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An Inviting street that considers the human scale strategy and regenerates a character and an identity
Acknowledgement:

Firstly, I would like to send my sincere thanks and gratitude to my advisor Dr. Hana Alamuddin, for the constant help and support for the first phase of my final year project. I would also like to thank Dr. Mehran Madani and Dr. yasser Abunaser for being available whenever I questioned my project and for all the help and the ongoing support to continue with it.

Secondly, I would like to thank the American University of Beirut for its wide spectrum and various collection of books that guided me throughout the years. Special thanks go to the Landscape Design and Ecomanagement Department for allowing me to reach where I am now, and for all the knowledge and experience I was lucky to receive.

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Abstract:

The paper examines a human-scale strategy in the enhancement of the urban planning guidelines and principles of Verdun street in the city of Beirut, Lebanon. Since most of the public lands in Beirut are in the process of becoming privatized, and many of the old traditional houses are being demolished and turned into skyscrapers and massive buildings, it is only necessary to question the modernist principles of planning and design. The fact that these principles no longer consider the historical and sensible context of a neighborhood puts us in a critical situation.

This paper starts with the introduction of the current situation of Beirut regarding its lack of public spaces. It will present the major factors behind the absence of such important spaces, and will emphasize on the necessary need of having such spaces. Briefly summarizing the approach that Jane Jacobs, a highly established urban writer and activist, follows in one of her books, and supporting it with a few quotes by Jan Gehl, a famous Danish urban planning consultant, will conclude the end of the first chapter of this paper.

After locating the study area, the paper continues to point out the issues with the site and the future opportunities it carries with it. The project statement, aims, and objectives will be mentioned in this part of the paper, along with suggested solutions to the problems found on site.

Before starting with the site analysis and data collection, the paper will provide a brief description of Jan Gehl’s theory of the human scale and 3 categories he divides street activities in. Following this literature review, a few case studies about streets as public realms, street identity, and street revitalization will be discussed.

Chapter 4 of this paper marks the beginning of the site analysis and inventory, in which data about the site’s history, land use, street layout, vegetation, user groups, vehicular and pedestrian circulation will be collected.

In the design chapter, the paper applies certain knowledge from the literature review, case studies, and site observations, to the design proposal of Verdun street in Beirut. 3 different concept designs will be described, however only one concept will pass the preliminary design and continue to program development. The proposal will design a master plan for the street, however focus on a specific site on the street to detail.

The aim of this paper is to explain the importance of public spaces, and how one should consider the human-scale when designing. The proposed design will reveal how a street can be transformed into a place for people that celebrates an identity and a sense of belonging.
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PART 1
INTRODUCTION
1.1 Background:

Throughout the years, Beirut’s population has grown drastically causing its border to expand further every year. With this increasing population, ranging from locals to Armenian, Palestinian, Iraqi, and Syrian refugees, the city was forced to build on almost every empty land it has. Coastal cliffs turning into resorts, sand dunes into commercial centers, and pine forests into more and more houses, the city simply was left with barely any open spaces. In 2005, it was estimated that Lebanon’s population holds 307 inhabitants per km², having 594 inhabitants per km² along the coast only. This radical increase in urban sprawl has left the city with only a few lands as public, giving it the title of a “Cemented Forest”.

Unfortunately, most of these “public” lands are either closed or are in the process of becoming privatized. Horsh Beirut, the largest public space in the city, has been closed down for more than 15 year, however it recently has been open for the public. Moreover, 81% of the city’s coastline, from Jounieh to the airport, is now privatized into either resorts, restaurants, or used as a military base.

Urban sprawl, governmental power, and private organizations have taken over any chance for Beirut to be revived as city that celebrates public spaces. Unfortunately, the urban planning of the city disregarded the importance of old, traditional urban structure and open spaces for communication in urban design. Instead, it stressed on replacing that “style” with big high-rise building, grid road networks and clear functional zones. As this modernist principle started appearing, human scale spaces and buildings disappeared gradually and cities were designed for cars, causing it to be uncomfortable for humans’ needs thereby damaging the urban diversity, intimacy, and historical context.

The urban writer and activist Jane Jacobs published “The Death and Life of Great American Cities” in 1961. The book was mainly based on the arguable height of the modernist urban renewal movement. The entirety of this work is based fundamentally on the fact that urban planners should discover the complexities and unique characteristics that determine how places work and enhance them, instead of write policy and design large projects that determine how a city should work.

Jane Jacobs’s main argument discussed how places should be unique and reflect the identity of the people who live there instead of places answering to lofty academic principles of homogeneity. She believed that this argument should be a fundamental core of urban design.

Jacobs approached cities as living beings and ecosystems. She suggested that over time, buildings, streets and neighborhoods function as dynamic organisms, changing in response to how people interact with them. She explained how each element of a city – sidewalks, parks, neighborhoods, government, economy – functions together, in the same manner as the natural ecosystem.

Working with Beirut’s streets and sidewalks, places that are usually highly consumed by people, allowed me to focus on humans’ behavior, and how they shape the spaces around them.

Jan Gehl, a renowned Danish architect, urban design consultant, and champion of the human scale, dedicated his life to provide convincing evidence for an investment in public life. He credits the “grandmother” of humanistic planning, Jane Jacobs, for drawing attention to the importance of human scale. “Fifty years ago” she said – “go out there and see what works and what doesn’t work, and learn from reality. Look out of your windows, spend time in the streets and squares and see how people actually use spaces, learn from that, and use it.”
1.2 Problematic and Project Statement:

Beirut is known for all its narrow streets and alleyways that more or less create clusters of neighborhoods. It is very common to come across different characters as one walks through Beirut. Behind every street or alleyway hides a precious story of significance and meaning that define the place and give it a certain character. Hamra street with its old theatres and small boutiques; Bliss street with its historical American University and student's dorm life; Mar Mkhiael street with its old traditional Lebanese houses and hipster movement; and Gemmayze street with its bars and nightlife. What makes these streets of special interest is the way people have taken over them. The constant pedestrian movement, human communication, and sidewalk activities increased the liveliness of the street. People, with their random self-entertaining actions, have shaped these streets to their own benefits.

On the contrary, it seems that Verdun street, which intersects with Hamra street, lacks any human activity that makes it stand out as the rest. In fact, the ultimate car dominance on that street kills any possible human activity to happen across. Although Verdun stands as the leading high-rise commercial and one of the most prestigious residential neighborhoods in the city, it has no longer been a destination. People nowadays tend to go to Verdun for a certain purpose, get it done, and leave. Having shopping and dining as the only activities in the area, the amount of people that access it is actually quite minimal if compared to other streets. This, in fact, caused the street to be known for its indoor activities rather than an outdoor experience. Furthermore, with its very expensive shopping and commercial centers, only certain user groups tend to visit the area. This has left the street and its people very disconnected from the surrounding.

One of the reasons that decreased the pedestrian activity and turned the place into an indoor “zone” is the change in street circulation. In 2006, the street was turned from a two-way to a one-way street. This change affected the street's character drastically, in which it became non-pedestrian friendly and very unsafe due to the high speed of cars as they pass through. Unfortunately, what was once a street packed with school kids and families running around, is now a street used by “passer bys” and people performing necessary activities.

Because of the current situation of Verdun, and the existing flaws of the urban planning of Beirut, Verdun seemed to be the ideal place to apply the new guidelines of urban planning, in which designing for people and the human scale would be the priority. Given its past character, and its future expansion, Verdun has a lot of potential in being transformed into a place that will be a destination rather than a pass through and a place rather than a street.

The aim of this proposal will be to design public spaces that will cater for an increase in the number and the variety of users: people of all social classes, age, and gender will dominate the place. Changing the street layout into a more inviting pedestrian friendly one will allow for a wider variety of street activities to regenerate, which will eventually form an identity and revive life in these forgotten spaces.
PART 2
THEORETICAL SECTION
2.1 Invite or Repel: Human Scale

"Only architecture that considers human scale and interaction is successful architecture.*

Jan Gehl is an urban theorist who has done much research on the city as an organism that was created in response to human senses. Today our top-down institutional structures have created a city that appeals more to machines and their speed, social needs, and hearing abilities. In order to build a better city for people, he recommends five principles to follow and five to avoid: Assemble vs. Disperse, Integrate vs. Segregate, Invite vs. Repel, Open Up vs. Close In, Increase vs. Reduce.

He describes how it is important to make the city space attractive and inviting to humans on a human scale for them walk comfortably and safely throughout.

In his book, "Cities for People", Gehl discusses the importance of considering the human scale when designing or planning for a city. He stresses on the concept of seeing things at the human's eye level, in which people see everything horizontally, but barely notice whatever is above or below the eye level. Gehl bases people's perceptions on viewpoint and distance, suggesting that the speed at which they move is crucial. Rooted in biological history, the human sensory apparatus is designed to perceive and process sensory impressions while moving at about 5km/hr.

The 5km/hr. architecture usually takes into consideration the walking pace of humans. On this scale, the architecture would actually be detailed enough to invite and attract pedestrians to look at. Easily turning around while walking encourages people to get quite close to the facades. Since signals and signs are viewed at a close range, they are usually small and refined. Traditionally, 5km/hr. architecture is also rich in detail, because viewers have a good vantage point and the time to appreciate it properly. To conclude, 5km/hr. architecture combines a glimpse of the town hall tower or distant hills at the end of the street and the intense contact of ground-floor facades up close.

In contrast to this 'slow' architecture is the 60km/hr. architecture along the roads used by vehicles. Here, due to the fast speed of cars passing by, large spaces and signs are a necessity. Perceiving details when moving at this speed is nearly impossible, therefore the matching architecture would characterized by smooth buildings short on detail.

Modern cities are heavily influenced by confusion over these two scales. Pedestrians are often forced to walk in 60km/hr urban landscapes, while new urban buildings are designed as boring and sterile 60km/hr buildings in traditional 5km/hr streets. To design high-rise buildings with massive signs and huge billboards high up on streets that celebrate a high level of pedestrians would cause an unpleasant, repelling walk for the people, instead of an inviting one.

In his interview with ASLA, Jan Gehl makes it a point to state that the problem is with the architects and planners. "They constantly confuse car scale with people scale. Sometimes they make a mix, but most of the time they make car scale and say, look, there's a sidewalk, people can walk here. What's the problem?" says Gehl sarcastically.

In conclusion, it is important to consider the human scale as part of the design in order to understand how the street or space can be inviting or repelling. Simply adding a sidewalk is not the solution, catering for attractive signs and street elements along the walk is necessary.

«First life, then space, then building, the other way around never works»

Following Jacobs' advice, Gehl spent countless hours walking the streets of cities around the world, studying life beneath, between and around buildings. "Man was made to walk", Gehl reminds us. "All our senses are made for being a walking animal – for that speed, for that horizontal perception – and when we are in that natural environment that we are meant for, then we can watch and talk and kiss as we were meant to as human beings". Forty years of this close observation of human behavior, Gehl's core beliefs were to treat pedestrians and cyclists as priorities and to preach for a city to be an "invitation" to spend time; a welcoming and sustaining place for people to live. "A good city is like a good party", he says. "You know it's working when people stay for much longer than really necessary, because they are enjoying themselves."

Jan's generous nature is tested on the subject of "starchitecture". He believes that there is no place for «bird view architecture» in this world. He compares this legacy of modernists, which he refers to as – "architects travelling all over the world to drop their towers", to his wife's perfume bottles that decorate the bathroom shelf. Each new building, tower, or skyscraper reaches higher, in more complex formations, than the last. This is, he says, the "Brasilia syndrome" – the creation of cities and spaces which look magnificent from a plane, or in the architect's render, but do nothing for the people that need to live in them.
2.2 Hamra Vs. Verdun

As mentioned earlier, Hamra street is not only pedestrian friendly, but it also holds a certain identity. The fact that people of all social classes and ages dominate the street, allows for a wider variety of events and activities to take place. The fact that it is a one-way street with basalt paved rocks, and sidewalks with bollards, buildings with awnings, and ground level shops with different facades, a person is automatically drawn to performing any optional action. As one walks through Hamra street, it is impossible to miss the girl sitting on the bollard waiting for a cab, the man resting on the stairs smoking his cigarette, the shop owner smoking his arguile as he sits on his chair outside the shop waiting for customers, the boy spraying graffiti paint to express a statement, the street vendors roaming around as the traffic light turns red, and the excessive stops of window shopping. Having a street dominated by this much pedestrian activity is having an inviting street layout with place attachment.

Shaping the street is one of the most evident things noticed in hamra; people tend to use the sidewalks as they please. As shown in the following pictures, various users use the same spot in hamra differently at different times of the day.
On a Sunday morning, a group of multiethnic domestic workers use that space as a gathering spot.
On a Saturday morning, this empty public space is turned into an open air dining experience to celebrate certain occasions.
At night, the youth frequent this area to practice their breakdancing skills as their music is loudly played.
This various change in street activities attracts more people to the site and brings out a certain character to the place. When people shape the space around them to meet their personal benefits is when they reveal significant attachment to the site they’re using. This act not only defines place making, but it actually uncovers how a place is made and how it comes into action. If it weren’t for these users, it would have been just another empty spot along the street.

The diagram on the left represents how Hamra street attracts people from the surrounding neighborhoods to stay on the street itself. It acts as a spine that represents a community, which is comprised of these neighborhoods.
On the other hand, Verdun street represented on the right, acts as a separator rather than a connector. Its non-pedestrian friendly street, and lack of human activity and circulation repels the people away from the street into the immediate surrounding. Not only is it uninviting, but with its expensive chain stores and restaurants, it discourages the people of the neighboring surroundings from visiting the street.
2.3 Activities:

According to Jan Gehl, street activities are divided into three categories. Necessary activities are essential activities that must take place in every person’s life, from working to going to school to buying groceries. These activities are ones that will happen regardless of the street’s condition or the quality of the physical environment.

Optional activities are based on personal preference, in which they can include walking, sun bathing, sitting, or simply enjoying the outdoor environment. These activities take place only when exterior conditions are optimal, when weather and place invite them. This relationship is particularly important in connection with physical planning because most of the recreational activities that are especially pleasant to pursue outdoors are found precisely in this category of activities. These activities are especially dependent on exterior physical conditions.

“Resultant” or social activities are usually the result of an increase in optional activities. When more people gather in a certain space, social relations or activities are more bound to occur among them, therefore these activities depend on the level of optional activities, which directly means that they are dependent on the exterior physical conditions as well.

When outdoor areas are of poor quality, only strictly necessary activities occur.

When outdoor areas are of high quality, necessary activities take place with approximately the same frequency – though they clearly tend to take a longer time, because the physical conditions are better. In addition, however, a wide range of optional activities will also occur because place and situation now invite people to stop, sit, eat, and play…

In streets and city spaces of poor quality, only the bare minimum of activity takes place, people tend to hurry home in such conditions.

In a good environment, a completely different, broad spectrum of human activities is possible.

In this diagram, streets and places that celebrate different optional and resultant activities are highlighted in red and orange, while necessary activities are colored in yellow. It is shown that Verdun street mostly holds necessary activities unlike Hamra, Gemmayze, and Mar Mikhael. The latter streets enjoy various optional activities including public art, street festivals, and painting, along with other events like the parking day, a biking day, and a car free day.

Unfortunately, Verdun street includes no such activities what so ever. This lack of such optional activities along Verdun shows how necessary it is to revive the pedestrian activity along the street and cater for more street activities in order to produce and enhance the optional and social activities.
PART 3
CASE STUDIES
3.1 Las Ramblas, Spain

Design approach and implemented principles in the project:

**Comfort and Image**
- The harmony between street width, building height, landscaping and intensity of usage create a pleasant pedestrian experience.
- A mix of activities promotes diverse images and characters of the area.

**Uses and Activities**
- Pedestrian promenade and sitting area for people-watching, discussions, and entertainment.
- Retail and market space, including restaurants, eateries, and bars.
- Exhibition space, festivals, bazaars, and demonstrations.
- Cultural institutions, museums, and monuments.

**Access and Linkage**
- Major thoroughfare connecting central city plazas with waterfront.
- Prioritized pedestrian access from central promenade.
- Walkable along entire length.
- Metro access.

Define design elements that represent the design approach:
- The buildings provide the street with clear edges, while the large number of windows and building entrances provides a sense of fluidity.
- The street has defined its own program of events by permitting performances by local artists and musicians. This makes its visual and cultural landscape different with every visit.
- Sidewalks are usually less than 10 feet wide, encouraging walking in the center.
- The canopy from the lined trees on both sides filters light in the hot summer and gives protection from the one-way traffic on either side.
Summary of the architect's approach and theory:
The main vision and theory is transforming Sydney's new civic spine into a high quality pedestrian boulevard, while linking its future squares and key public spaces. Furthermore, it aims at maximizing people's enjoyment of the street, adding vibrancy to the area and supporting retail and the local economy.

Project problematic and strategy to address the problem:
**Problematic:**
- Low pedestrian priority
- An overload of buses
- Poor pedestrian amenity
- Noise
- No cycling facilities
- Closed frontages and facades

**Strategy:** Delivering a strengthened identity, an improved mobility, an invigorated public life, and a more resilient economy through the following principles:
- Efficient transport system
- Pedestrian focused boulevard
- Legible spine
- An iconic street
- A 24-hour street
- Linking to the harbor
- Connecting 3 great spaces

Define design elements that represent the design approach:

**Street elements:**
- Trees
- Furniture
- Smart poles
**Temporary elements:**
- Festivals
- Outdoor dining/vending
- Public art installations

**Building use:**
- Ground level use
- Facades
- Fine grains
**Building elements:**
- Signs
- Awnings
- Finishing quality

Identify any social/community/historic/ecological/concerns in the project:

**Historic:**
- Importance and significance of the street as a connecting route
- Construction of central station in 1855, Sydney Town Hall in the 1880s, and the electric tramway in 1899
- Replacement of trams by diesel buses in 1969

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*Figure 3.2a*
3.2 George Street, Australia, 2020

Design approach and implemented principles in the project:
- Maximization of space for pedestrians
- Minimization of clutter in the streetscape
- A balance between public and private occupation of space
- A 24 hour street offering diversity of use beyond business hours

Figure C represents the street’s case year 1930, in which people took over, figure D represents the case today, in which cars took over, and figure E represents the case in the future, in which people take over the space again. This shows how the current problem will be addressed successfully.
3.3 Places for People, 2004

Summary of the architect's approach and theory:
A reversal of the long downward trend in CBD commercial activity of previous decades. The city will again be a center of culture and entertainment, a haven for small creative businesses, and a great place to live and learn.

Project problematic and strategy to address the problem:

**Problematic:**
- Lack of effective city planning
- Loss of the attraction and the charm of the city
- Change of character: from an arcaded city to useless wind-swept fore courts
- Unplanned and inhospitable city center
- Laissez-faire approach to new development

**Strategy:** Designing a better space for people, enhancing existing public places and providing additional ones, attracting more people by improving the pedestrian paths, and revitalizing the city's laneways, streets, and spaces.

- Improve the pedestrian network
- Make gathering spaces of excellent quality
- Strengthen street activity by physical changes
- Encourage more people to use the city

Design approach and implemented principles in the project:

- A larger residential community
- An increase in student population
- Improved streets for public life
- New squares, promenade, and parks
- Revitalized network or lanes and arcades
- More places to sit and pause
- City-wide art programs
- A 24 hour city
- An integrated street furniture collection
- A greener city

Identify any social/community/historic/ecological/considerations in the project:

**Social:**
- Continuing improvement of the Yarra River corridor has consolidated the city's recreational and civic spine

**Communal:**
- Presence of major research institutions in the city is a huge advantage in bringing technology, talent and tolerance to the local community

**Economical:**
- Expanded 'micro-scale' retail, such as flower and fruit stalls, newsstands, and information pillars attract greater activity to city streets

Comparison report between 1994 and 2004

Figure 3.3a
3.3 Places for People, 2004

Define design elements that represent the design approach:

- Outdoor spaces on- and off-campus provide important meeting places for students to work and socialize
- Lunchtime street closures that assist in reducing motor vehicle impact and present opportunities for informal social interaction and reinforce a sense of place for people
- Second floor building facades that provide interest through windows, displays, pedestrian overview of the street and visible indoor activity
- Traditional, temporary, and/or public art installations that help in revitalizing the street’s character
- Street furniture including: information pillar, drinking fountain, newspaper pillar, benches, bollards…
- Integration of laneways into the walking pattern has had a very positive impact on the pedestrian network and the level of activity in the city center

Interpretation Drawings of Melbourne’s Street Identity:
Summary of the architect's approach and theory:
To create a unified Rogers Street corridor that celebrates the City of Bloomington, while keeping the distinct neighborhood zones unique within the design.

Project problematic and strategy to address the problem:

**Problematic:**
- Lack of available right-of-way, which makes the goal of providing a consistent corridor of design elements that tie the space together and help establish an identity, difficult.
- 5 distinct zones with different feel and character
- Accessibility, walkability, safety

**Strategy:** To concentrate on design project elements that will help to create an identity or a sense of place along the corridor.
- Promote walkability and pedestrian safety in all aspects of the design
- The corridor should have a unified theme, yet celebrate the individuality of the neighborhoods within the project area
- The design should be able to be extended further along Rogers Street
- Calm traffic, yet maintain the necessary traffic flow
- Provide something that is unique to Bloomington
- Design approach and implemented principles in the project:
- Separate neighborhoods need to be clearly identified as part of the overall project in order to maintain their individuality.
- From the safety aspect, the project should address accessibility and pedestrian movement
- Project materials should be reminiscent of Bloomington
- Provide outdoor spaces for people to interact and gather.
- Address intersections in order to enhance pedestrian and bicycle movement and safety.
- Include public art in the design.
- Respect the historic nature of the homes and businesses along the corridor.
- Use color and materials to create excitement and interest.

Pland and section of proposed extended curb:

Figure 3.4c
Define design elements that represent the design approach:

### Street and Roadway elements:
- Narrowing of street lanes
- Defining existing on-street parking through curb extensions or bump-outs
- Enhancing intersections to be more interesting and pedestrian friendly
- Enhancing crosswalks to slow vehicular traffic and encourage pedestrian use

### Character elements:
- Street lighting
- Signage
- Landscape features and improvements
- Identity markers or gateway elements
- Banners on light poles

### Character Vegetation:

#### Trees
- Acer Rubrum
- Gledisia Triachanthus
- Quercus Rubrum

#### Shrubs
- Iris Germanica
- Aquilegia McKana Giant
- Landscape features and improvements
- Rudbeckia Hirta
- Echinacea Purpurea Magnus
Summary of the architect’s approach and theory:
Production of a public realm strategy for Camberley Town Centre, in Surrey. The approach will study the opportunities for enhancing the public perception of the town center by helping to define the character of the town, open up new connections and routes, and improve the public spaces to create a vibrant town center.

Project problematic and strategy to address the problem:
Problematic:
• Puzzle of different materials
• Dominance of cars
• Haphazard approach to shop fronts and signage
• Poor connection to station
• Barriers at junctions
• Overgrown trees

Strategy:
• Reveal the assets: Support shop front improvements
• Release the potential: Improve and establish new pedestrian connections into the town center
• Raise the offer: Create a new public square in the heart of the town
• Reinforce for the future: Establish a coordinated town center signage strategy with a high quality materials palette

Design approach and implemented principles in the project:
• Pedestrianizing the length of the High Street, while maintaining access routes for servicing
• Maintaining the dimensions of a traditional streetscape including flush kerbs, tree planting zones, and pocket spaces
• A 24-hour street reinforcing the identity of Camberley Town Centre to create a distinctive and lively shopping environment.
• Provide maximum amount of open space and reduce the presence of cars
• Provide informal arrangement of street furniture along the length of the street as part of a coordinated palette for the town that will create a sense of place

Define design elements that represent the design approach:
• Improved crossing points
• Improved junctions
• Street clutter
• Materials palette
PART 4
SITE INVENTORY AND ANALYSIS
As mentioned earlier, Verdun stands today as the leading high rise commercial and one of the most prestigious residential neighborhoods in the city. However, this has not always been the case, Verdun has changed from a strictly ecological site to a commercial street over the years.

In 1923, the area was fully covered by sand dunes, only a few houses were scattered around the site, and the sea was visible from Hamra Street. One of the only schools in the area was the industrial school.

In 1936, a religious sect appeared, called Dar al Taefa, which included the Druze cemetery, a garden for the industrial school was designed, called Sanayeh garden, and finally, French military barracks called Barbar, Vellelote, and Foch, resided in the area.

4.1 Timeline:
In 1978, Verdun has already grown and more schools filled the area. The Italian, Carmel st Joseph, and the French schools were very significant in the area at that time. Carmel st Joseph replaced the Veillotte French barracks; UNRWA was located instead of the Foch military barrack, and new barracks called Fakhreddine appeared as the street extended along the site.

In 2015, Carmel st Joseph school moved to Chiefat, and the land is currently being built as the new ABC mall, while the UNRWA land was replaced by another religious sect called Dar el Fatwa.

4.1 Timeline:
4.2 Land Analysis:

After studying the historical layer and understanding the gradual change in the character of the street, looking at the land ownership was important to know in order to estimate the ratio of private to public lands that are currently on the site. Given that Verdun’s current character is very commercial, most of the lands on site were private lands. The only public properties were 4 gardens and the places of worship. Although most of the lands are private, some were considered public to a certain extent. Therefore, I divided the land ownership into 6 categories as represented.

Highlighting the amount of public and private lands on site helped realize the excessive private development that is currently taking place. Most of the private lands presented in figure x are either commercial, residential, or of mixed-use. However, the institutional lands on site, although less than the commercial and residential, are actually massive in size. Moreover, parking lots, scattered all over the site, were very hard to miss. The increasing amount of developing lands suggests that the site is further expanding, which explains the excess need for this much parking lots.

Most of the mixed-use lands comprise of residential buildings with shops on their ground level. Stating what each store is helps in defining the character of the place and allows one to understand the different user groups that might visit these stores. The most dominant shops were clothing chains or department stores, salons, banks, minimarkets, and restaurants. As mentioned earlier, institutional buildings take over a lot of the lands on site. Most of these buildings comprise of schools, places of worship, and organizations, which also add a certain character to the place.
4.3 Building Analysis:

Being a commercial street, it is noticeable that most of the commercial stores and buildings are located directly along the strip. As one moves inwards into the neighborhoods, the site's character changes; streets turn to alleys, supermarkets to mini markets, and department stores to small boutiques. Residential buildings, of different architecture and different times, also start to conquer the site. It was important to study the building's condition in the area in order to understand how the character changes. The buildings were analyzed based on their differences in facades.

Another observation made differentiating the neighborhoods' character from the main street in Varudn is the various range in the number of floors per building. The buildings in the area generally vary from one to fifteen floors. It was apparent that the number of floors increased along the street. However, a few old traditional Lebanese houses remain on the main street standing side by side to a massive high-rise commercial building. This variety in architecture adds a certain touch to the historical yet modern character of the place.
4.3 Building Analysis:

Difference in **building facade** between main street and surrounding alleyways.

Difference in **land use** between main street and surrounding alleyways.
4.4 Vegetation:

Just like most streets, trees were aligned along both sides; however, were randomly scattered around and within the site. As street trees, they were generally native trees that provided shade. In front of most of the private residences and commercial centers, the vegetation changed from native to aesthetic; instead of being aligned like the street trees, they were organized in clusters as focal points at the entrance of building. The last category of vegetation was described as natural vegetation. This type of vegetation grew as invasive species naturally took over the unbuilt abandoned lands.
4.5 Sun and Shade

After collecting the information about the height of the buildings, looking at the sun and shade was significant, given that they were affected by the amount and height of the buildings in the area. In the morning, between 9 and 12 am, the street was mostly shaded. The sun rays were obstructed by the high rise buildings and the vegetation on site.
4.5 Sun and Shade

At noon time, 12pm and onwards, the site was mostly sunny, except for a few spots along the street. The sun rays at that time struck directly along the street, however the high rise buildings provided shade on certain areas.
As the buildings were studied, focusing on the integration between the people and the buildings was important; therefore, locating the building entrance for the people and the cars helped me understand the pedestrian circulation along the street. Zooming into the street layout was the next needed step for a better understanding of the circulation and relation between cars, people, and buildings. Due to the intense flow of cars along the street during the morning, cars were parked along both sides of the street, covering a good portion of the street's width. Because of the presence of several military barracks, parking is restricted to a few locations only. This caused an increase double-parking and sidewalk parking along the street.
As mentioned earlier, the presence of military barracks restricted parking; locating street signs and parking meters was beneficial to understand the circulation of cars and people. It was clear that as one reaches the «hub» of Verdun, where the commercial centers stand high, the parking meters decrease in number while the no parking signs increase forcing the people to park in the official parking lots of the malls. However, after the Saeb Salam highway, both the parking meters and the signs decrease in number, allowing the people to park wherever they please. This is justified due to the difference in land use, whereby it is commercial before the highway and residential after.

Defining the roads as primary, secondary, and tertiary allowed me to differentiate between the activities that happen on each, and the change in car flow and speed along each.
4.7 Speed and Circulation

Double parking, military barracks narrowing the street’s width, and valet parking spots are factors that cause traffic at certain times of the day. Studying the cars’ speed at different times helped highlighting the times and zones of traffic. With a relatively low speed during the day, the traffic is high and the street appears to be dominated by cars. This decrease in car speed actually benefits the human circulation and allows people to perform their daily necessary or optional activities. On the contrary, at night, the traffic decreases and cars’ speed increases to more than 65km/hr discouraging any possible pedestrian circulation to take place. This relatively fast speed concludes that the level of optional activities decreases turning the area into a «ghost town» at night.

The figures on the right represent the difference in speed between night and day, with the blue color as fast speed taking over the street at night.

In comparison to Hamra street in the figure at bottom, the yellow and orange colors, as slow speed, seem to be dominating the street. As mentioned earlier, Hamra street celebrates a higher level of pedestrian activity; one of the factors that allow for this to happen is the relatively slow speed of cars as they drive along the street.
4.7 Speed and Circulation

When compared to how the situation used to be before the street turned into a one way street, one would realize the similarity between Verdun and Hamra street regarding the vehicular speed and pedestrian circulation. Due to the fact that it was a two way street, the street was narrower, allowing fewer cars at a time increasing the traffic, which as mentioned earlier, meant a more pedestrian friendly street.

Hamra Street Analysis

Vehicular Circulation

Traffic/Speed

Pedestrian Network

Figure 4.7d

Verdun Street Analysis

Vehicular Circulation

Traffic Speed

Pedestrian Network

Figure 4.7c
4.8 User Groups

Moving from lands to buildings to streets, studying the user groups was one of the most important layers. Walking along the street at different times of the day, it was clear that the users fell under two broad categories; the constant users and the various users. Staff members, construction workers, taxi drivers and shop owners, and finally security guards, Valet drivers, and Military guards all fall under the constant or fixed user group. While men, women, families and kids fall under the other category, various or changing user group.

In order to estimate the number of users, I calculated the number of people on site for 15 minutes, and multiplied it by 4 in order to get an approximated number of users per hour. These diagrams represent the difference in the number and category of users on a weekday morning, weekend morning, and at night.

During a weekday morning, all groups of both categories are evident on site, performing their necessary activities; however, it was clear that on a weekend morning, staff members, construction workers, and school kids are missing.

Figure 4.8a
4.8 User Groups

At night, on weekdays and weekends, construction workers and shop owners are both not part of the user groups on site. Instead, the street is highly filled with valet drivers, security guards, military guards and staff members. In addition to that, around 97.5% of males are found passing by, and 92.5% of women are located in restaurants or commercial centers.

Unfortunately, by 9pm, all shops close down, and the only places that remain open are a few restaurants. However, the street remains highly lit all night long as part of a security procedure. This observation suggests that the street appears to be a 24-hour street, however, given that most of its users are of the constant user category, it is actually a «Ghost Town».

Figure 4.8b
4.8 User Groups

The following graphs describe, in detail, the estimated percentage of the number of users on site at different times of the day. By looking at these graphs, one would automatically realize the various change in the wide spectrum of users. In total, around 400 people were spotted on a weekday morning, 200 on a weekend morning, most of which were of the constant user group, and around 100 at night, most of which were also of constant user groups.

Figure 4.8c

WEEKDAY (MORNING)

WEEKEND (MORNING)

WEEKDAY & WEEKEND (NIGHT)
Another observation made was the almost complete absence of youth on site. Luckily, this generation seems to enjoy using the streets as spaces for the public, turning them into festivals and car free days, or even including biking lanes at some points. These activities, missing from the Verdun street, are actually popular in streets like Hamra, Mar Mikhael, and Gemmayze. Comparing these streets to Verdun, it was apparent that the percentage of youth is almost 5 times more. The youth actually frequent streets like Hamra and Mar Mikhael more often because they are more pedestrian-friendly. Being able to appropriate the spaces around them, and shape these streets to their own personal benefits and needs is why more youth are spotted in the streets and places highlighted on the map.
4.9 Sections

Figure 4.9a
4.9 Sections

Figure 4.9b
4.9 Sections

Figure 4.9c
4.10 Constraints and Opportunities

After collecting the necessary data about the lands, buildings, streets, vehicular and pedestrian circulation, pointing out the constraints and opportunities was necessary in order to get a general vision of how the site can transform. As mentioned earlier, most of the lands were either built, or are under construction for future development. However, a few private lands remained unbuilt and abandoned on site. Some of these lands portrayed great potential for a possible intervention. Given that most of these lands that hold future opportunities are private, manipulating and setting new urban planning guidelines was necessary in order to make full use of these lands.

On the other hand, the site held great challenges and constraints that were difficult to avoid. Dealing with all the military barracks and security procedures that controlled any actions on site is one of the hardest challenges to overcome. Furthermore, the width of the street, ranging between 12 and 21 meters wide, was a major constraint. It caused the street to be dominated by cars and hindered any possible pedestrian flow across, as Jan Gehl said, “If you design a city for cars, you get cars, if you design a city for people, you get people.”

In conclusion, just like any other site, Verdun has its constraints and opportunities that need to be dealt with cautiously. Designing the site, and intervening on certain spaces will allow for a better place and will provide solutions for most of the issues found on site currently. The future design will make sure to tackle the problem of disconnection caused by people and the limited stores on site; it will provide more activities and facilities that will attract a wider variety of users; and finally, it will revive the identity the place once had, and regenerate activities that will bring life to the spaces.

Figure 4.10a
PART 5
CONCEPT DIAGRAMS
5.1 From a Highway to an Alleyway

In order to produce a well designed proposal that will address all the objectives, I had to divide my proposal to three concept diagrams with different themes ranging in scale, each tackling a specific problematic.

Starting with the smallest scale, the first design focused on the street layout. It was about dealing with the emotional and spiritual layer in order to highlight the identity of the site. The main aim was to celebrate street activities by stitching them together through a common “theme”, unifying the street into one. Enhancing the pedestrian circulation in the area, and allowing for more people events to happen was the main purpose of this design.

A continuous median will run through the street, turning it into two streets of one lane headed in the same direction. Parklets will be scattered along both sides of the street with crossing points allowing a pedestrian friendly intersection from and to the median, or to the other parklets on the other side. These parklets will hold various events, whether functional or aesthetic, depending on their locations, while the median will act as a continuous strip for walking, jogging, biking, or simply sitting.
5.2 Outdoor Vs. Indoor

The second design, which was more about the functional aspect, focused on considering a larger scale, therefore highlighting potential lands for intervention. This concept depended directly on the amount and variety of activities and their smooth connection to attract more user groups, and open up Verdun for the public.

Verdun is currently more about the indoor experience than the outdoor one, therefore the aim here was to combine these two in one design.

Two major nodes, one catering for an outdoor experience, and another for an indoor one, will hold the bulk of the activities, and will be connected through pocket parks along the street, eventually connecting the Sanayeh garden to Ramlet El Bayda Garden.

The outdoor events will be site specific, representative of their surroundings. An empty private land will be turned into a graffiti park that will represent most of the current wall drawings on site. A mini amphitheater replacing the Rachid Karame Memorial garden will emphasize the sloped topography at that point and give a pleasant character to the place. Both spaces will allow for a pedestrian friendly zone that will attract more users.

The indoor activities on the other hand will remain as is, commercial centers with attractive outdoor diners acting as transitional zones. However, pocket parks that will connect both nodes together will be multifunctional open spaces with several activities ranging from an outdoor ice rink to a football field to a farm market. Finally, a strictly pedestrianized zone will be designed to cater for street festivals and events.
Finally, for the third concept, which tackled the social and communal factor, it was important to take the general picture and include the surrounding in order to produce a better design.

As mentioned earlier, Verdun street, being the high prestigious residential and commercial zone of the area, acted as a separator between the neighborhoods. With its expensive chain department stores, it discouraged people from the surrounding neighborhoods of visiting the area. The main objective of this design is to alter this conception and actually turn the street into a linkage between surrounding neighborhoods, turning them into one community instead of catering for more divisions.

The green network will be based on minor interventions on empty lands on the street and in the neighborhoods. A total of 12 public spaces will form a green network that will be connected through Verdun street. Being the spine of this network, the street will eventually be visited by all users.
5.4 A Street as a Destination

In order to produce a coherent and a well thought of design, it should tackle and resolve all the issues of the site and make sure that the general aim and objectives are being achieved. Since each concept discussed earlier had a certain approach and addressed a certain layer, integrating all these layers, the spiritual, functional, and social, together was the goal.

The final conceptual design is mostly similar to the second approach that was discussed earlier, “Outdoor Vs. Indoor”. The 2 major outdoor and indoor nodes will be connected through pocket parks. Given that the bulk of activities will be within the nodes, and the pocket parks along the street, Verdun will not only act as a spine holding these activities together, but will also attract more users to the site.

To emphasize the character of the street and regenerate a certain identity, part of the street in the indoor node will be strictly pedestrianized catering for street festivals and place making. To add to that, a pedestrian median will run through the residential street after the Saeb Salam highway, and will allow for more services to take place for the residents.

As for the social layer, having bus stops located along the street will not only promote for public transportation, but will also bring the people of different neighborhoods together, and act as gathering spaces on the street.
PART 6
POGRAM DEVELOPMENT
6.1 Schematic Design

Moving into the schematic design, I will be producing a master plan for the whole site, however focus on a single area to design and detail. My main area of intervention will be the proposed pedestrianized street facing the Dunes center, however I will thoroughly explain my proposed design and state the programs and activities that will take place.

Ok here I will start by restating my project statement and problematic and a few quotes for Jan Gehl.

Figure 6.1a

Figure 6.1b

Straight road, narrow sidewalks, fast speed

S street, extended sidewalks, slower speed
KIOSK SERVICES

Figure 6.2a
Extending the sidewalks at some points caused the street to get narrower at certain points, allowing for the natural S-shaped street style to take place. This of course, was a very essential point in my design since it is catering for people; and with wider sidewalks, more pedestrian events can take place.

My site has no exact access points since it is a street with several intersections, however its beginning and end are marked by the two famous gardens, Sanayeh and Ramlet El Bayda. Starting at Fransabank, which intersects with Hamra street, the site boundaries of the proposed design begin. As the sidewalk extends, the first bus stop will be shifted further, allowing more space for pedestrian activity to occur. Moving kiosks will eventually fill the area serving the people as they wait for the buses to come.
Reaching Concorde center, the first proposed intervention will be on the right; this empty private land, which was once used as parking space, will be turned into an outdoor ice skating rink resembling the first ice skating rink that was ever opened in Lebanon, which was located in the Bristol hotel in the 60s.

Between the ice skating rink and the second site intervention, which is the outdoor node, stands the second bus stop. As the sidewalk extends on both sides, more space allows for a resting spot under the old ficus tree. Furthermore, the street gets narrower allowing an estimated number of two lanes to take place. The sides of the street will be strictly used for car and bus parking. This critical point, between two commercial centers, guarantees more people to use public transportation, and attracts more users to the site as required.
Figure 6.4a
The outdoor node is a very dangerous yet important intersection; therefore, regulating the traffic lights in a coherent and organized manner in order to control the vehicular and pedestrian circulation safely, is very important. As mentioned earlier, this outdoor node holds events that are site specific. The private empty land, located next to the "stay at bridge" center, is characterized by the graffiti drawings on its walls and the walls of the land adjacent to it, making it the perfect spot for a graffiti park as an outdoor space.

On the opposite side lies the Rachid Karame memorial garden, which comprises of several stairs, a statue of his head, and a lot of vegetation. In order to make use of this space, the statue will be moved to the public domain stretch found across the garden, and the stairs will be shaped into a mini amphitheater that will cater for different user groups to appropriate and use as they please. With the extended sidewalks on both sides, the extra space will be used as transitional zones between the public and the private and will accommodate public seating areas. The existing narrow one-way streets on both sides of the lands of intervention will be adjusted. One will be closed down to be consumed by pedestrians as an entrance to the graffiti park, and the other will have a slight diversion in the vehicular circulation as shown on the map.
After the military barracks, more site interventions on private lands will take place. The two private lots, dar el fatwa and the land that is currently a parking lot, will follow new urban design guidelines in which they will be turned into high-rises with podiums, that will act as transitional zones between the private and the public and allow for increasing public green spaces.

Given that the land is occasionally opened for the public for certain events, part of it will remain accessible by the public to use as they please. An extension of the sidewalk will also allow for transitional zones to separate the public and the private.

Removing a parking lot in Verdun wouldn’t be the smartest thing to do, therefore the existing parking lot will be taken underground, in which it would fit more cars, yet allow for more public space to take place.

Figure 6.5b
The indoor node includes the famous commercial centers, Verdun 730 and Verdun 732, Dunes, and the new ABC mall.

Between Verdun 732 and Dunes exists an empty space that acts as an entrance to the shops infront. Unfortunately the space lacks any services, hence appears to be a potential spot for a pocket park.

Being in the center of the commercial hub, and at the end of the vehicular street, adding the last bus stop infront of the proposed pocket park will allow for a greater chance of people gathering around. Therefore, the sidewalk will be extended, the street will get narrower, and the circulation will be diverted.
The famous fountain by the school marks the end of the vehicular street. The vehicular circulation will be diverted to an alternative route facing the new development (ABC mall). This one-way existing street is parallel to the proposed pedestrian zone, leading to the same destination, Saeb Salam highway. Given that this slight change in circulation will continue to lead to the same destinations will prevent any disruption as shown on the map.

The pedestrianized street will be a street festival with various activities and events, ranging from farm markets, to outdoor dining and playing areas, to street performances and biking lanes…

Figure 6.7a
PEDESTRIAN MEDIAN

Figure 6.8a
The Saeb Salam highway marks the end of Verdun street and separates the commercial strip from the residential one. There is a clear change between before and after the highway. The street gets calmer, becomes a two-way road, and is mostly residential. To create a smooth transition rather than a clear cut between the two, there will be around a 7m wide pedestrian friendly median running through the street. This median will be resembling continuation to the earlier pedestrianized street. The median will be safely used for walking or jogging. It will be equipped with a few machines to be used as an outdoor gym, and will also be dog friendly for the adjacent residences. The end of this median will be at the entrance of the Ramlet El Bayda park, which will be the end of the strip.

Section G-G
Scale 1:100

Figure 6.8b
PART 7
DESIGN DEVELOPMENT
7.1 Preliminary Design

Reinvisioning the current street network and infrastructure whereby streets would connect green spaces rather than turn them into further patches; invading the roads with public green spaces is the aim.

This diagram presents the general concept of recreating a greener Beirut. It explains how the streets and the infrastructure divided the city into small patches of greenery. The aim of this proposal is to reverse this action and make the streets green in order to connect these patches into a greenerspace like it once was.
The strategy behind this project will be, as mentioned earlier, to propose a master plan of the strip that will connect Sanayeh Garden to Ramlet el Bayda Garden. The strip will be taking you through a walk in history where the story of Verdun and its events will be strategically highlighted and celebrated. As part of the approach, the street will be visually divided into 3 zones:

- The gateway to Verdun, the first zone, will be my focus area.
- The commercial hub, an occasional strictly pedestrian street, which will thrive with street activities and festivals.
- The pedestrian median, the transitional space between the city's highrise towers and the openness of the sea. This will be a residential walking experience with outdoor gym equipments.

The vision is a single urban boulevard composed of 3 plazas characterized differently according to function and land use. The 3 plazas will form into one through the pedestrian flow created by the pavement and the street elements.

7.2 Master Plan

Master plan axonometric analysis

Figure 7.2a

Figure 7.2b
Reasons behind choosing this zone as focus area

- Site in context
- Important major intersection
- Connects to all streets
- Weak pedestrian flow
- Several important landmarks

Concept Phase

- Analysis for concepts
- Highlight unbuilt spaces
- Site Concept: Combine unbuilt spaces into one node
- Minimizing vehicular circulation
- Maximizing pedestrian flow

Design Lines

- Design lines: Balance between rigid and organic nature lines.
- Site's topography
- Rigid built elements
- Concept Diagram: Street as a focal point combining the zones of interest. Attracting a wider variety of people

Inspirations

Figure 7.2c
7.3 Site Plan
The main purpose of the project is to create a unified open space, while keeping the individuality and character of each space. Every zone in this boulevard plays a role in celebrating the existing or previous landmarks found on site, however, all being combined and treated as one through the pavements, pedestrian flow, and activities along. Certain activities are places strategically according to the surrounding land use, like in the case of the proposed playground and the youth study area.

The boulevard will be filled with street markets, farmers’ markets, outdoor dinings areas, public seating areas, along with street kiosks and water features. However, in every zone, there is a certain element, or activity that characterizes the zone by celebrating its landmark.

As mentioned earlier, the 4 landmarks to be celebrated in this zone are the following:

- The Bristol Hotel --> an important lebanese landmark
- The preexisting Italian school, which was later on replaced by the StayBridge Hotel
- The Druz Cemetery
- The Rachid Karame Memorial --? an influential lebanese figure

An outdoor courtyard will be designed for the Bristol hotel for certain occasions and events; it will be representative of the hotel through the pavement design proposed. The hotel will be carved on a concrete slab, with a letter from the famous poet Nizar Kabbani, that describes the homy feeling the hotel provides, and the friendly and cultural atmosphere it has, along with a few old pictures of previous events or rooms in the hotel.

As for the Italian school, 10 stairs will be designed as part of the entrance to the StayBridge Hotel, carved with children’s handprints and footprints as a tribute to the 10 years children spent at the Italian school.

The Druz cemetery is one of the few large green spaces in Beirut. It is characterized by the large pine trees in it, and therefore to highlight and celebrate the space, adding more pine trees was the aim. This vegetation, that this space is known for, will extend outside these walls creating an urban forest.

Finally, Rachid Karame’s memorial will be places at the top of the mini amphitheatre for everyone to look at, and for it to stand like a main figure of Verdun, watching over the street activities.
7.4 Hardscape & Lighting Plans
7.5 Softscape Plan
Section D-D cuts through the mini amphitheatre, showing the changes in elevation, and the various activities taking place along every terrace, ending with the Rachid Karame amphitheatre.

Figure 7.6a
A 3D model showing the urban forest of the amphitheatre and the terraces along the Druz cemetery

Figure 7.6b
Section B-B is a cross section that cuts through the street market all the way to the Druz cemetery. This section shows the general character along both sides of the street, in which it includes the stairs as the tribute to the Italian school, and the urban forest as a representation of the Dru cemetery.
3 different shots of the 3D model showing the street market, the stairs of the Italian school, and the cascading water feature at the entrance of the StayBridge Hotel.

In figure x, the background of the Druz cemetery is present, showing how the boulevard extends from all access points.
Section A-A is a cross section that also cuts through the boulevard spaces along both sides of the street. It shows the Bristol courtyard and the playground.
Figure 7.6h

Perspective representing the mood of section A-A
Section E-E cuts through the upper part of the boulevard, which shows the terraces of the Druz cemetery along with the bleachers of the amphitheatre.
Section C-C cuts through the terraces of the Druz Cemetery, showing how the vegetation slopes upward, along with the street kiosks and outdoor seating areas on every terrace.
Figure 7.6l
THANK YOU