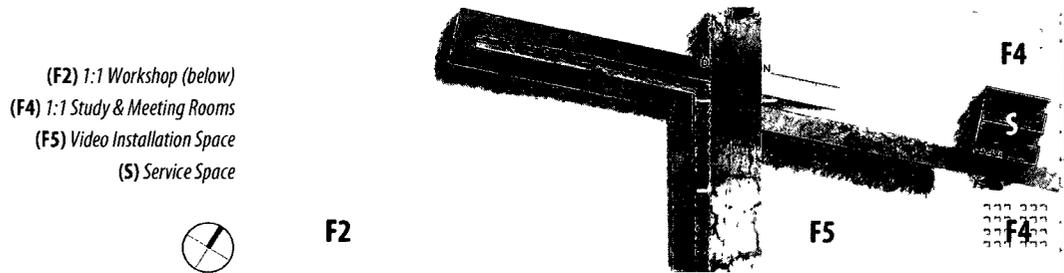


Fig. 4.3: Plan detail of the arcade. Author.

The workshop and learning spaces in this portion of the proposal are where students can build the reconfigurations studied, planned and criticized in the previous program. With stations for machining and fabrication in full operation to the left, video installations of the manufacturing process display these processes. Beyond the projection walls are 'free-rooms' for amateurs to discuss and show the process of reconstruction in groups (Figure 4.4).

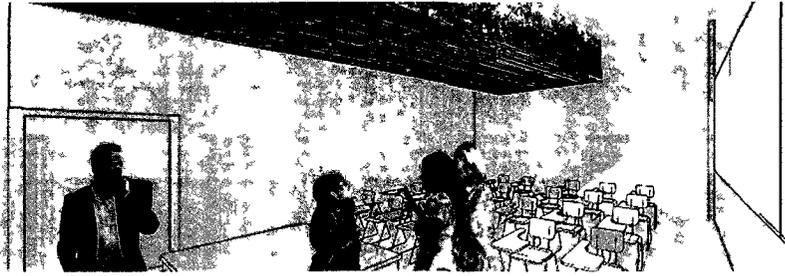


Fig. 4.4: Interior vignette of class room. Author

At the end, the arcade takes an abrupt turn. The straight path is no longer an option for the visitor. Will they decide to take this path and become a participant of the reconstruction process? (Figure 4.5)

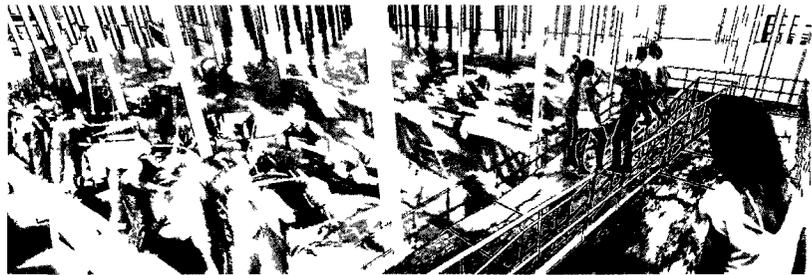


Fig. 4.5: Interior vignette of visitor descent. Author

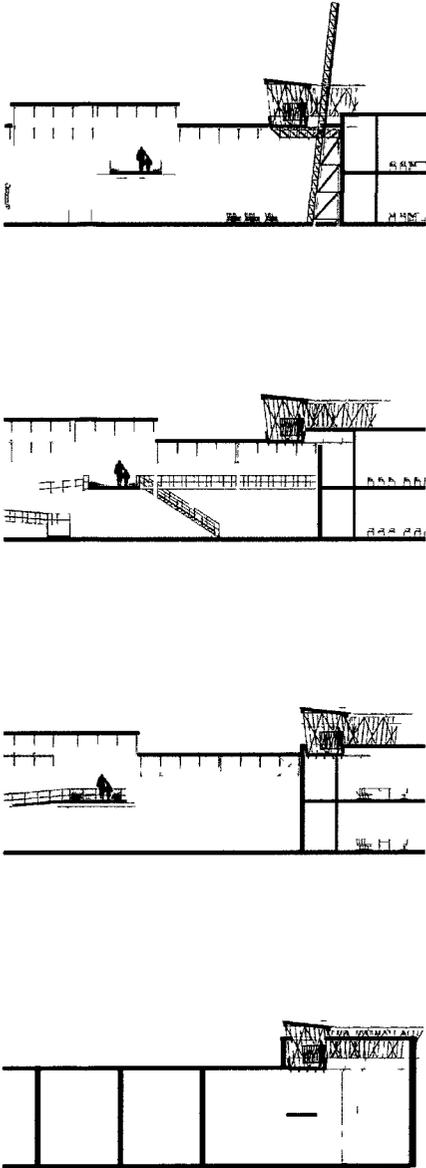


Fig. 4.6: Visitor Progression Sections. Author.

Meeting St. Catharines

The Center of Reconstruction intends to ‘meet’ the traditional realm of St. Catharines in two forms—the micro-use scale, which is how the building extends itself on the site; and the macro-use, which is how the re-purposing of the building and site can spawn positive effects on the rehabilitation of St. Catharines.

Site and Methods: Micro Scale

◆ For scope and locations explained in this sub-chapter Site plan in Appendix panel 6

This adaptive reuse project will have subtle exposure on the exterior and from surrounding viewpoints within the city. The entrance that fronts Ontario Street (Figure 4.7) and the entrance that fronts onto the river (Figure 4.8) are the only moments where the reconstructive design is shown on the façade of the existing building.



Fig. 4.7: Perspective collage of Ontario Street entrance. Author.



Fig. 4.8: Perspective collage of rear entrance. Author.

The rear entrance leads to a significant exterior space where the topography of the land plateaus by the river (Appendix 6). This space will provide the site for reconstructors to exhibit full-scale projects (Figure 4.9) and marks the first exterior interaction between the participants and the public walking along the path that is located along Twelve Mile creek. As St. Catharines residents travel northward along the river, the remains of an old bridge provide another foundation for future reconstruction to occur (Appendix 6).

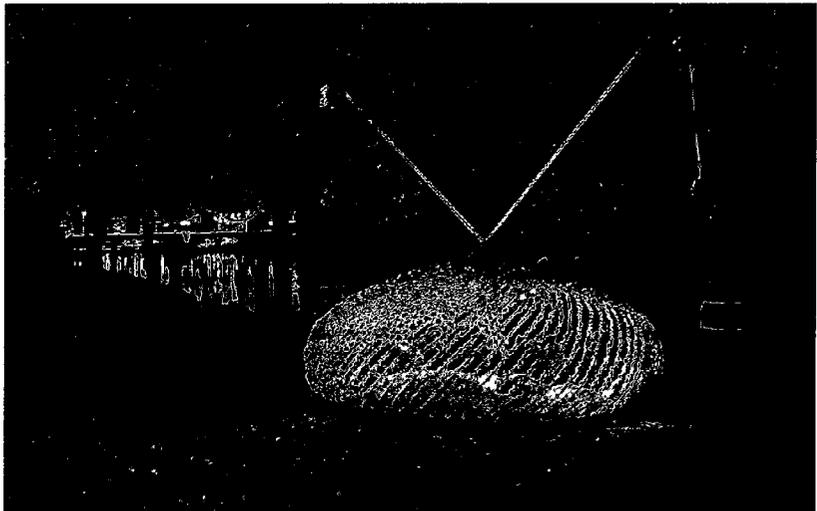


Fig. 4.9: Dinner pavilion constructed out of chain link fencing. Anna Preiss, Gina Ghallagher, Pal Van der Grient, Marco Ianni, Dany Medved, Shea Macdougall, and Author.

Since the east building has been disassembled to reconstruct the west factory, ___ acres of urban space on the site can be re-developed (Appendix 5) for programs that can bring life back into the site.

City and Economic Revitalization-- Maria Scott

Co-operations with local businesses is a vital process in transformation. Provided in the museum space of the Center of Reconstruction, is a small kitchen that accommodates catered functions (Appendix 4). All of the food catered to the Center will be catered by a neighbouring restaurant called *'The Duck'* (Figure 4.10, Appendix 6)—a restaurant that thrived on the business from post-shift automakers. Benefiting from the repurposing of the old factory, the pub will provide the 'greasy spoon' fare, fish and chips and specialty burgers for the events held in the Centre of Reconstruction.



Fig. 4.10: 'The Duck'. Author

The transformation of St. Catharines is a task that will take collective action. If the processes intended to inspire extra-ordinary trains of thought among the residents are successful, reconstruction

and similar models of adaptation and inventiveness can also lead the transformation of the local economy. As previously described, St. Catharines has been lacking the attraction of small businesses downtown. Looking at the Los Angeles model of urban transformation; the identity areas that appear within pockets of the city have regenerated a heterotopic society and the provocation of imaginations and difference making within all forms of production.

The Reconstruction Centre should not only provide new ways of thinking and building architecture, but the process of gaining confidence in one's ability to make decisions can transfer to other ways of doing business as well. It goes beyond thinking and re-thinking. Will residents of St. Catharines take the leap of faith, accept their risks, and embrace the transformation processes of a city?

Resistance In Practice

Reflexive & Temporary

Can transformations of everyday objects relate to the transformation of everyday life? Will violations of traditional and conventional methods of making and working provide peaceful instruments of social transformation? This thesis proposal argues that by changing the relationships between the individual and the built environment, a shift in traditional construction methods can catalyze a shift in conventional ways of thinking about the city and architecture. *The Center of Reconstruction* has provided an appropriate program to allow for the practice of imaginative thinking risk taking and damage.

If we dispose buildings as we dispose other obsolete products, we will have negated the genuine evolution of a city. Aldo Rossi has claimed that History has proven to be indestructible.⁵⁹ When inner city developments do not work out as planned and are decommissioned, the architectural remnants persist and express these problems both through its style and form as well as through its many deformations.⁵⁹ Not all of human kind's traditions can last forever. *The Center of Reconstruction* recognizes this. The deformation of all architecture is inevitable.

- "the past is partly being experienced now, they are a past that we are still experiencing"

Aldo Rossi in
The Architecture of the City, p. 59

St. Catharines, is not alone. Other North American cities will continue to undergo similar forms of identity crisis. However, we

⁵⁹ Rossi, Aldo, and Peter Eisenman *The Architecture of the City*. Cambridge, Mass: MIT Press, 1982. Print, 18

have entered a critical point in time where, the way in which we proceed will determine the fate of these particular cities moving forward. When cities face urban crisis, will they call for desperate measures of recovery?

Los Angeles has proved that embracing the uncertain present of a failing identity does not require a clean slate. Prior to the failing identities of many industrial cities, previous architects and developers did not quite understand how people could use conflicting urban spaces in the city. White zones, dead zones, outmoded buildings and urban waste provide the necessary elements to assist genuine recovery. While serving to assist the city in the transformation process that will take place generation by generation, these spaces can now provide a realm where people can come together outside their homes and other traditional realms and obtain access to environments that provoke rediscovery of architecture, of imagination, of dialogue and of a reconstructed self.

Genuine evolution of a city should always lie in the resolution of its existing problems. Aldo Rossi's emphasis that "the city in its growth is defined by its artefacts,"⁶⁰ encapsulates the significant relationship civilization can have with its architectural artefacts.

When individuals experience opportunities that provide alternatives to from tradition, they are able to re-gain confidence in making their own decisions and rebuild a community from the inside-out.

⁶⁰ Rossi, Aldo, and Peter Eisenman *The Architecture of the City* Cambridge, Mass MIT Press, 1982 Print, 18

Conclusion

Architectural interventions must always consider the relationships between society and their buildings.

Any building, no matter the shape, form or condition in which it currently exists, has links to the genetic make-up of a society and city. Las Vegas, Los Angeles and St. Catharines provide scenarios where architecture and people co-exist in the identity transformations they have experienced. The negative and positive effects observed in their respective transformations give proof that people and architectural interventions should work together to revitalize and reconstruct cities undergoing identity crisis.

We have learned that monotonous architectures can create one-dimensional societies that accept only economic and traditional re-development strategies and not extra-ordinary projects. If architectures of provocation begin to take place in cities in limbo, can this influence a shift in society's train of thought, generating acceptance of the extra-ordinary? Perhaps an architecture of provocation will unbind the people from economic tradition and allow them to envision their monotonous environment as a unique canvas for re-development, celebrating a past identity and embracing its current transformations.

Using a sensible approach for an architectural transformation, intervention projects focus primarily on helping society go through transformation and helping citizens partake in the processes involved. If an intervention influences people to rekindle the relationship with their own imagination, they can then begin to use it in the re-development of their city.

Appendix Panels



- 1- Brock University
- 2- The Keg
(Cottom Mill)
- 3- Mixed Use
(Paper Mill)
- 4- Glendale GM Plant
- 5- TRW Factory
- 6- Abandoned
- 7- Abandoned
(Hair & Cloth Factory)
- 8- Ontario St. GM Plant
(West- To Remain)
- 9- Ontario St GM Plant
(East- To Demolish)
- 10- Abandoned
(Unknown)
- 11- Abandoned
(School)
- 12- Cloth Factory

App. 1: Aerial mapping of St. Catharines. Author.

- M1 - MAIN FOYER
- M2 - RECEPTION KIOSK
- M3 - INDUSTRY NIAGARA MUSEUM
- M4 - INSTALLATION ON WHEELS
- M5 - INSTALLATION SPACE
- M6 - GRAND INSTALLATION SPACE

- C1 - RUIN COURTYARD
- C2 - CONCEPT STUDIO
- C3 - ORGANIC CULTIVATION
- C4 - ORGANIC STUDIO
- C5 - PROTOTYPE STUDIO
- C6 - GREEN COURTYARD

- O1 - OFFICE ADMIN
- O2 - RECEPTION/FOYER
- O3 - ENTREPRENEUR OFFICE SPACE

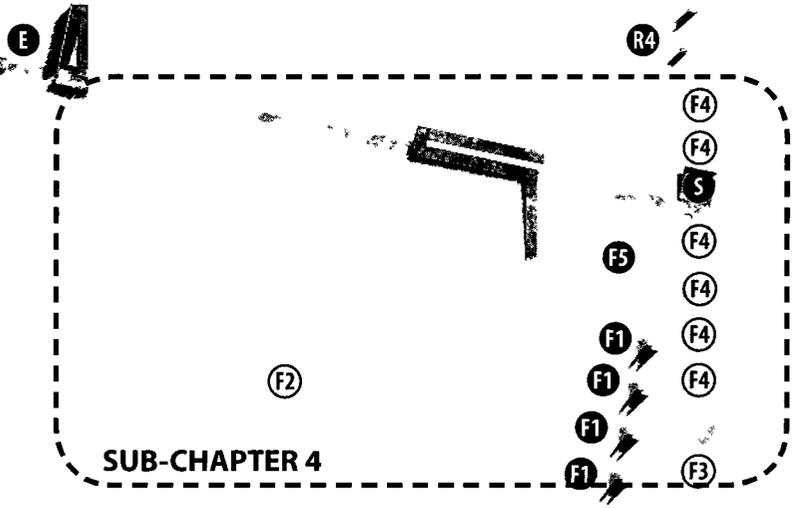
- E1 - LIBRARY SERVICE
- E2 - STUDY & READING AREA
- E3 - STACKS
- E4 - PRESENTATION SPACE

- F1 - 1:1 DETAIL PRESENTATION
- F2 - 1:1 WORKSHOP
- F3 - RECONSTRUCTION ADMIN
- F4 - 1:1 STUDY & MEETING ROOMS
- F5 - VIDEO INSTALLATION SPACE
- F6 - 1:1 EXTERIOR EXHIBIT

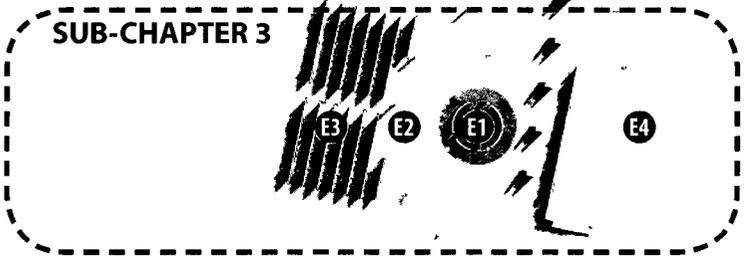
- R1 - EAST PLANT SALVAGE
- R2 - TRANSFER LIFT [STORAGE]
- R3 - RECONSTRUCTION SALVAGE
- R4 - TRANSFER LIFT [FORGE]

- E - ENTRANCE
- L - LOADING
- S - SERVICE

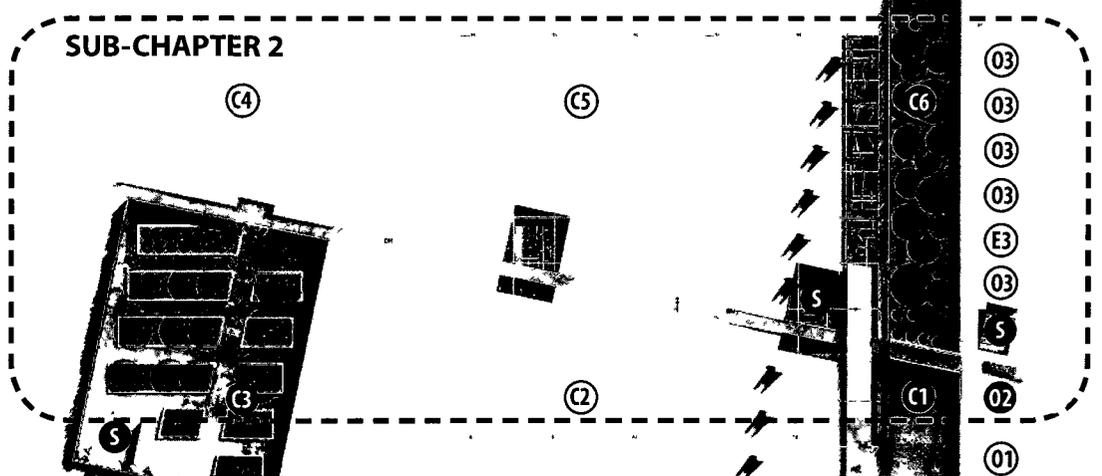
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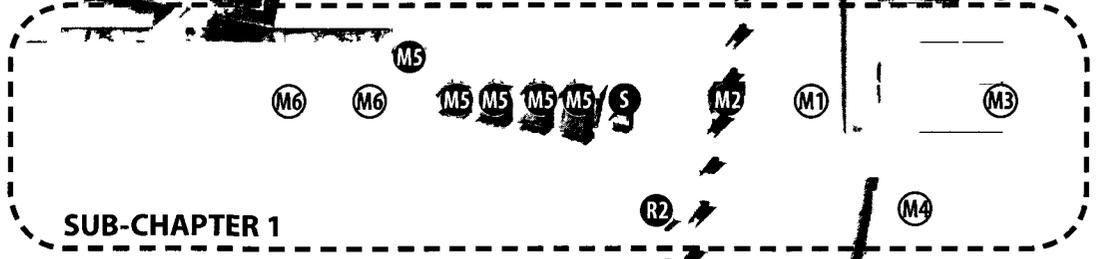
SUB-CHAPTER 4



SUB-CHAPTER 3



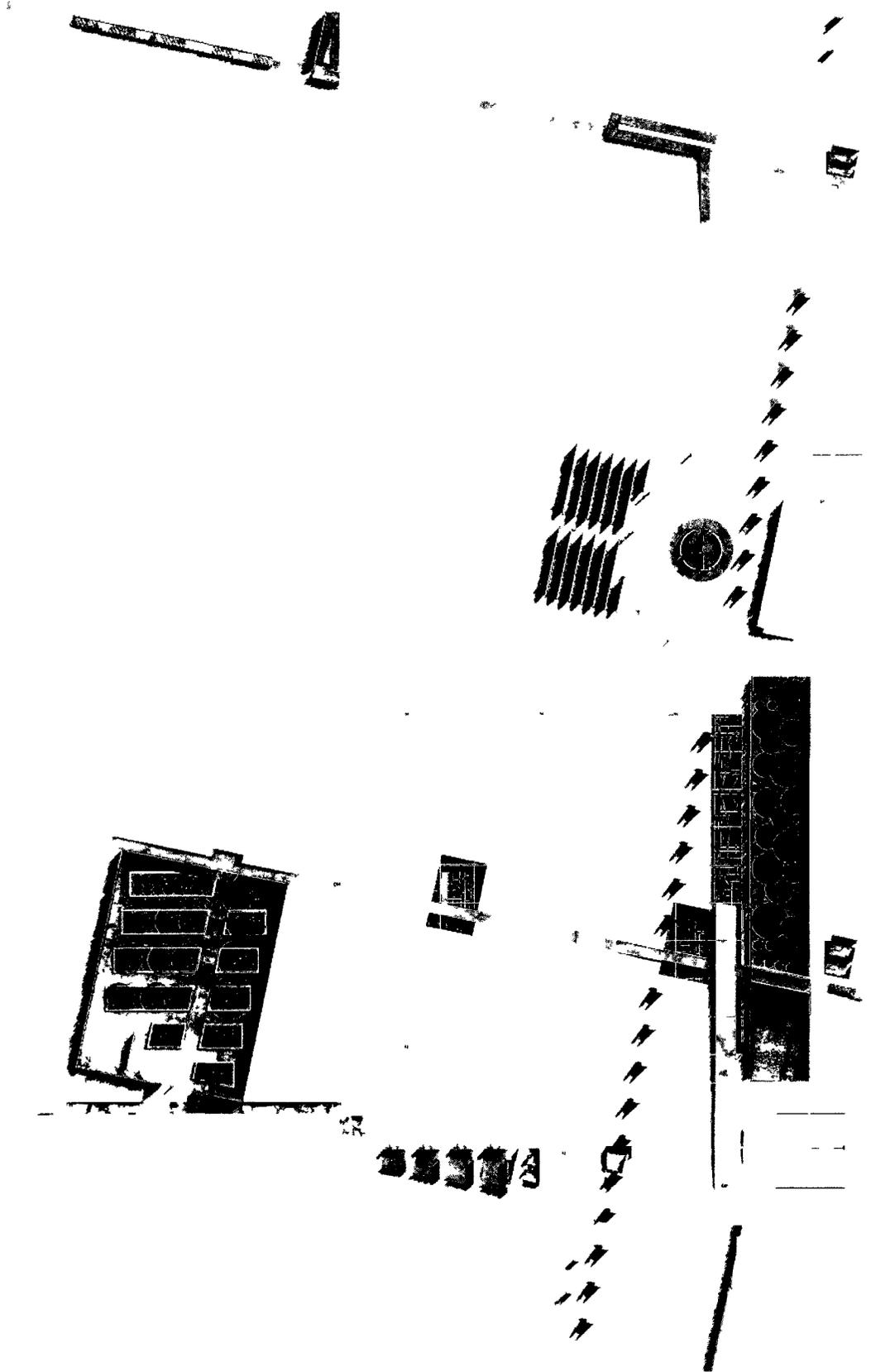
SUB-CHAPTER 2



SUB-CHAPTER 1

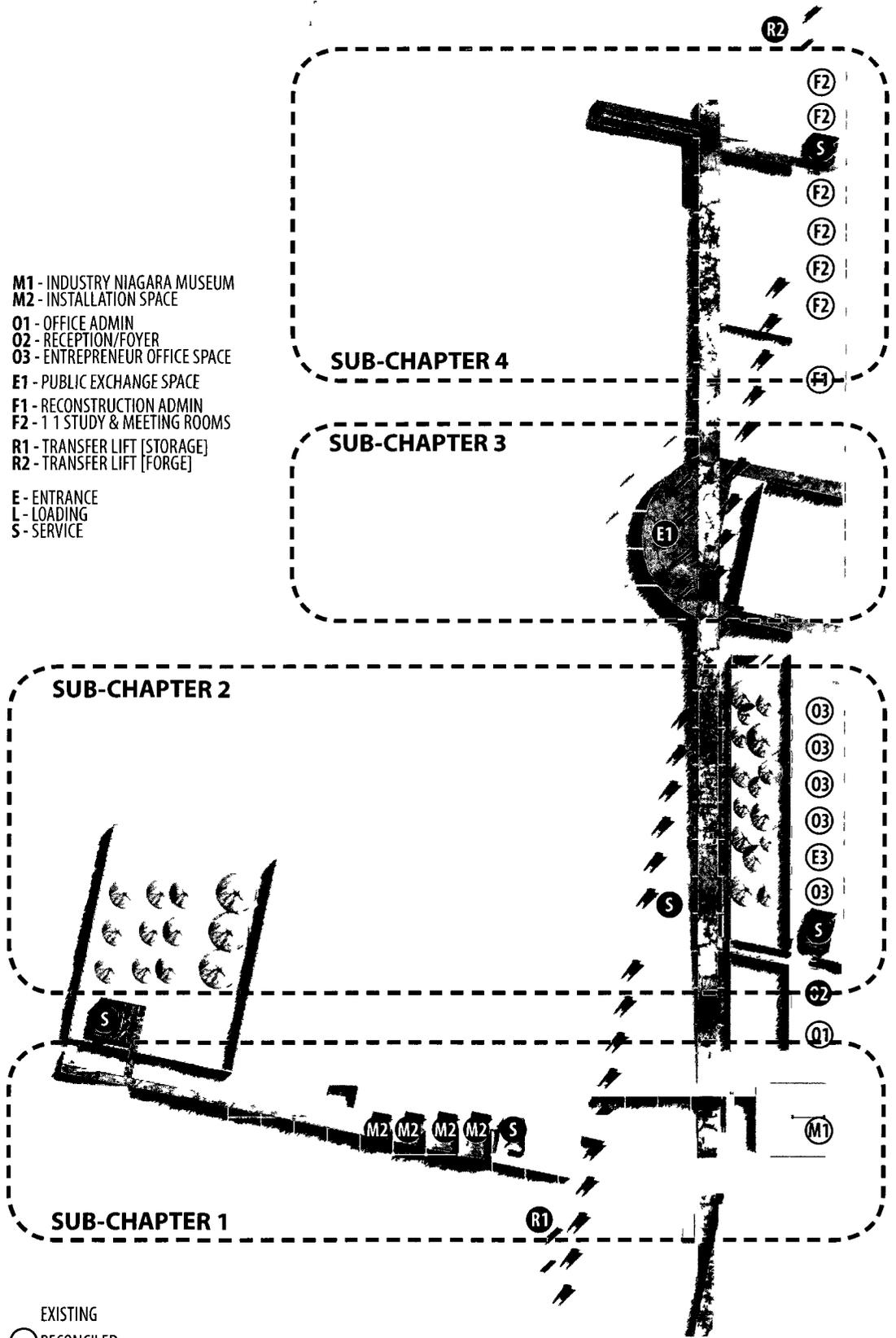
- EXISTING
- RECONCILED
- RECONSTRUCTED

App. 2.1: Center of Reconstruction First Floor Plan: Labels. Author.



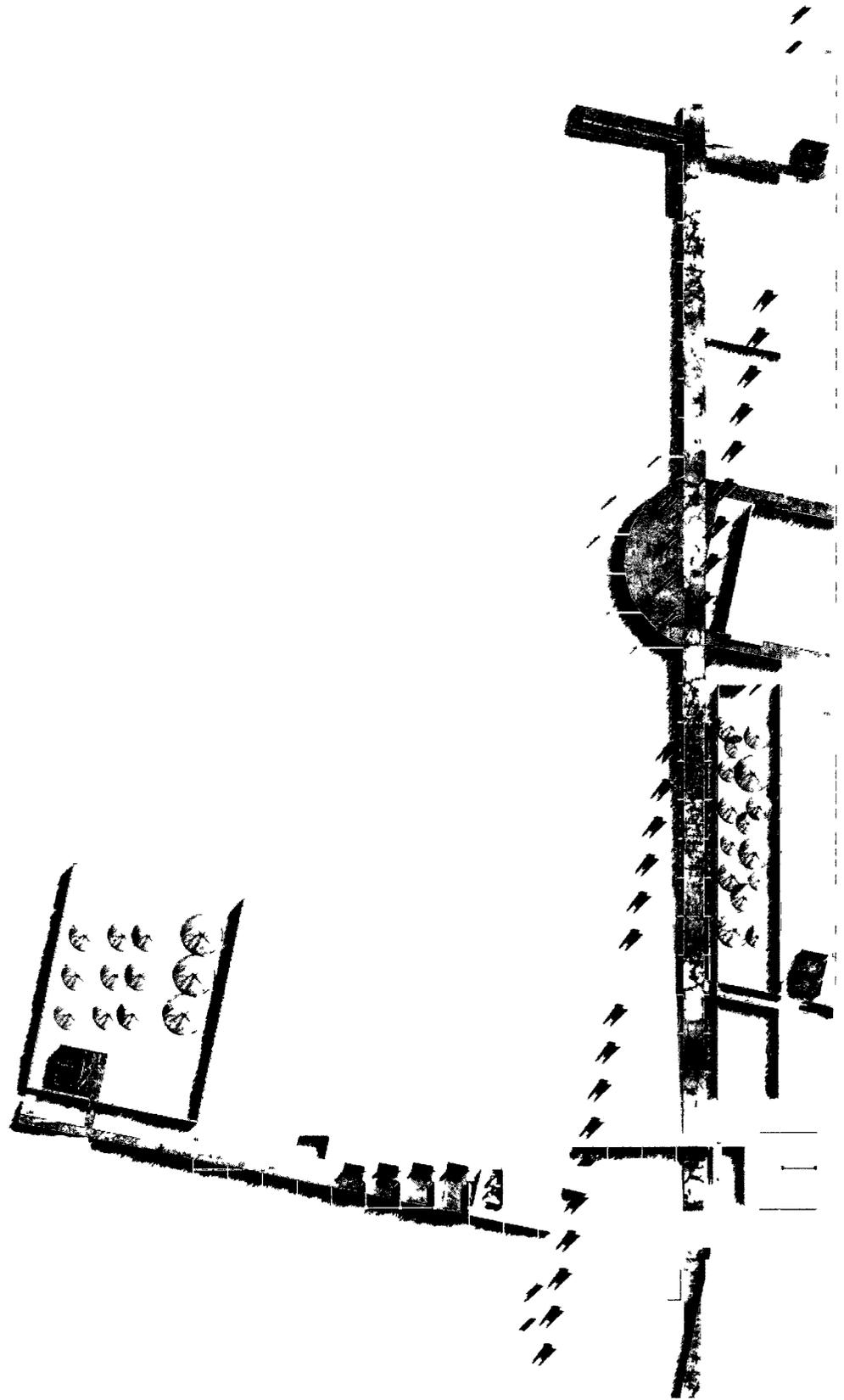
App. 2.2: Center of Reconstruction First Floor Plan. Author.

- M1 - INDUSTRY NIAGARA MUSEUM
- M2 - INSTALLATION SPACE
- O1 - OFFICE ADMIN
- O2 - RECEPTION/FOYER
- O3 - ENTREPRENEUR OFFICE SPACE
- E1 - PUBLIC EXCHANGE SPACE
- F1 - RECONSTRUCTION ADMIN
- F2 - 11 STUDY & MEETING ROOMS
- R1 - TRANSFER LIFT [STORAGE]
- R2 - TRANSFER LIFT [FORGE]
- E - ENTRANCE
- L - LOADING
- S - SERVICE



- EXISTING
- RECONCILED
- RECONSTRUCTED

App. 3.1: Center of Reconstruction Second Floor Plan: Labels. Author.

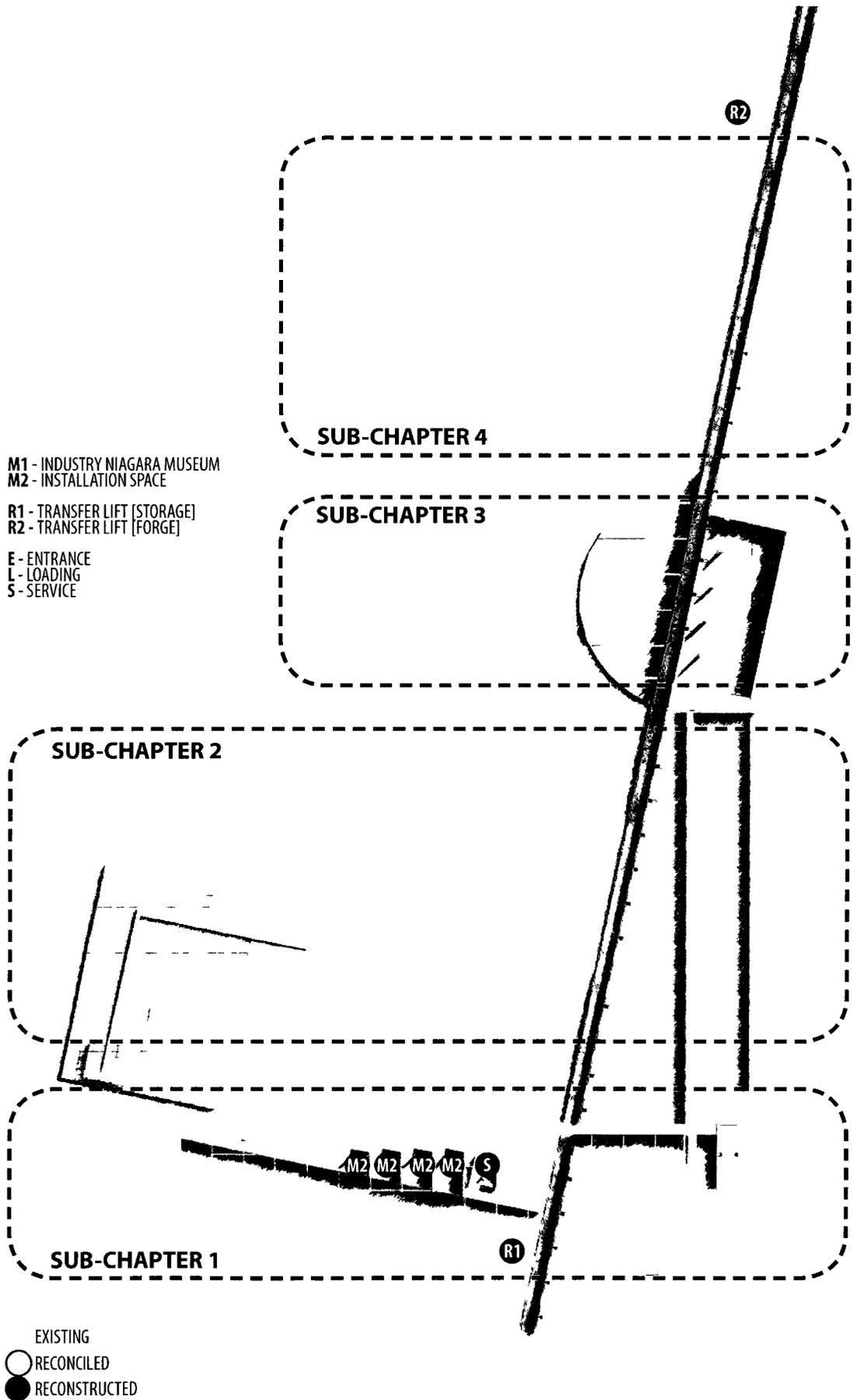


App. 3.2: Center of Reconstruction Second Floor Plan. Author.

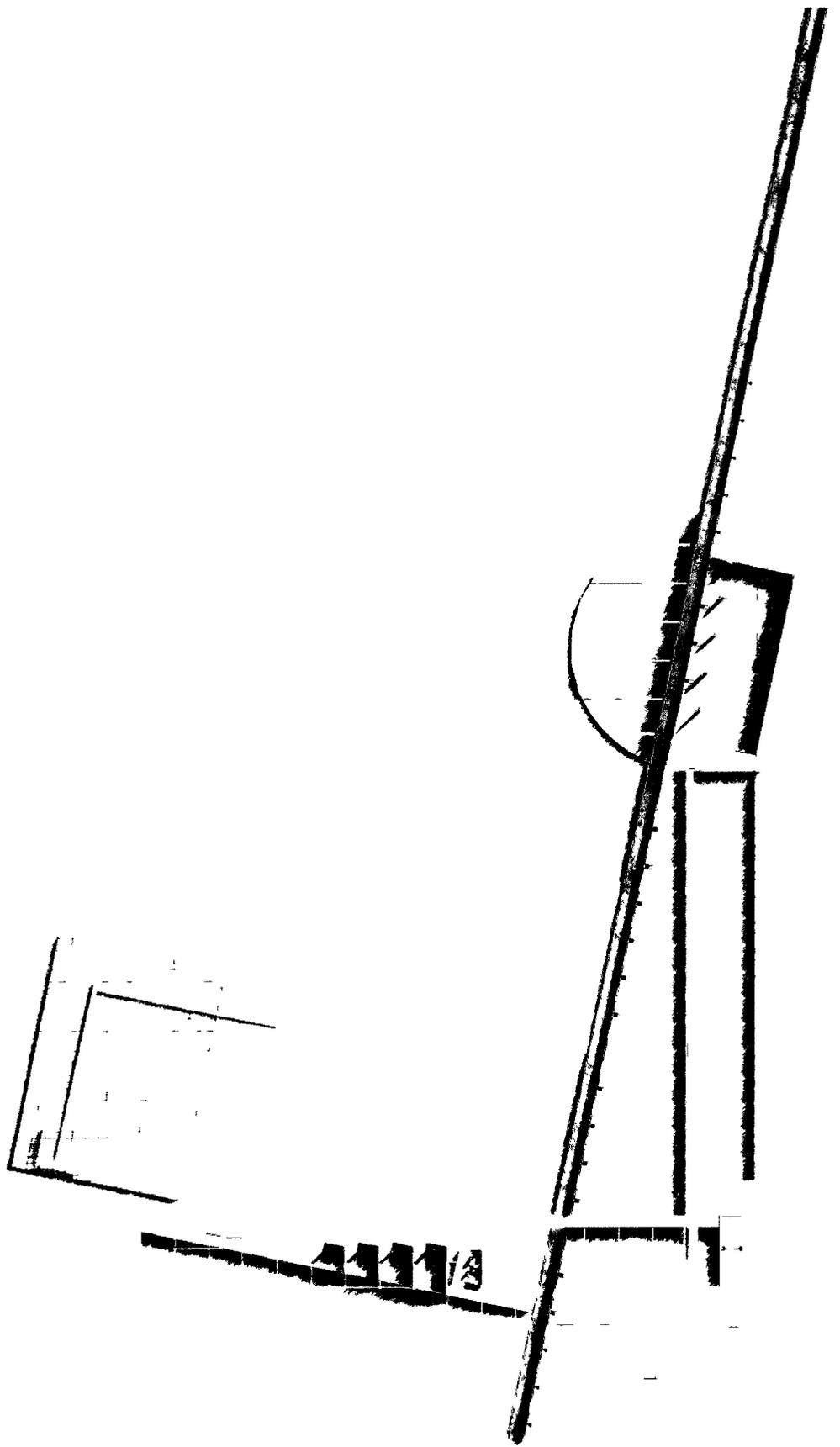
M1 - INDUSTRY NIAGARA MUSEUM
M2 - INSTALLATION SPACE

R1 - TRANSFER LIFT [STORAGE]
R2 - TRANSFER LIFT [FORGE]

E - ENTRANCE
L - LOADING
S - SERVICE



App. 4.1: Center of Reconstruction Third Floor Plan: Labels. Author.



App. 4.2: Center of Reconstruction Third Floor Plan. Author.