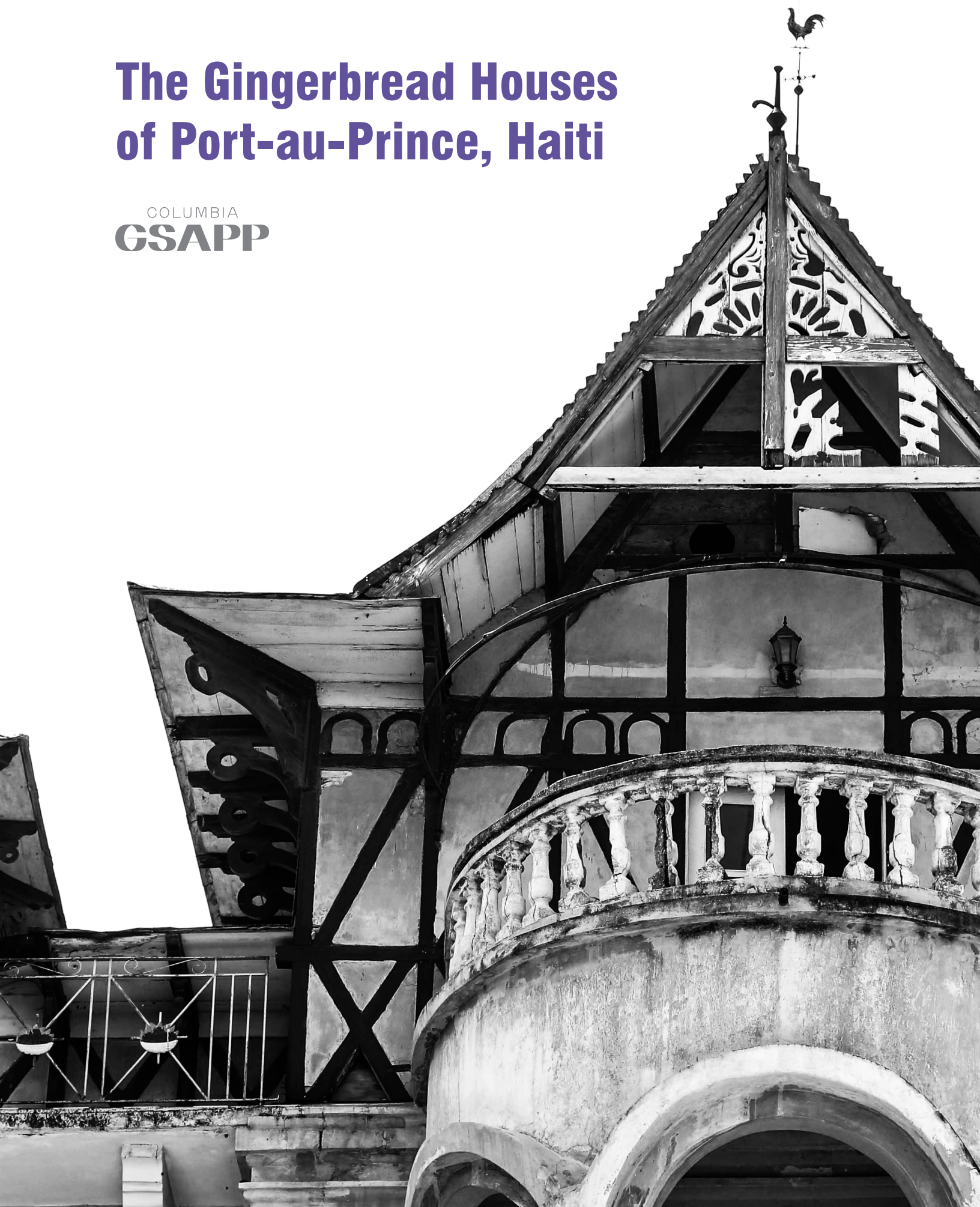


The Gingerbread Houses of Port-au-Prince, Haiti

COLUMBIA
GSAPP





Fondasyon konesans ak libète
Fondation connaissance et liberté

This report was completed with the
assistance and guidance of FOKAL,
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No. 2 Rue 4, Port-au-Prince, Haiti.
Architect Eugène Maximilien, 1914.

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> Rue 4 near Avenue Christophe.

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Members of the team at
Maison Dufort.

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Quartiers pour Haïti
Association of Haitian Architects and Urbanists (ASSHAU)

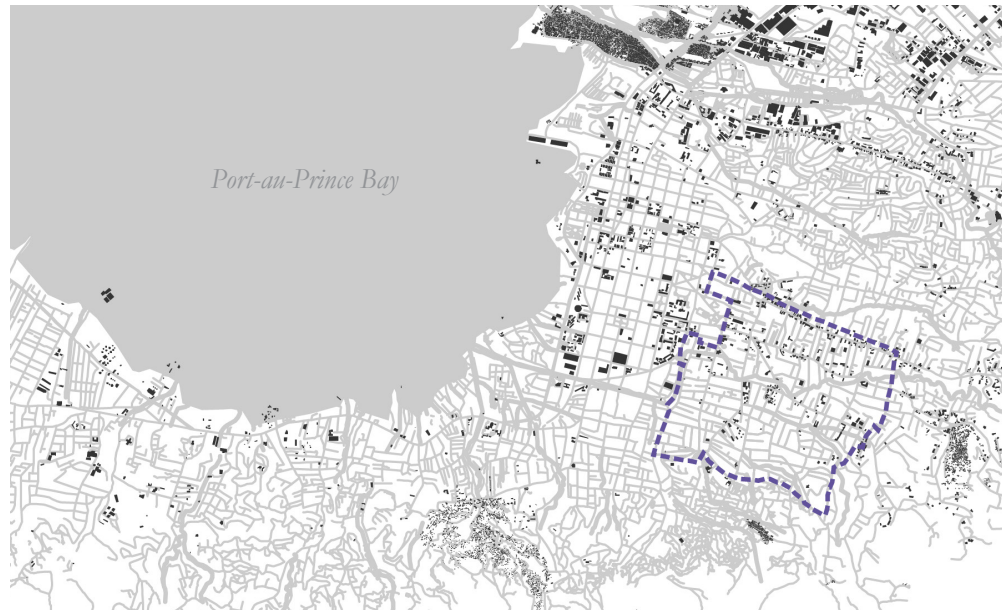
Special thanks also go to the many Gingerbread property owners and residents who so generously gave their time and knowledge by speaking with students and welcoming them into their homes and neighborhoods. Their interest and engagement underscore the tremendous spirit of the community and their pride in Haiti's Gingerbread heritage.





> 7 Rue Castrom.

Studio Aims and Scope.



Study area within Port-au-Prince.

After striving to meet the immediate needs of survivors and grieving for those who perished during the devastating earthquake that occurred on January 12, 2010, it was possible to take stock of the extent of the destruction. Several historic neighborhoods of Port-au-Prince, including Bois Verna, Pacot, Turgeau, and Bas Peu de Choses, suffered notably less damage than many other parts of the city, and these areas have likewise been remarkably resilient compared to other areas of Port-au-Prince. Their older Gingerbread architecture was not as prone to collapse as more recently constructed buildings, especially those of reinforced concrete. These turn-of-the-century Gingerbread houses are an icon of Haiti's rich past, characterized by intricate ornamentation and steeply pitched roofs and constructed in timber, masonry, and combinations thereof. Early assessments undertaken after the earthquake found that traditional construction techniques proved seismically resistant, thereby preventing many Gingerbread structures from collapsing. In addition, their connection to Haiti's history made the survival of this cultural heritage an important beacon for resilience. As Michèle Duvivier Pierre-Louis, Executive Director of FOKAL and former Prime Minister of Haiti, noted:

...saving the Gingerbread houses in Port-au-Prince would represent the conservation of a powerful and unique symbol of urban planning and architecture.... Recently Haiti has gone through political upheaval, periods of violence, and natural disasters that have had devastating effects on every aspect of the country's historical, cultural, and natural heritage. The Gingerbread houses have not been immune to this overall deterioration. But paradoxically, the situation has at least given us the opportunity to speak out and show once again our unique creativity. In this sense, culture in general remains a factor for social integration, in that it is a uniting force, situating us in terms of our history, our collective memory and the present time. In return, memory and history nourish culture in its infinite variety of expression and show the way forward into the future. Making this cultural wealth the subject of research, creation and education can be hugely beneficial in recreating Haiti's social fabric. In a country whose developing citizenship is looking for roots, culture can help transform our relationship with ourselves, with others, and with our surroundings. [1]

International assistance and government support for heritage conservation have been extremely limited in the five years since the earthquake, with most aid going to shelter, feed, and care for the many displaced and vulnerable residents of Port-au-Prince. Early post-earthquake efforts sponsored by World Monuments Fund (WMF), the International Council of Monuments and Sites (ICOMOS), the Prince Claus Fund, and the Fondation connaissance et liberté (FOKAL) sought to assess the damage suffered by the Gingerbreads and promote their recovery.

A rapid survey of the Gingerbreads was undertaken in the aforementioned neighborhoods, covering a span of 1+ square miles and ranging in density, form, and fabric. Since 2010, only limited research has been undertaken to document the surviving Gingerbreads, as well as those lost in recent years, and very little is understood about their relationship to their urban context—physically, environmentally, socially, and economically. While FOKAL has spearheaded a program to train artisans in the traditional construction techniques and crafts needed to restore Gingerbread architecture and has been a staunch advocate for preservation, there is still much ground to cover between finding ways to restore an individual building and finding ways to meet larger needs at a neighborhood scale.

Recognizing both the important work that has already been done, as well as the challenges ahead to preserve Haiti's Gingerbread heritage, Columbia University's Graduate School of Architecture, Planning, and Preservation (GSAPP) developed an advanced studio course in the Fall of 2015 focused on the Gingerbreads as important elements of the urban environment of Port-au-Prince. Given the value they hold to the people of Haiti, the Gingerbreads are not simply historic buildings in need of repair; they are a form of living heritage that can help to catalyze change within the physical and social fabric of the community. The studio concept developed from this premise.

Drawing students from historic preservation, urban planning, and real estate development, the studio explored three fundamental questions:

1. What can the Gingerbread houses contribute to the surrounding urban context (socially, environmentally, and economically)?
2. What can the surrounding urban context contribute to the preservation and valorization of the Gingerbread houses?
3. What challenges do the Gingerbread houses currently face and how might those challenges be overcome?

As an advanced studio, the course was conceived as a facilitated learning experience to engage students in interdisciplinary professional practice and fieldwork. Real-life issues and clients drive such studios at GSAPP. Through independent and collective research, data collection, and analysis, the students shaped the direction of the study and its ultimate proposals, in keeping with the aims and needs of FOKAL, who served as the "client" for didactic purposes. Specific learning objectives included working collaboratively on a client-driven project and report, locating and aggregating relevant data resources, developing rapid survey methods appropriate to a challenging field environment, and mapping and visualization of urban data.

A core element of the studio was a week of intensive field work in Port-au-Prince (October 4–9, 2015). The Columbia students, along with collaborators from *Maîtrise en Histoire, Mémoire et Patrimoine* at the *Université d'Etat*, the *Université Quisqueya*, and the Haitian Education and Leadership Program (HELP), spent the greater part of the week documenting more than 350 Gingerbreads and their urban contexts using an electronic survey to rapidly record information and collect photographs. Upon returning from the field, this material provided the baseline data upon which a geospatial inventory was developed and all conclusions and analyses were based. This report serves to summarize their analyses as well as present proposals for how the Gingerbread houses can be preserved within Port-au-Prince's diverse urban environment and can create positive benefits for the city's communities.

Key Data Sheet.



356

Gingerbread houses
surveyed in the whole study area



651

other buildings
surveyed in the whole study area

among surveyed Gingerbread Houses...



94%

are occupied

The Gingerbreads continue to be highly used, with over 94% of the Gingerbreads surveyed being occupied, and less than 6% being unoccupied.



45%

are in good condition

Significantly, despite age, changing use or natural disaster, 45% of Gingerbreads are in good condition, 39% in fair condition, and only 16% are in poor condition.



47%

are small

While the general assumption is that Gingerbreads were originally luxurious residences, in fact only 22% are large, while 31% are medium, and 47% are small.

59*

lost Gingerbread houses
(demolished/collapsed) since 2010

**confirmed*

Introduction.



> Avenue John Brown and Rue Castrom.

Introduction.

History of Development of the Gingerbread Neighborhoods.

1860s

Port-au-Prince sees economic and industrial growth.

While houses built in the Gingerbread style can be found throughout Port-au-Prince—as well as elsewhere in Haiti and the Caribbean—this report focuses on a concentration of these houses within Haiti’s capital, specifically in the historic neighborhoods of Bois Verna and Turgeau, continuing into Deprez, Pacot and Bas Peu de Choses. Then, as now, the geographical boundaries of these neighborhoods were not strictly delimited. Throughout this report, references to particular “neighborhoods” are intended to help readers achieve a general rather than absolute sense for the geography concerned. When used, the phrase “Gingerbread neighborhood” is synonymous with the Study Area, the zone within the boundaries described on page 19.

In the 1860s, Port-au-Prince experienced economic and industrial growth, serving as a center of trade due to its position as Haiti’s only port open to foreign exchange. As a result, a new bourgeoisie of wealthy traders, merchants, and educated professionals emerged. As the city’s population grew, necessitating its expansion, this new political, economic, and social elite sought to escape the density and chaos—as well as frequent fires—of Port-au-Prince’s downtown.[1] They migrated eastward, beyond the limits of the Champ-de-Mars, onto slopes of what historian Georges Corvington called the “green hillside,” creating new suburban neighborhoods surrounded by greenery and offering beautiful views.[2] By the turn of the century, the city had expanded to three times its colonial size, with a population of 70,000; approximately 8,000 houses were constructed to accommodate this expansion.[3] At this point, Turgeau and Bois Verna were recognized as the most prestigious neighborhoods.[4] Soon after, other similar neighborhoods like Deprez and Pacot were established. It was in these privileged communities, with a relatively short commute to downtown, that the Gingerbread houses were built.

1881

Second National Palace
[Image 01].



1887

Villa Sam built
(Today, Hotel Oloffson).

Combining foreign influences with local traditions and adaptations, the eclectic, highly ornamental Gingerbread style of architecture was inspired by the construction of the second National Palace in 1881 and Villa Sam (now Hotel Oloffson) in 1887.[5] Serving as models for a national architecture, these buildings ushered in the Gingerbread era of 1880–1920, during which the style was adopted for the private residences of the wealthier classes inhabiting the aforementioned neighborhoods. Industrialization—first in Europe, then in Haiti—played a significant role in the spread of the Gingerbread style. Manuals circulated from Europe and North America allowed for the diffusion of international stylistic trends and a democratization of the construction process.[6] International exchange also came in the form of Haitian architects studying abroad in Paris, including Georges Baussan, Leon Mathon, and Eugene Maximilien.

1880s-1920s

Gingerbread Era: National Style
adopted for private residences.

[7] These architects returned to apply their training and knowledge of European styles to private residences. Further, French artisans set up woodworking shops to train Haitian artisans in the decorative craft.[8] The invention of technologies for mass production meant that prefabricated ornamental and decorative elements could be ordered at lower costs.[9] The Gingerbread style became more accessible and spread to less wealthy citizens, and smaller, more modest Gingerbread houses for the middle and lower-middle classes began to appear.



A 1925 ordinance banning wood construction due to its susceptibility to fire, along with the introduction of concrete, which was first used in the 1914 National Cathedral (Cathédrale Notre-Dame de L'Assomption), brought an end to the era of traditional Gingerbread colomage (timber and masonry) construction.[10] Concrete became the primary material for modern residences that were built to accommodate the rapidly growing population of Port-au-Prince. The city's population grew to 120,000 as its area increased to five times its colonial size between 1925 and 1954.[11] One driving factor of this growth was the effort, undertaken during the

1900

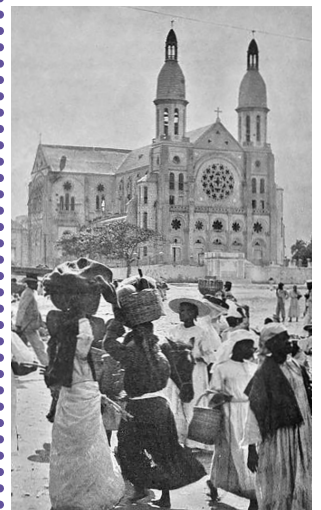
City grows to 3x colonial size.
"Plan de la Ville de Port-au-Prince, 1897" [Image 02].

1901

Country roads become avenues.

1909

Introduction of automobiles.



1914

First use of concrete: National Cathedral [Image 03].

1925

Ban on wood construction due to fires and introduction of asphalt roads.

1925-1954

City grows to 5x colonial size.

1946

Revolution of 1946.

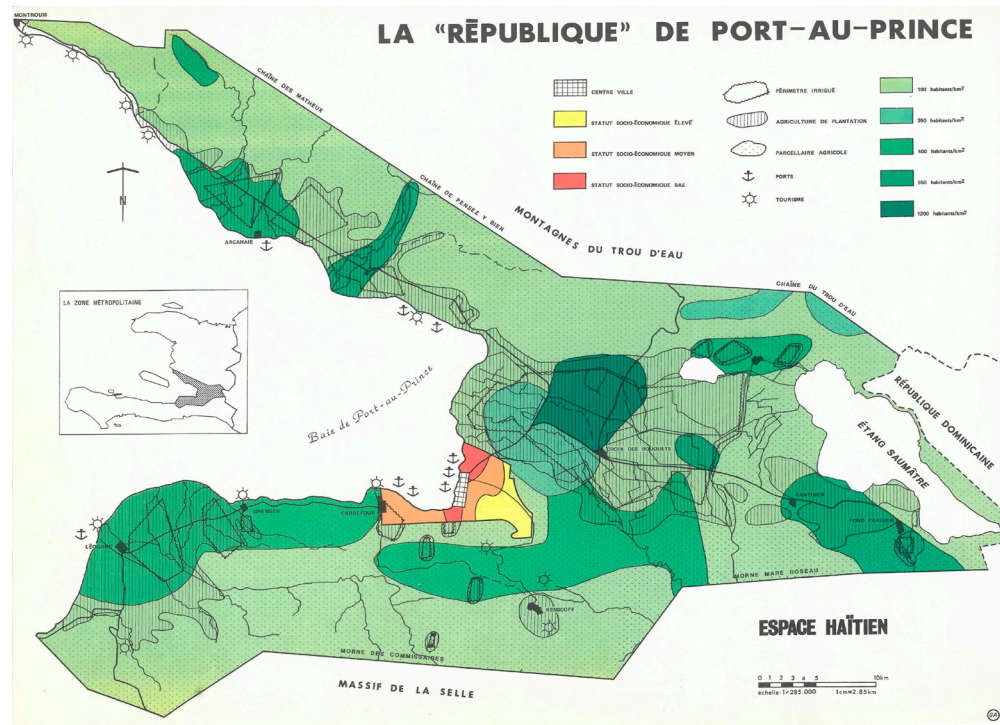
1950s-1960s

Slum proliferation and urban decay.

La "République" de Port-au-Prince, Georges Anglade [Image 04].

American occupation that lasted from 1915 to 1934, to centralize previously regional markets, ports, budgets, and armies into the capital.[12] Parallel developments in transportation at this time, such as the transformation of country lanes into large avenues including today's Avenue John Brown (formerly Chemin de Lalue) and Avenue Lamartinière (formerly Chemin du Bois-Verna) in 1901, the introduction of the automobile in 1909, of asphalt roads in 1925, facilitated the accessibility, growth, and densification of the old Gingerbread neighborhoods.[13] Following the Revolution of 1946, which overthrew the dictatorship of Elie Lescot, an emerging middle class led to the founding of newer neighborhoods consisting of more modest Gingerbread-style houses. These include Morne-à-Tuf and Bas Peu de Choses, located to the west of the earlier established Gingerbread neighborhoods.[14]

Centralization of political, economic, and military power in Port-au-Prince continued under the Duvalier presidencies from 1957 to 1971 (François Duvalier) and 1971 to 1986 (Jean-Claude Duvalier).[15] Cities in outer provinces, with the closure of their maritime ports, faced degradation and depopulation, with a vast number of their inhabitants moving to the political and economic center of Port-au-Prince.[16] In addition, there was high migration from rural areas into Port-au-Prince, especially under Jean-Claude Duvalier, who focused foreign investment into industry and export-oriented agriculture. Privatization, falling incomes of small landowners, increases in food prices, and cuts in social spending pushed rural Haitians into cities, especially the capital, where they tried to earn a new living through industrial production.[17] These trends occurring at a national level directly affected the local cityscape of Port-au-Prince, reorganizing the social and architectural fabric of its neighborhoods.



Facing a massive population influx that resulted in intensified population growth and densification, Port-au-Prince in the 1950s and 1960s was marked as a period of urban decay and slum proliferation as much of the city's open spaces were taken over by informal housing.[18] Historian Roland Devaiges, writing in 1954, already recognized the relationship between altitude and social hierarchy in which the wealthiest residences were built on the highest ground.[19] Similarly, geographer Georges Anglade maps out the relationship between socioeconomic status and relative distance from the old colonial city.[20] Thus, the same trend that established the Gingerbread neighborhoods in the late nineteenth and early twentieth centuries was at play

once more, as urban transformation and major political and social upheavals pushed wealthier residents further outward and upward—to new suburbs at even higher elevations, such as Pétienville. Consequently, while some Gingerbread properties in the older neighborhoods of Bois-Verna, Turgeau, Deprez, Pacot, and Bas Peu de Choses have remained intact and continue to serve as residences, many others were altered physically and functionally as their owners moved out. Large lots composed of a single house and surrounding garden were subdivided to accommodate new construction as these neighborhoods densified.

With the additional increase in rural migration into Port-au-Prince, densification continued through the 1980s, when the city's population approached one million inhabitants, and into the twenty-first century.[21] By 2009, the once-privileged and spacious historical retreats of the wealthy classes had undergone an extensive socioeconomic transformation. In conjunction with the declining affluence of residents, the existing building stock deteriorated. Many of the Gingerbread houses suffered from a lack of maintenance, and periodic hurricanes, termites, and water infiltration took their toll. Simultaneously, infill construction made these neighborhoods more dense, and many of the Gingerbread houses underwent alterations or additions (often in concrete). The use of many of these houses also changed from strictly residential to accommodate the needs of institutions, commercial enterprises, and schools that have moved into these neighborhoods to meet the evolving needs of residents. Such conversions began as early as the 1930s (e.g. the conversion of Villa Sam to commercial use as Hotel Oloffson in 1935), and have accelerated since the 1950s.[22]

According to the research that Lisandre Jardon carried out on the Gingerbreads as part of her master's thesis at the Université Libre de Bruxelles, the identification of a Gingerbread is not determined by its use or function; rather it is the architectural and stylistic language that characterizes it.[23] Their character-defining features include tall ceiling heights as a climatic response, abundant and intricate decoration, especially on the roofs where the house meets the sky, and galleries or porches which represent important intermediate spaces that provide shade and a space to congregate.[24] Thus, there is indeed a diversity in the buildings that can be called Gingerbreads, which feature a variety of sizes and uses as reflective of the history and development of the neighborhoods in which they are found.

Previous Gingerbread Efforts.

The brief vignettes and simple sketches of the Gingerbread houses of Haiti by the American Anghelen Arrington Phillips in 1975 offered one of the first catalogues that examined the unique aesthetic of these structures. While Phillips only sketched a limited number of houses, her work provided an important service by beginning to document the rich history of these buildings and their owners. However, little effort was made to further document them until a survey of the Gingerbread houses was conducted in the early 1980s by the National Tourism Board (Office National du Tourisme) and the Institute for the Preservation of National Heritage (Institut de Sauvegarde du Patrimoine National—ISPAN).[25] This inventory identified and photographed nearly 800 historic structures throughout the city of Port-au-Prince, illustrating the prevalence of this typology in the historically less-dense neighborhoods of Pacot, Bois Verna, and Turgeau.

Interest in the Gingerbread houses of Port-au-Prince resurfaced in 2009, driven by both the appreciation for their historical and aesthetic values as well as concern for their steady disappearance. In October of 2009, the Gingerbreads were nominated to the 2010 World Monuments Watch by Conor Bohan, Executive Director of the Haitian Education and Leadership Program

1980s

Continued densification.

1930s-2015

Physical and functional alterations of Gingerbreads.

1975

Anghelen Arrington Phillips publishes her drawings of the Gingerbread houses.

1980

Inventory by ISPAN and the National Tourism Board.

2010

January 12th Earthquake.
WMF/ICOMOS Report.



2012

Quartiers por Haiti report.
Maison Dufort workshop-school.

2013

Daniel Elie exhibition.

2014

Lisandre Jardon thesis.

(HELP), and the Association of Haitian Architects and Urbanists (ASSHAU). Inclusion on the Watch, coupled with the renewed discussions it had already engendered about the importance of the structures to Haitian culture and heritage, made it possible for World Monuments Fund (WMF), FOKAL, and the International Council on Monuments and Sites (ICOMOS) to respond quickly in the wake of the devastating earthquake of January 12, 2010. A Gingerbread condition assessment mission, which was supported in part by the Prince Claus Fund, took place in April 2010. Establishing a unique methodology geared toward the challenging post-disaster circumstances, the 2010 mission analyzed Gingerbread construction typologies and assessed the structures' conditions and seismic performance in order to provide informed recommendations for interventions and future protection. The report concluded that "the importance of repairing and reviving these buildings and their neighborhoods as a bright spot in Haiti's reconstruction cannot be overstated." [26]

In 2012 the Belgian organization Quartiers pour Haïti issued a report in conjunction with FOKAL, ISPAN, the Comité Interministériel d'Aménagement du Territoire (CIAT), and the city of Port-au-Prince. [27] This report emphasized the connection between the Gingerbread houses and their surrounding urban context. Focusing on a defined area within the Gingerbread district, Quartiers pour Haïti offered several urban design recommendations that included restructuring the neighborhood's three primary roads, identifying a symbolic "heart" for the district, and introducing a linear pedestrian park running through the blocks. Although these visions have yet to be realized, Quartiers pour Haïti made the significant contribution of linking the preservation of Gingerbreads with a broader urban program for the surrounding community. To complement this, as part of her dissertation project for the Université Libre de Bruxelles, Lisandre Jardon surveyed over 30 Gingerbreads within Quartiers pour Haïti's study area; the resulting records provide some of the most detailed and thorough information about these structures within the Gingerbread neighborhood.

Another important step taken in 2012 was the launch of FOKAL's workshop-school at Maison Dufort. This project has aligned technical experts and master craftsmen from the Institut du Patrimoine Wallon (IPW) with local Haitians, with the aim of equipping them with specialized knowledge and the skills necessary for the restoration of these historical houses. Although FOKAL had been actively looking to acquire a Gingerbread to act as the first training school since 2010, work on Maison Dufort did not begin until September of 2012. The project was completed in 2016, and the students who participated in the Dufort project will continue to refine their skills as they work on FOKAL's next Gingerbread restoration project at Maison Chenet on the corner of Rue M and Rue 7.

Adding to this growing body of knowledge, Daniel Elie's 2013 exhibition and accompanying publication, *Maisons Gingerbread à Port-au-Prince*, provided a detailed analysis of the historical, social, environmental, and technological factors that contributed to the development of the Gingerbread style. [28] Elie used this knowledge to systematically delineate the individual elements that he viewed as the key characteristics of the style, such as its location in the middle of the lot, decorative and steeply sloped rooflines, and use of industrially produced materials, among many other traits. The following year, Lisandre Jardon published her extensive Master's thesis, *Gingerbread: Patrimoine de Port-au-Prince*, in which she argued, beyond solely rehabilitating Gingerbreads, for a more comprehensive action plan for improving the urban area associated with them. [29] According to Jardon, protecting heritage is essential for preserving a collective identity and is therefore an important component to the reconstruction and resilience of Port-au-Prince. Altogether, these various projects have contributed to an ever-evolving discussion about how the Gingerbread style continues to contribute to Haitian heritage.

Methodology.



> Students collecting data in the field.

Methodology.



Team surveying Maison Gauthier.

The aims of this study were to undertake an informed analysis of the current urban context of the Bois Verna, Pacot, Turgeau, and Bas Peu de Choses neighborhoods; the roles that Gingerbread houses play within this context; and the challenges and opportunities associated with those Gingerbreads. An underlying premise of this approach was that the Gingerbreads can only survive into the future if they remain integral elements within the built and social fabric of the city. Therefore, research could not simply focus on the Gingerbreads, but rather needed to explore the Gingerbreads as part of a larger urban environment. For the purposes of this studio, the team focused on the study area defined previously by FOKAL and others, roughly bounded by Avenue John Brown to the north, the steepest slopes of Pacot's hillside to the south, Avenue Magloire Ambroise to the east, and Avenue Martin Luther King to the west.

Urban conditions vary significantly within the study area, from quiet residential neighborhoods to busy commercial corridors. To understand the Gingerbreads within their range of urban contexts, the studio's research employed two fundamental lenses. First, the team identified all the Gingerbreads within the study area. This lens provided comprehensive information about the geographical distribution of these houses as well as an overall sense for how the condition of Gingerbreads has changed since the last survey was conducted in 2010. The team then defined smaller concentrations—or “nodes”—of Gingerbreads within discrete sub-neighborhoods of varying character, surveying all the buildings (including non-Gingerbreads) within these nodes. This second lens fostered a greater understanding of the different relationships between the Gingerbreads and their diverse urban contexts. This analysis could then inform the development of potential interventions that were specific to different types of Gingerbread contexts, with the ultimate aim of valorizing and preserving the Gingerbreads in ways that contribute to the community's social, environmental, and economic well-being and resilience.

The lack of existing data poses a fundamental challenge in researching the built environment of Port-au-Prince. The Centre National de l'Information Géo-Spatiale (CNIGS) in Haiti is in the process of undertaking the first cadastral survey of Port-au-Prince. There are no available property maps, nor systematic records of land ownership. While the photographs from the 1980s Gingerbread survey by the Office National du Tourisme and ISPAN are now available, the accompanying survey records, addresses, and maps have not been recovered. The 2010 post-earthquake assessment mission identified some of the Gingerbread houses within the aforementioned neighborhoods but due to conditions on the ground this survey was not comprehensive. The

efforts of Quartier pour Haïti brought greater detail to a discrete area within the broader neighborhood. Yet limited time and resources have prevented further monitoring and updating of this data. Thus, the team was challenged to unite and build upon disparate and incomplete resources to develop a comprehensive understanding of the study area. This process of data gathering and preparation was undertaken in four phases: Basemap preparation; Survey tool development; Survey deployment/fieldwork; and Data compilation and refinement.

Basemap Preparation.

Given the lack of an existing cadastral map for Port-au-Prince, the team created a basemap relying on secondary spatial data obtained through OpenStreetMap, ESRI, geocoded data from the 2010 post-earthquake Gingerbread assessment, and a high-resolution aerial image from 2014 supplied by the Centre National de l'Information Géo-Spatiale (CNIGS). This information was compiled and overlaid to create a preliminary basemap of the study area. Initially, this map would be utilized to identify the total number of buildings within the study area as well as locate all previously surveyed Gingerbreads. However, while in Port-au-Prince, the map was also used to devise best strategies for the documentation of buildings and street activity.



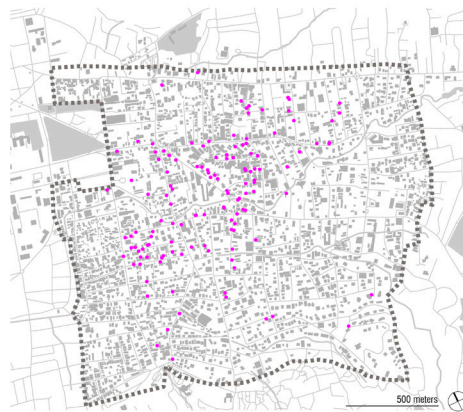
Existing polygons in Open Street Maps.



3,000 polygons drawn from CNIGS aeriels.



Final map with over 4,000 buildings.



Previously surveyed Gingerbreads.

Survey Tool Development.

Concurrent with the basemap preparation, the team developed a survey tool and protocol for collecting additional data in the field during a week-long campaign in Port-au-Prince. The team faced significant challenges in preparing for fieldwork in Haiti and worked to minimize these issues by planning for contingencies. The limited time period meant the team would have to undertake a rapid and intensive survey in the heat and difficult urban conditions of Port-au-Prince. While a digital platform seemed the most obvious solution to facilitate data collection, unreliable mobile network data connections in Haiti necessitated offline collection capacities.

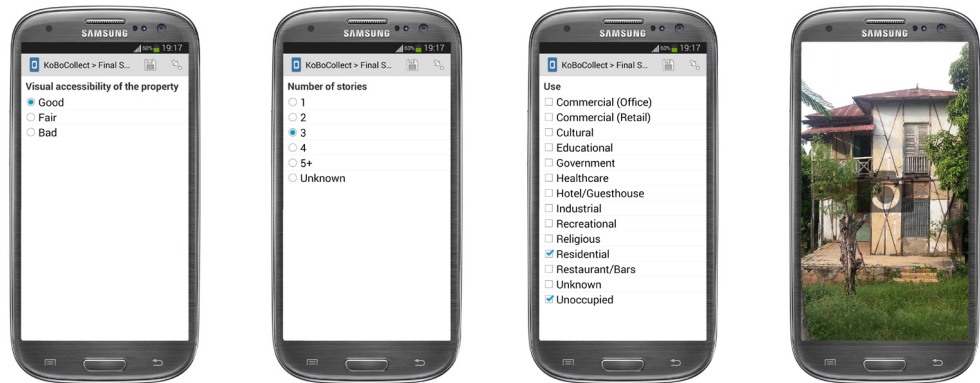
Given the time constraints, a series of questions was devised to capture only the most relevant information about each building to facilitate a useful analysis of the Gingerbread houses and the surrounding neighborhood. With this in mind, the scope of the questionnaire was narrowed down to: location, Gingerbread identification, current condition of the property, materials, use, relationship to the street, a photograph of the property, and an optional note field. The same series of questions would be answered for each individual property on a digital platform supported by a mobile device.

In addition to the digitally recorded survey responses, each group would also use printed handouts of the base maps to register (with hand-drawn conventions) general streetlife conditions, including the presence of street vendors, walled properties, and water distribution points.



Team members working with the GPS device in the field.

The digital platform chosen for the implementation of the survey was KoBo Toolbox, an open source, web-based platform for data collection and analysis. Information can be input and stored by individual groups and then combined into a master database. In addition to its cost-free KoBo Collect application for Android devices, KoBo Toolbox provided an easy-to-use template for survey development and data collection, allowed the inclusion of photos with individual survey entries, and offered the potential for offline work (without requiring an internet connection or cellular reception). However, this application also presented certain problems, including its incompatibility with iOS devices in offline mode, the inaccuracy of GPS coordinates taken directly with the phone/tablet, and the fact that photos, when taken in portrait format, are not automatically rotated. These problems were addressed by only using Android devices, manually entering GPS coordinates from a precision GPS handheld device, and rotating the photographs during the data cleaning phase.



Screenshots of the survey as seen in the KoBo Collect app on an Android device.

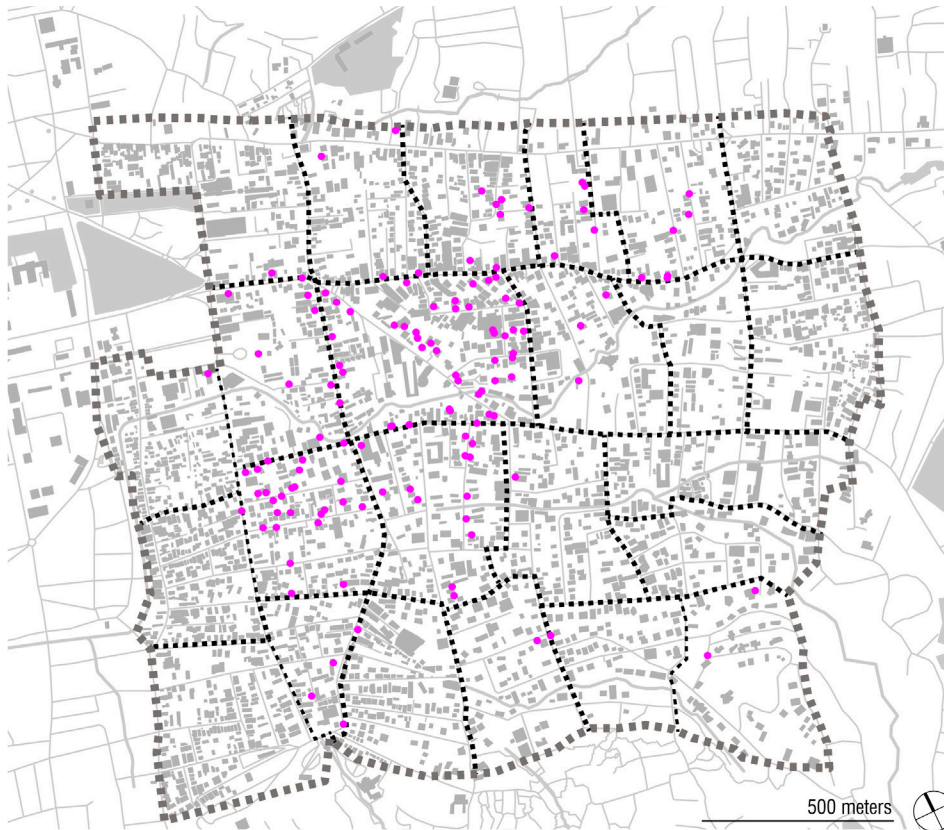
In order to use KoBo, a master account must be created and used to develop the survey form. The application individually registers each question and assigns an appropriate format (e.g. select one, select multiple, numeric, text, etc.). Once the form is finished, it can be edited and reorganized multiple times. However, the final draft of the form must be exported as a project before it can be completed by survey participants or shared with other KoBo accounts to allow for multiple users. While the process of creating and editing the survey form was done through a desktop internet browser, the survey was conducted over the course of the week with assorted Android devices.

Each mobile device utilized for data collection in the field required installation of the KoBo app and a registered KoBo account with which the project was shared. These devices then had to download the form to enable offline survey completion. While multiple forms can be completed and saved offline, a device must be online for the information to be uploaded to the KoBo server.

Prior to deployment in the field, the studio first tested the KoBo application in New York to gain a better understanding of how the survey functioned and to troubleshoot any potential problems. Beneficially, this short trial demonstrated the time-consuming nature of documenting buildings, highlighted the different tasks each team member could perform, and exposed minor complications regarding question format and wording. After these minor tweaks, the survey was ready to test in the field.

Survey Deployment/Fieldwork.

Data was collected through a field survey, conducted in Port-au-Prince over the course of five days (October 5-9, 2015). The study area was subdivided into twenty-four zones of similar dimensions that were distributed among six survey teams. Each survey team was composed of two students from Columbia University and one student from the Université d'État d'Haïti (Maîtrise en Histoire, Mémoire et Patrimoine), with the additional assistance of several students from HELP and Université Quisqueya throughout the week. Initially, each student group was responsible for surveying four zones.



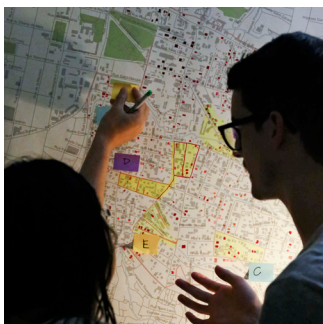
Study area as divided into 24 fieldwork zones.

Considering the size of the study area and the intensity of the midday heat in Port-au-Prince, each day of fieldwork was divided into two three-hour working sessions (8:30–11:30am and 3:00–6:00pm) with a three-and-a-half-hour break in between. During the break, survey teams reconvened at the Université d'État d'Haïti to push data gathered during the morning session. By the end of the week, each group completed thirty hours of fieldwork, totaling 180 hours.

Over the course of the first two days, each team of students exclusively surveyed the Gingerbread houses within its assigned four zones and assessed the current condition of those Gingerbread houses previously surveyed by WMF, ICOMOS, and Quartiers pour Haïti.



Team surveying a Gingerbread house adjacent to Maison Dufort on Rue du Travail 2ème.



Team analyzing the collected data in order to define nodes.

Once all Gingerbreads within each zone were identified, the teams then distinguished smaller areas of clustered Gingerbreads based on a range of criteria, including size and condition of the Gingerbread houses, dynamics and socio-economic character of the neighborhood, commercial/residential/institutional uses, and potential stakeholders' willingness to engage in the preservation or adaptive reuse of the historic properties, among others.

Ten nodes of Gingerbread groupings were identified. These areas varied greatly in size, from just three Gingerbread houses (Rue M) to twenty-nine Gingerbreads surrounded by substantial development (Rue du Travail). These nodes were then reassigned to the teams, who documented all buildings surrounding the already-surveyed Gingerbreads during the remaining days of fieldwork. Ultimately the teams surveyed all of the properties in each node in order to better understand the relationship between Gingerbreads and their surrounding context.



Identification of Gingerbreads.



Node boundaries delineated within the study area.

At the end of the week in Haiti, a total of 651 non-Gingerbread buildings were surveyed. Including the 356 Gingerbread houses identified, over 1,000 properties were catalogued.

Data Consolidation and Refinement.

Upon returning to New York, the team began the process of cleaning and consolidating the downloaded data from KoBo in preparation for analysis. To do so, all survey results were exported into Microsoft Excel. A variety of cleaning tasks were completed, including standardizing street names, eliminating invalid data points, and removing repetitive records. The team encountered points with wrong coordinates, correcting the mistyped digit by using the average coordinates of addresses nearby. Once all GPS coordinates were plotted onto the basemap using ArcGIS, each field group matched these GPS coordinates with polygons representing building footprints, using the 2014 aerial satellite imagery provided by CNIGS, as well as in-field photographs and street address information. Fields were also added to the GIS data, including Gingerbread size and a field to note the certainty of the shape of the polygon drawn.

With the data cleaned and combined, the team conducted quantitative analyses of the Gingerbreads, as well as for all surveyed properties within the nodes. This allowed the team to assess the overall features of Gingerbreads, the general urban context of the nodes, and the building environment of the study area. The field-selected node boundaries were specified based on survey data, street maps, and the statistical and spatial analysis of each individual node.

Data Analysis and Findings.



> 70 Avenue Magloire Ambroise.

Data Analysis and Findings.



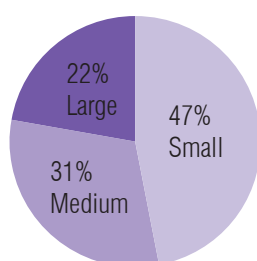
118 Jean Paul II.
A large residential Gingerbread house in bad condition.

Understandably, the sheer multitude of Gingerbreads within the study area has posed challenges to forming general observations. Surveyors made rapid visual assessments of 356 Gingerbreads, recording their location, size, condition, visual accessibility, and use, among other information. Data collection was therefore influenced by both conditions on the ground and the subjective interpretations of the surveyors. Nevertheless, characterizing the Gingerbreads was an essential task so that the team could understand and observe trends within the data. The following section thus attempts to provide a succinct analysis of the quantitative data collected in the field.

Gingerbread Characterizations.

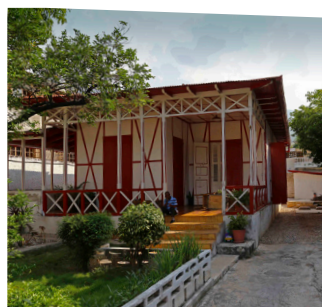
Size of Gingerbread Houses.

As noted previously, the Gingerbreads range in size and scale. To understand these differences and their representation within the study area, the team categorized the Gingerbreads into three sizes (examples of which can be seen below):



Gingerbread Size

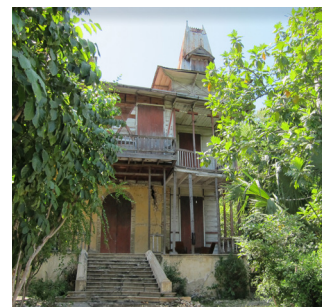
- a) Small—single-story, modest structures
- b) Medium—two stories high and at most two bays wide
- c) Large—two or more stories and three or more bays wide



a) an example of a small Gingerbread House, 10 Rue 4.



b) Rue des Marguerites between Rues Baussan and Camille Leon.

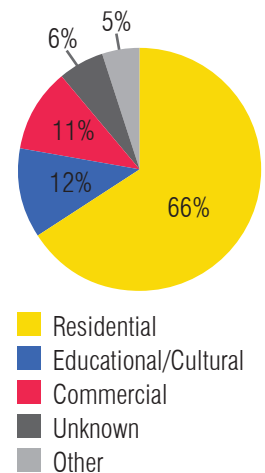


c) The Patrice Pamphile House, 4 Rue M. Casséus.

Although larger Gingerbreads—like the Castel Fleuri and the Patrice Pamphile House—stand out as grand examples of the style, often portrayed in popular imagery, the team surprisingly categorized only 22% of these buildings as large. Medium Gingerbreads made up a third of the building stock. However, almost half of the Gingerbreads surveyed were classified as small. The plethora of small-scale applications of the Gingerbread style challenge perceptions of this typology as a style of the upper class.

Current Use of the Gingerbread Houses.

The Gingerbreads are overwhelmingly occupied (94%) and residential in use (66%). However, there are some interesting and innovative examples of adaptive reuse, and around 11% of the Gingerbreads have been converted to commercial uses, including office and retail space. A particularly interesting example being a gas station on Rue Capois.



Gas station at Rue Capois and Avenue Jean Paul II (Docteur Audain).

Another 12% of the Gingerbreads are used for educational and cultural purposes. These range from small preschools to renowned institutions like the dance school at Maison Gauthier. The team perceived the institutional presence in these houses as a strength to be capitalized on.



Collège Mixte Lamartinière, 26 3ème Rue du Travail.



Université d'Etat d'Haiti (UEH), 3 Rue Pacot.



Compagnie et École de Danse Viviane Gauthier, 15 Rue M.

Interestingly, the team observed that only around 16% of the Gingerbreads exhibited multiple uses. This counters the survey team's original assumptions that most Gingerbreads had been altered to serve a variety of purposes. Taken in total, the data demonstrates that most Gingerbreads continue to operate in their original capacity as residences.

Building Materials.

Identifying the structures' primary materials helped the team categorize buildings as Gingerbreads. Unsurprisingly, timber, sheet metal, and masonry were the materials most often associated with the Gingerbreads. Despite numerous instances of concrete additions, the findings indicate a continued use of traditional construction materials on Gingerbreads.



Variety of timber elements.

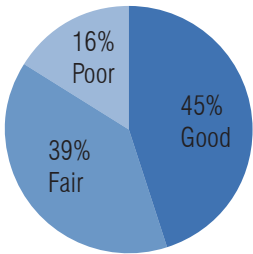


Sheet metal, primarily for roofs.



Masonry elements.

Condition of the Gingerbread Houses.



Building Condition

Surveyors were also tasked with qualifying the Gingerbreads as being in good, fair, or poor condition. Although these assessments were limited by time constraints, some interesting trends emerged. Almost half of the Gingerbreads were judged to be in good condition, providing a happy contrast to the images of severe damage following the earthquake. Around two-fifths of the surveyed Gingerbreads were assessed to be in fair condition. Buildings under this categorization tended to show some signs of deterioration or damage, but appeared stable and reparable. Just one-fifth of the Gingerbreads were classified as in “poor condition.” Even so, many of these compromised buildings continued to be utilized, demonstrating their continued importance to the community. In fact, only six percent of all Gingerbreads remain unoccupied. The overwhelming occupancy of these structures, despite the challenges posed, demonstrates the resilience of this building typology that the studio intended to build upon.



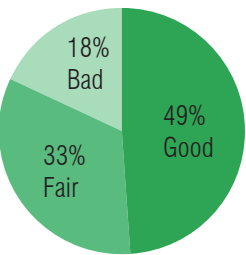
Good condition, 29 Rue Bellevue.



Fair condition, 11 Rue Ducoste.



Bad condition, 57 Rue Cameau.



Visual Accessibility

Visual Accessibility.

This data was collected by observations taken from the street. Therefore, the quality of the information gathered was dependent on the how visually accessible the property was. Fortunately, almost half of the Gingerbreads had good visual accessibility, lending them a strong street presence. Nevertheless, a little under one-fifth of the Gingerbreads were not visually accessible, leaving the team with views of gates and trees. Bad visual accessibility hinders the development of meaningful relationships between the Gingerbread and the surrounding urban context.

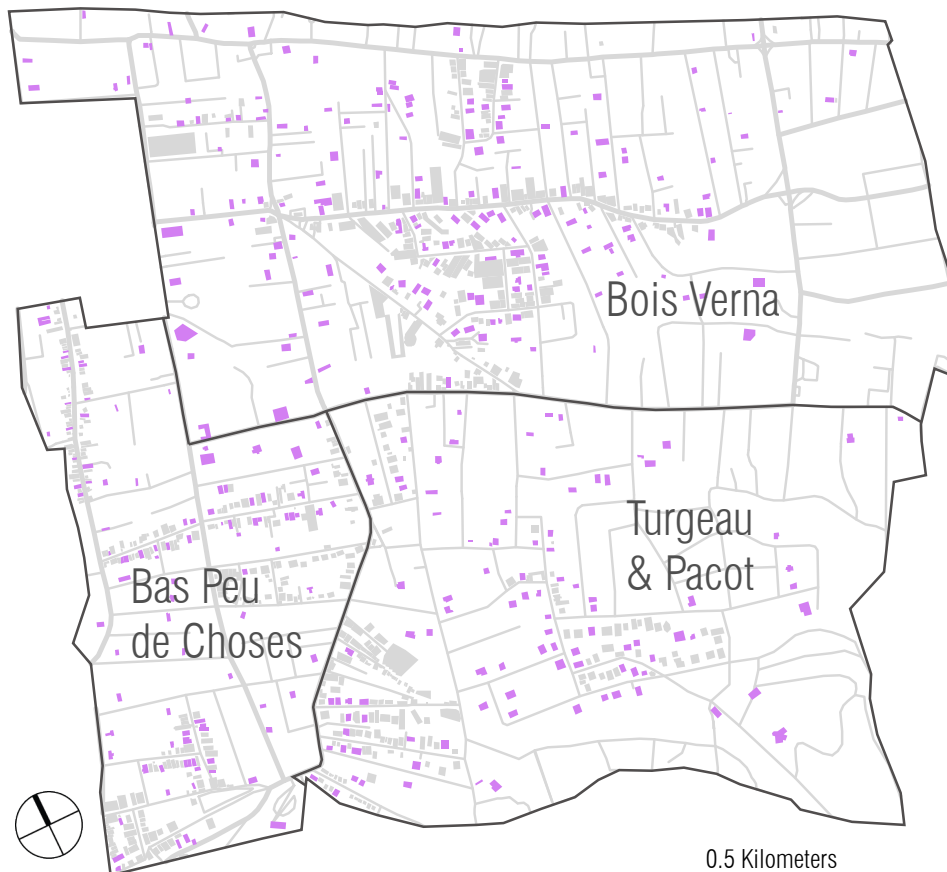
Spatial Characterizations.

Taken as a whole, the observations may appear overwhelming. However, through the use of geographic information systems (GIS), the team was able to analyze this data spatially and identify certain trends. The spatial analysis of the Gingerbreads resulted in the categorization of three distinct areas: Bois Verna, Bas Peu de Choses, and Turgeau and Pacot.

The area north of Avenue Jean-Paul II, roughly corresponding to the Bois Verna neighborhood, is a notably dynamic and diverse portion of the study area with a heterogeneous stock of Gingerbreads that are largely visually accessible. The team observed a concentration of Gingerbreads with educational and cultural uses in this area.

Bas Peu de Choses, south of Avenue Jean-Paul II and west of the busy Avenue Christophe, is a stable residential area primarily made up of small Gingerbreads in good condition that are largely characterized by good visual accessibility, depending on the street. Interestingly, the data indicates that the Gingerbread houses in Bas Peu de Choses utilize less concrete and cinder block construction. This may be attributed to their continual use as residential structures in a middle-income area.

Turgeau and Pacot, south of Avenue Jean-Paul II and east of Avenue Christophe, are a world apart from the bustling thoroughfares and intimate streets previously discussed. This residential neighborhood is characterized by large Gingerbreads with low visual accessibility, set back from the street and blocked by trees and tall walls.

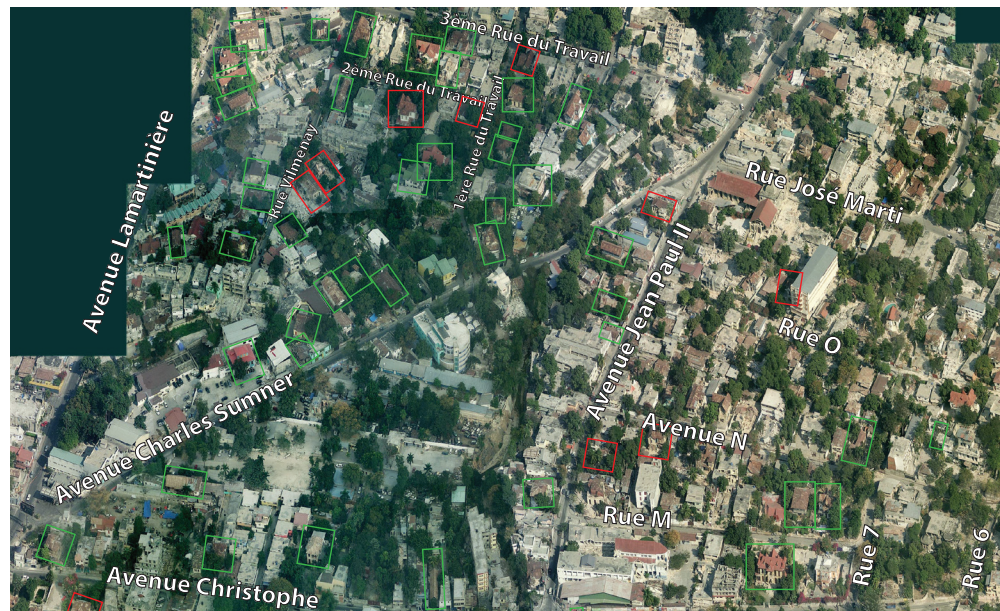


Gingerbread Survey Comparisons.

In total, the team surveyed 356 Gingerbreads, a substantial variance from the 206 identified in the *2010 Earthquake Mission Report*. Given that the 2010 survey took place soon after the earthquake while some roads remained closed—and that it focused on recording the largest, most definitive examples of the Gingerbread style—it is easy to understand how the current study recorded a greater total number of houses. Nevertheless, by comparing the distribution of Gingerbreads in 2015 with other studies conducted after the earthquake, it became clear that at least fifty-nine Gingerbreads are known to have been lost since 2010 [see Appendix 01].

Documentation from previous surveys included photographs, GPS locations, addresses, and brief conditions assessments that proved invaluable in assisting with this cross-referencing task. While confident matches were made between properties that had identical addresses, fairly consistent GPS data, and photographs, other matches were found by extrapolating from the available addresses in proximity to the property and using aerial imagery. In particular, copies of the 2010 oblique aerals taken by Pictometry International Corp. and assembled and rectified by conservationist and photographer Randolph Langenbach for the 2010 earthquake mission, were used to more easily identify where demolitions had occurred. [1]

2010 Pictometry Image.
Here streets were labeled to assist in identification. Extant Gingerbread houses are marked in green; known sites of demolished Gingerbreads are marked in red.



In few cases, high walls, dense vegetation, or private roads obscured Gingerbreads set back from the street. While these structures are likely still extant and appear to be present in recent aerial imagery, their presence and condition were not confirmed in the field. However, these represented only a few cases and were often the result of the adaptation of a Gingerbread to a use that necessitated higher security.

While it is difficult to provide a number for the total loss of Gingerbreads since the first inventory in 1980, the studio can confirm that fifty-nine have been lost since the completion of the 2010 assessment mission. The historic photographs taken during the 1980 survey, however, offer an important early snapshot of these structures. For a handful of structures, photographs can be compared between 1980, 2010, and 2015, offering an important glimpse at some of the adaptations and changes to the use and physical fabric of the Gingerbreads [see also Appendix 02].

The comparisons that emerged from this exercise illustrated a number of conditions faced by the Gingerbread houses that are commonly referenced, but not often visually illustrated. In some cases stability, resilience, and careful maintenance were visible in markedly unchanging

facades. In other cases, drastic change or complete loss was amplified by images of Gingerbread houses that weathered the earthquake with no visible exterior damage, but had vanished without a trace by 2015.



Locations, in red, of all 59 identified Gingerbread houses lost since the 2010 survey.

Subdivision of Lots and Densification.

Due to the setback of these homes, owners are able to profit from the subdivision of their historically large lots. The densification of Port-au-Prince, the desirability of this area, and the financial hardships of maintenance have combined to make Gingerbreads very susceptible to the loss of their historic context. Many homes have been entirely obscured from public view by new construction.



26 Rue Cadet Jérémie

Persistent Earthquake Damage.

Many Gingerbreads exhibit lasting earthquake damage from 2010. This can range from masonry cracking (as visible below) to the weakening or loss of key structural elements. Without attention, even relatively innocuous damage can lead to the loss of an entire structure.

4 Rue M. Casséus,
the Patrice Pamphile House



Rising Walls and Alterations.

Increasing wall heights are a symptom of the fear for safety in Port-au-Prince. Many walls show a substantial increase in height, a decrease in use of permeable materials, and are often topped with barbed wire or broken glass.

Alterations to these structures can range from concrete additions to the replacement of original features. Continuing alterations that—while well-intentioned—detract from the building's identity as a Gingerbread are a threat to the continuing presence of these structures.

208 Rue Alerte
Here the alterations—wooden
infill in place of original verge
boards—are well-intentioned and
attempt to mimic a Gingerbread
style with choice of materials.



Deterioration.

While neglect can sometimes work in favor of preservation (preventing alterations and allowing the building to retain material authenticity), long-term neglect and deferred maintenance are pressing issues for the preservation of the Gingerbread houses. Despite the structures' resilience, maintenance and restoration must be undertaken to save this historic housing stock.



15 Rue Garoute,
This structure, as well as another
Gingerbread house nearby,
was recently purchased by the
Haitian Education and Leadership
Program (HELP) as a location
in which to base their growing
campus.

Demolition.

Without constant monitoring, demolition is a serious concern. With the difficulties in acquiring raw materials for repair, the threat of natural disasters, the densification of the city, and only a limited discourse on the value of these structures, many Gingerbread houses are under substantial development pressure. Understanding why some areas, like Lavaud or Rue O, have experienced higher losses in their historic housing stock will help to inform how heritage protections can be best approached.



1980.



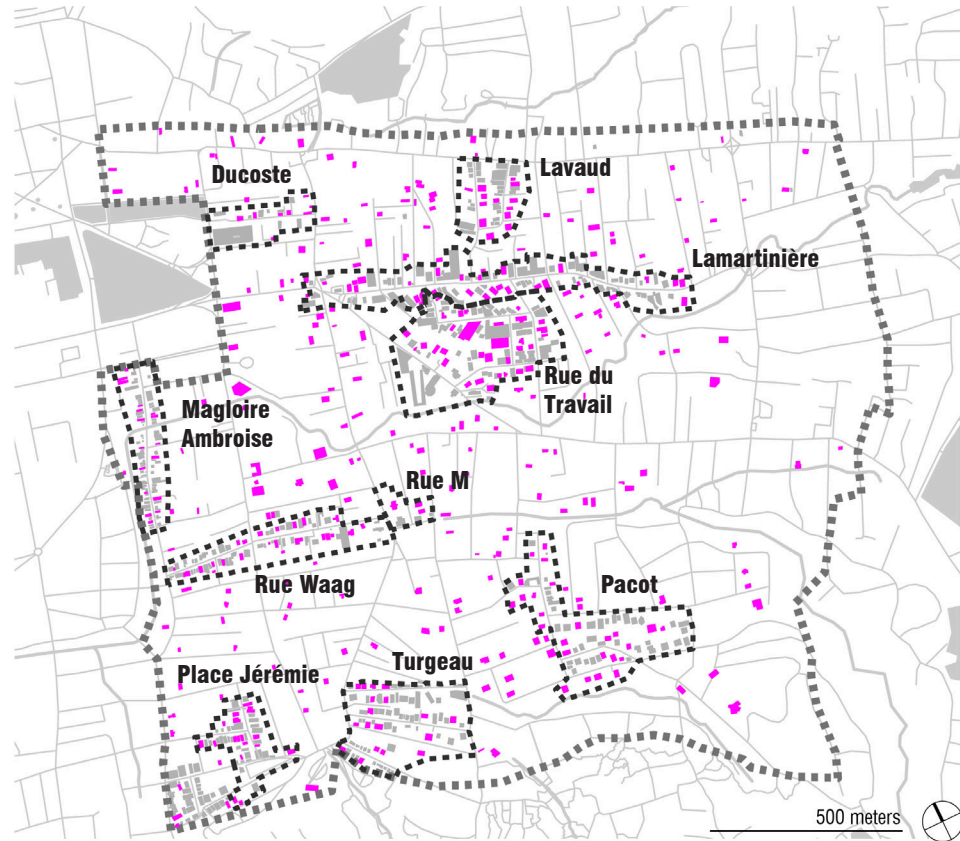
Post-Earthquake, 2010.



October 2015.

5 Rue Lavaud 1er

Node Characterizations.



Buildings and Gingerbread houses surveyed within the 10 nodes.

After all the Gingerbreads were surveyed, the team identified concentrations of Gingerbreads in different locations throughout the study area. The examination of the unique context of each of these specific concentrations—called nodes—allowed the team to better understand the variety of conditions present. This smaller scale, in which every building was surveyed, provided a more fine-grained lens through which trends, threats, and opportunities could be more easily identified for specific areas.

It would be difficult to create one-size-fits-all projects that could be reproduced effectively throughout the study area. The more cohesive patterns of building use, visual accessibility, size of Gingerbreads, and condition of buildings within the nodes allowed for more tailored, site-specific opportunities. Therefore, in addition to adding depth to the studio's overall analysis, the nodes created a platform for which the implementation of proposals could become more tangible and feasible.

Turgeau.

Located along the southern edge of the study area, the Turgeau neighborhood is composed of four streets—Rue 4, Rue 3, Rue 2 and Rue du Chili—that run east to west, from Avenue Christophe to Avenue N. The area is easily identified by its sloping landscape and beautiful views of the bay. The neighborhood has a relatively quiet atmosphere, as both cars and pedestrians may be daunted by its relatively steep slopes. Street activity becomes more prevalent closer to Avenue Christophe. The presence of vegetation and a minimal number of vendors reinforce the residential character of the area, though the neighborhood's educational and government buildings increase street life during the day.

Of the 77 buildings in the neighborhood, 17 (22%) are Gingerbreads, primarily found to be in good condition though varying in size. The variety of sizes and styles of the Gingerbreads in the area create a unique sampling. Walled-off properties, typical of residential neighborhoods in Port-au-Prince, are present in the node; however, the walls tend to be somewhat transparent or not very high, providing fair to good visual accessibility of the buildings from the street.

However, the lack of connection between the streets that run from east to west (long, steep stretches between Avenue Christophe and Avenue N), prevents these Gingerbreads from being understood as an ensemble. As a result, each street is read as an independent environment, fragmenting the node and limiting its potential as a cohesive, lively residential neighborhood that is representative of Haiti's dramatic topography, architecture, and landscapes. In certain cases, pedestrians have created informal paths through this node to better navigate its terrain. These tenuous connections should be strengthened in any potential intervention.



Villa Therese, Rue 3.



View of the bay from Rue 2.



Medium Gingerbread, 6 Rue 3, near Avenue Christophe.



17
Gingerbread houses

77
total buildings

Lavaud.



59 3ème Rue Lavaud.



13 1ère Rue Lavaud.



3 3ème Rue Lavaud.

Located in the northern part of the study area, the Lavaud district is roughly bounded by Avenue John Brown, Rue Lavaud 1ère, and Rue Lavaud 2ème. Despite its proximity to the bustling commercial corridor of Avenue John Brown and the traffic-ridden Avenue Lamartinière, Lavaud provides a more temperate environment, given the node's substantially reduced vendor presence. Full growth trees shade most of the streets, and this node is one of the most walkable areas in the general proximity of the Champ de Mars.

Of the 39 buildings surveyed in the area, 11 (28%) were identified as Gingerbreads. Interestingly, the majority of these Gingerbreads are large in size and characterized by extremely good visual accessibility, unlike many of the large-scale Gingerbreads in the southeastern part of the study area, which are typically hidden behind high walls and impenetrable gates. Furthermore, all Gingerbreads within Lavaud are either in good or fair condition.

Land use within the Lavaud neighborhood is a mixture of residential, commercial mixed-use, and educational. While the district has a strong residential feel, less than half of the buildings are solely residences (several are a combination of residential and commercial). The Gingerbreads in the neighborhood predominantly provide residential uses, though one is used for educational purposes and another is used for commercial activity. In addition to the residential and mixed-residential uses, Lavaud is characterized by the presence of educational institutions, with four schools in this relatively small area serving a diverse age group of students ranging from primary to higher education.

The unique nature and scale of Gingerbreads in this node presents an interesting opportunity for collective action in a neighborhood that is both visually and physically accessible. Moreover, given the fair to good condition of its Gingerbreads, the node may be able to draw strength from a perceived interest in preservation. Indeed, owners of several Gingerbreads in the neighborhood appear to have recently completed improvement projects. The prevalence of educational facilities also suggests that these institutions might serve as community anchors in the context of wider-reaching interventions.

11
Gingerbread houses

39
total buildings



Pacot.

Bounded by Rue Pacot, Rue Croix Deprez, Rue M. Casséus, Ruelle Chochotte, Ruelle Wilson 1ère, and Rue Bellevue, the Pacot neighborhood is one of the most well-maintained within the study area. A peaceful and predominantly residential neighborhood, the majority of buildings are single-family houses, varying from one to three stories high, often surrounded by lush gardens. Compared to other, higher-trafficked neighborhoods in the study area, the low density and calm street life of Pacot are particularly remarkable. Situated on the slopes of the hill and comparatively difficult to access, there are relatively few reasons for people to visit this node unless they live there. The substantial height of walls that enclose most properties limits the visual accessibility of the Gingerbreads within the node as a whole.

There are 25 Gingerbreads within the Pacot neighborhood. Of these, 80% are two to three stories high, reflecting the neighborhood's history as a residential area for the wealthy. The majority of these structures are characterized as large or medium in size and predominantly found to be in good condition. While the vast majority of the Gingerbreads are residential (24, or 96%), seven of those Gingerbreads were identified as currently unoccupied (41%), five of which were in bad condition. The only non-residential Gingerbread, located on Rue de la Montagne, is heavily altered and currently houses educational facilities.

A particularity of this neighborhood, uncommon to other districts within the study area, is that most of these uninhabited properties have substantial visual accessibility, significantly contributing to the streetscape of the neighborhood. Thus, there is an inverse relationship characterizing the neighborhood: the better maintained a property, the more limited its visual accessibility.

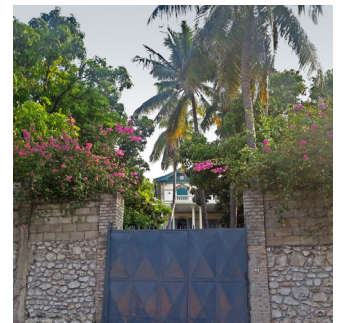
The Pacot district has a distinct residential atmosphere, with 15% of the buildings serving non-residential uses and only one vacant lot. Other uses in the neighborhood include industrial, cultural, commercial, governmental, and educational. However, both the Gingerbreads and the non-residential properties are fairly evenly distributed throughout the neighborhood. Interventions in this node will depend on successfully engaging owners of private residences.



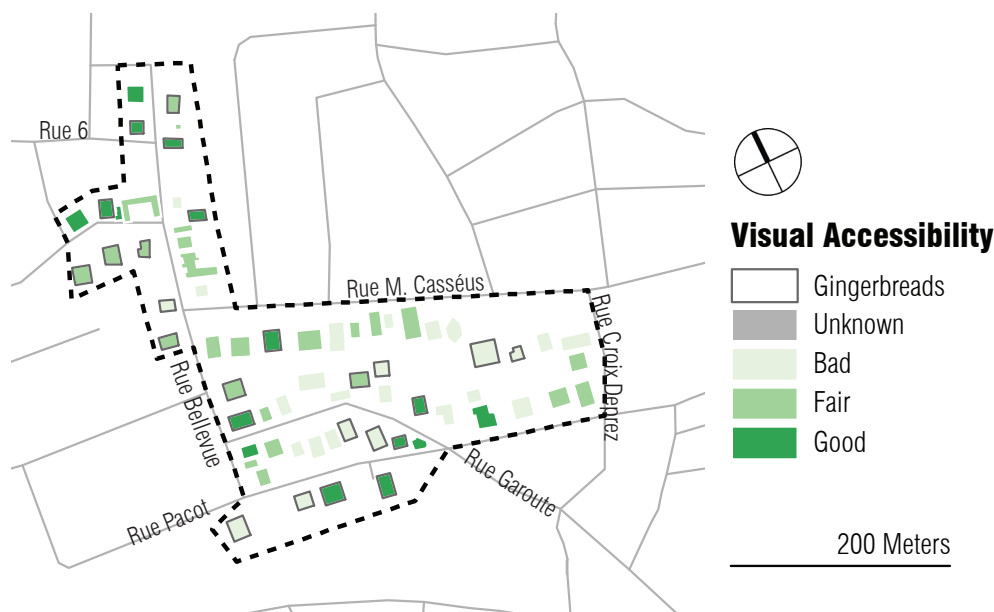
18 Rue Garoute.



Streetscape in Pacot.



24 Rue M. Casséus.



25
Gingerbread houses

67
total buildings

Magloire Ambroise.

Situated in the northwest corner of the study area, the Magloire Ambroise neighborhood stretches the length of Avenue Magloire Ambroise between Rue Chavannes and Rue Saint-Honoré. A vibrant commercial hub, Magloire Ambroise is densely populated with low-rise structures and the continuous presence of street vendors. Given the neighborhood's predominantly commercial nature, it has an extremely active streetscape, with an amalgamation of built structures, active construction, and informal developments. Recovery from the earthquake is visibly ongoing in this node, as temporary vendor outlets have occupied spaces where buildings were destroyed, and large-scale construction projects are underway at the end closest to the Champ de Mars.

Of the 88 buildings surveyed within the area, 15 (17%) have been identified as Gingerbreads, with over half (8) found to be in fair condition, and the remainder good (3) or poor (4). Interestingly, the majority of Gingerbreads (13) are small in size and appear to be evenly dispersed along the length of the district. Given their location on a very busy commercial street, nearly all of the Gingerbreads in Magloire Ambroise are characterized by extremely good visual accessibility. The fair visual accessibility of only two Gingerbreads is due to their positioning toward the rear of their respective lots.

Approximately half of Magloire Ambroise buildings are either commercial or mixed-use, with just under 20% of the neighborhood identified as residential. Other primary uses in Magloire Ambroise include numerous restaurants, as well as educational and healthcare facilities. However, it should be noted that the current use of nine buildings could not be verified in the field. Correspondingly, two-thirds of the Gingerbreads in the neighborhood are commercial or mixed-use buildings (10), with the remaining residential (4) or educational (1).

The strong visual and physical accessibility within the node provides an opportunity for the development of a collective neighborhood plan, with the relatively evenly spaced Gingerbreads serving as potential community anchors for intervention efforts.

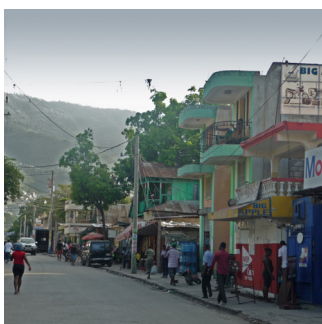


15

Gingerbread houses

88

total buildings



View down Magloire Ambroise.



Mixed-use property,
33 Avenue Magloire Ambroise.



Street vendor,
11 Avenue Magloire Ambroise.

Avenue Lamartinière.

Encompassing both sides of Avenue Lamartinière between Avenue Christophe and Rue Castrom, the Avenue Lamartinière node is located in the northern part of the study area. A dense and dynamic neighborhood, the area is heavily trafficked during the day. Vehicular and pedestrian congestion are especially common in early morning and late afternoon, as these are times when students attending the numerous educational centers located along the street are going to and from class. On weekdays, there is a substantial vendor presence along the sidewalks, which contributes greatly to the vibrancy of the area but in many cases also affects its walkability.

Among the 95 buildings documented in Avenue Lamartinière, there are 22 Gingerbreads, accounting for approximately 23% of the surveyed properties. The Gingerbreads in the neighborhood vary greatly in size, with nearly a proportionate number of small, medium, and large properties. While nearly half of the district's Gingerbreads are in good condition, they are in worse condition than the average non-Gingerbread building within the neighborhood. A noticeable concentration of Gingerbreads can be found along the northern edge of Avenue Lamartinière between Rue Dufort and Rue Jérémie 2ème.

While the neighborhood is a fairly heterogeneous area in regards to building condition and visual accessibility, there is significant variance in building size, construction materials, and use. Approximately half of the Gingerbreads in Avenue Lamartinière are residential, though a number are used for educational purposes. While mixed-use residential is the most common use in the neighborhood, there is a significant absence of mixed-use Gingerbreads. Nevertheless, given that so many pass through this transit corridor on a daily basis, the Gingerbreads along Avenue Lamartinière are familiar fixtures in the city, and interventions in this node will be immediately noticed and appreciated by a larger percentage of the population.



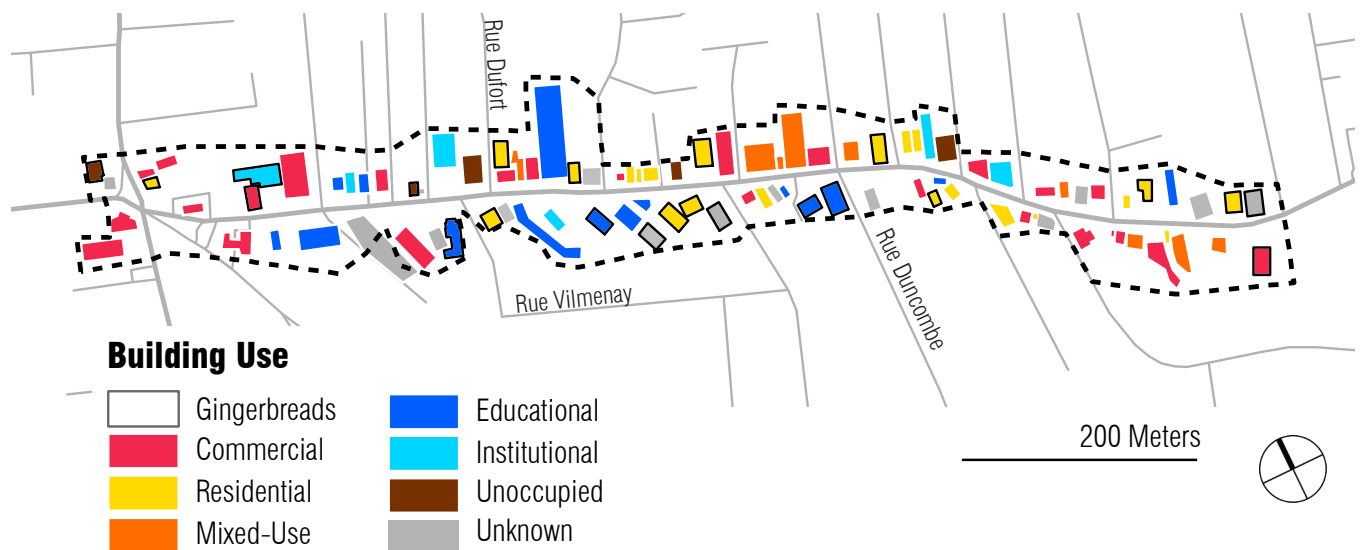
View west along Lamartinière at Rue Caméleau.



46 Avenue Lamartinière.



48 Avenue Lamartinière.



Rue Waag.



53 Rue Waag



Typical mixed-use, 5 Rue Waag.



97 Rue Capois at Rue Waag, collapsed in December 2015.

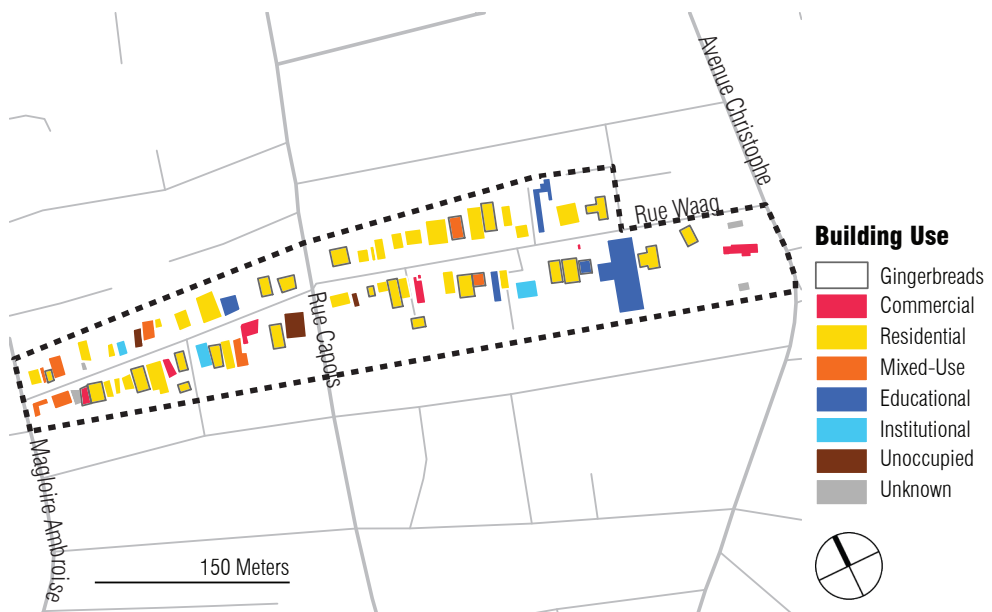
Located along the western edge of the study area, Rue Waag connects Avenue Magloire Ambroise, one of the liveliest commercial streets, with Avenue Christophe, an arterial thoroughfare of the city. Rue Waag does not see particularly heavy vehicular traffic, and perhaps for this reason it is often used by pedestrians passing between busier districts. While more than three-quarters of the buildings in the node are residential, many are mixed-use, combining retail, restaurants, and offices with housing. Other primary uses within the node include healthcare, cultural, and religious facilities. Interestingly, commercial buildings are primarily located along the western half of Rue Waag, healthcare offices are closest to Avenue Magloire Ambroise, and most educational buildings are in proximity to Avenue Christophe.

Of the 77 buildings in the Rue Waag neighborhood, 24 have been identified as Gingerbreads (31%), spread out fairly evenly along the street's length but concentrated mostly along its southern side. The vast majority of the Gingerbreads are residential (20 Gingerbreads, or 83%), with the rest as mixed-use (2), office commercial (1), or educational (1). The Gingerbreads are predominantly small in size, with only one large Gingerbread located at the intersection of Rue Waag and Rue Capois. At the time of our survey another large Gingerbread stood at this intersection; however, due to persistent earthquake damage, the building collapsed in late 2015. Otherwise, the majority of the node's Gingerbreads were found to be in either good or fair condition, with high visual accessibility.

The presence of mixed-use buildings on Rue Waag suggests opportunities for mixed-use conversion of existing residential buildings, if demand is found. Should the demand for commercial development exhaust the possibilities found on Avenue Magloire Ambroise and Avenue Christophe, Rue Waag provides a logical alternative. In addition, the relative scarcity of restaurants, cafes, or bars in this node may suggest another potential market.

24
Gingerbread houses

77
total buildings



Place Jérémie.

The Place Jérémie neighborhood, in the southwest of the study area, is characterized by the presence of an open plaza, Place Jérémie. Bordered by Rue Titus and Rue Cadet Jérémie, this triangular concrete plaza serves as a valuable public space in this dense, highly urbanized section of the city. Frequently used for sports or film screenings, the plaza also serves as an informal gathering space for students, providing a key source of light in an area where electricity is often scarce or unreliable. While the plaza sits empty in the heat of the day, vibrant activity is found instead on the shaded streets, with vendors highly concentrated at corners and intersections, such as at the corners of Rue Titus and Ruelle Lota Jérémie, and Rue Titus and Ruelle Charles Jeanty.

The Place Jérémie district includes 52 buildings, 18 (35%) of which are Gingerbreads. Here, Gingerbreads are small in size, standing at a single story, and are in good condition. Their strong visual accessibility is reflective of the neighborhood in general, characterized by the high-density, low-rise development of one- to two-story buildings with significant street presence. Some of the Gingerbreads in the neighborhood exhibit noticeable alterations.

The majority (77%) of structures in the neighborhood are either residential or mixed-use residential. The mixed-use model is most often a residential-commercial retail combination, with a significant concentration along Rue Titus at Place Jérémie. In addition, there are a number of educational institutions, particularly along the lower half of Ruelle Lota Jérémie. All but two of the node's 18 Gingerbreads feature a residential use: 13 are solely residential, while three are mixed residential and commercial (office or retail) properties. The remaining two Gingerbreads provide facilities for a kindergarten and the office of a missionary.

Although this node is considered a generally unsafe area, it is one that presents many opportunities for intervention—drawing strength from the significant concentration of Gingerbreads, the physical and social importance of Place Jérémie, and the presence of several key institutional anchors. These include notable Gingerbreads such as the magnificent one-story office and residence at 33 Rue Titus, the three-story religious office building Missionnaire Christ Marie Alphonse (MCMA) at 28 Rue Cadet Jérémie, and the renowned Hotel Oloffson just outside the node to the southeast. Finally, the presence of street signage and traffic lights in this area can serve as points of and models for urban improvement within the node itself. Among other interventions, this is a node where ongoing activities, sponsored in part by FOKAL, including the 4 Chemins theatre festival, and occasional *rara* parades to raise awareness about the Gingerbreads, continue to have a positive and lasting impact.



Place Jérémie.



33 Rue Titus.



28 Rue Cadet Jérémie, Missionnaire Christ Marie Alphonse (MCMA).



18
Gingerbread houses

52
total buildings

Rue du Travail.



Maison Dufort,
9 2ème Rue du Travail.



View south on 2ème Rue du Travail, toward 1ère Rue du Travail.



47 Rue Vilmenay (Gingerbread).

Extending from Rue Vilmenay south to 1ère Rue du Travail, between Avenue Charles Sumner and 3ème Rue du Travail, the Rue du Travail node contains one of the densest concentrations of gingerbreads in the study area. Highly residential and relatively calm, with minimal street vendor activity, the node is home to the recently renovated Maison Dufort, which can serve as an anchor for future Gingerbread efforts in this vibrant neighborhood. This node was previously identified by FOKAL and Quartiers pour Haïti as an area meriting particular attention.

Twenty-nine of the 106 buildings (27%) surveyed within the Rue du Travail district have been identified as Gingerbreads; and of these, the structures are predominantly found to be in good or fair condition, though six were noted as being in poor condition. While there is a fairly even array of small (9), medium (11), and large (7) Gingerbreads in the neighborhood, it should be noted that the sizes of two Gingerbreads could not be verified during the field survey, due to a lack of visibility. Interestingly, the Gingerbreads are fairly evenly distributed throughout the area, mixed among other buildings of different styles, materials, and uses.

While over half of Rue du Travail's buildings serve a residential purpose, other primary uses in the neighborhood are diverse, including education and healthcare, as well as both office and retail commercial uses. This distribution is echoed to an extent among the Gingerbreads, with 18 serving as residences (one of which is mixed-use), and the remainder housing schools (5), government facilities (2), cultural institutions (1), and offices (1). The use of the two inaccessible Gingerbreads is unknown. The vast majority of development in the Rue du Travail area consists of finished, built structures. Only three buildings are currently under construction (as of October 2015) and four sites were identified as locations of informal settlements.

This node is primarily residential, and its location directly south of Avenue Lamartinière makes it an oasis of calm just beside a bustling district. Due to its central location and the generally good visual accessibility of properties, this node contains Gingerbreads that are familiar to many. The completion of the Maison Dufort renovation will allow FOKAL to strategically use the facility as a pillar for the neighborhood, making the area ripe for any number of interventions, from lighting to reinvigorated open space. Like Place Jérémie, the yards of some of the institutional Gingerbreads could be used as places of congregation in a city with very few open space resources.

29
Gingerbread houses

106
total buildings

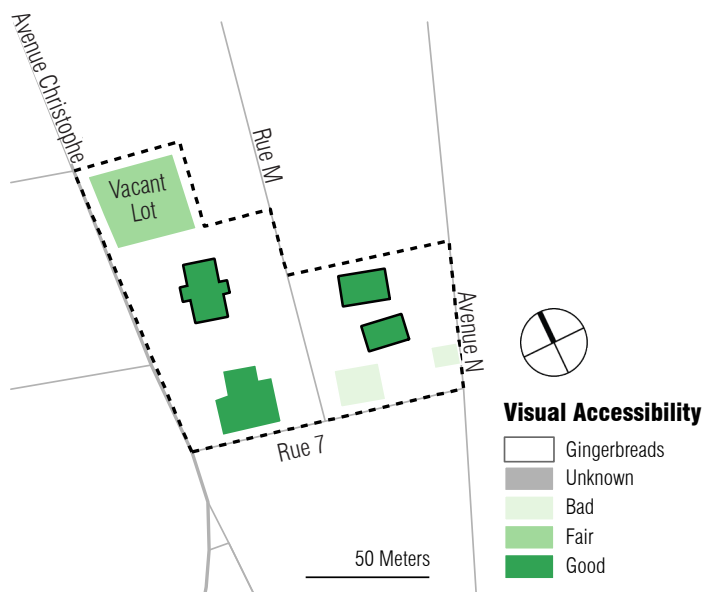


Rue M.

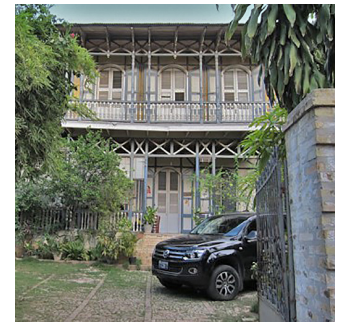
The small node focused around Rue M, and bounded by Rue 7, Avenue N, and Avenue Christophe, contains only six structures and one vacant lot. As the smallest node identified during field work, the neighborhood is characterized by the concentration of three large Gingerbreads—the earthquake-damaged Castel Fleuri, the renowned École de Danse Viviane Gauthier, and the soon-to-be-renovated Maison Chenet—that are important for their cultural, historical, and aesthetic values. The presence of Fonkonze, a large microfinance organization in Haiti that seeks to empower women, enhances the institutional ambiance of Rue M.

Given the significant visual engagement of Castel Fleuri along the main traffic corridor of Avenue Christophe, the noticeably distressed building has become a symbol for the loss of Haitian heritage and has helped raise awareness for the fate of the Gingerbreads. Situated adjacent are Maison Chenet, currently undergoing renovations overseen by FOKAL, and École Gauthier, one of the most well-maintained Gingerbreads in Port-au-Prince. The proximity of these structures and their substantial visual presence along Rue M create an important aesthetic quality, one that will only improve following the restoration of Maison Chenet.

The tranquil atmosphere of Rue M is enhanced by minimal pedestrian activity and a marked absence of vehicular use or commercial activity. The three prominent Gingerbreads, along with the vacant lot, have the potential to serve as an important hub for Gingerbread valorization through creative interventions and the creation of public places or pedestrian thoroughfares.



Castel Fleuri, Avenue Christophe.



École Viviane Gauthier, Rue M.



Maison Chenet,
Rue M and Avenue N.

3
Gingerbread houses

7
total properties

Rue Ducoste.



18 Avenue Christophe.



Centre Universitaire Maurice Laroche.



20 Rue Ducoste.

The Rue Ducoste node consists of 16 buildings positioned along Rue Ducoste between Rue Capois and Avenue Christophe. Although this short street connects the chaos of the Champ de Mars on Rue Capois with the constant flow of traffic along Avenue Christophe, Rue Ducoste has relatively little street life despite its ability to feasibly accommodate increased pedestrian traffic and some vendors. The high walls of the Hotel Plaza, located in the southwest corner of the neighborhood, create an unwelcoming environment that seems to have a deadening effect on the streetscape. The lack of sidewalks and the presence of the wall make it dangerous for pedestrians to walk this road, with fewer options to avoid oncoming vehicular traffic. Nevertheless, the node's remaining structures are densely packed together, and are characterized by their strong visual accessibility.

Half of the structures within Rue Ducoste have been identified as Gingerbreads, a significant concentration that warrants further attention. A grouping of five Gingerbreads are located on Ducoste and an additional two round the curve onto Avenue Christophe, aesthetically linking these corridors. However, a smaller Gingerbread is enclosed within the yard of the Hotel Plaza, completely invisible to pedestrians passing by. The majority of the node's Gingerbreads were found to be in fair condition, and medium-sized.

While the Rue Ducoste node has a strong residential feel, the use of three Gingerbreads could not be determined in the field and two appeared to be unoccupied. In addition to the Gingerbread within the Plaza Hotel, the two remaining Gingerbreads are used for residential or educational purposes. The nature of the neighborhood's Gingerbreads indicates that there is an opportunity to introduce new use into a neighborhood that can likely accommodate it; potential commercial and institutional anchors for the neighborhood include a restaurant on the northwest corner of the block (the owner of which built a "neo-Gingerbread" to house his business) and an educational institution on the southeastern corner (Centre Universitaire Maurice Laroche).

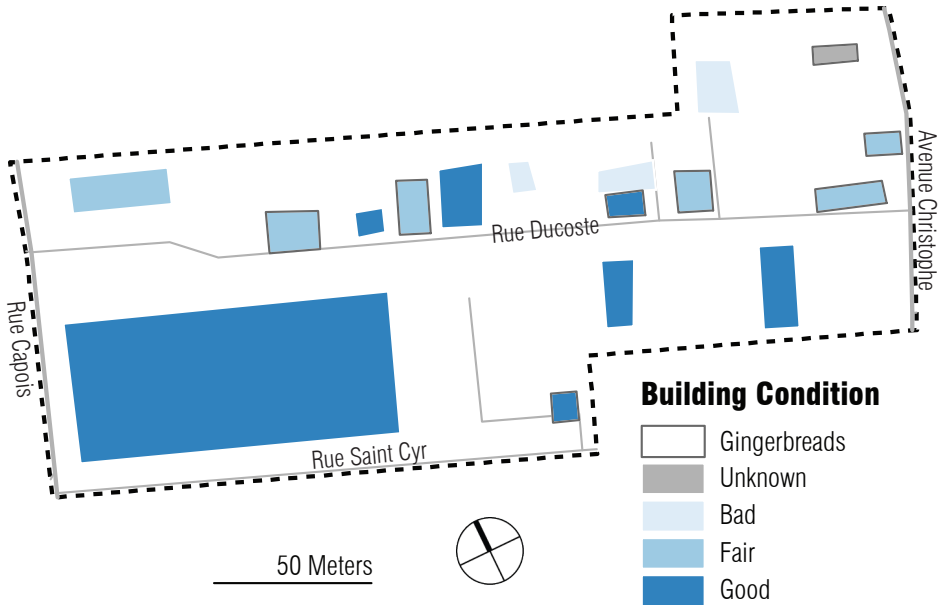
This is a node where small interventions could make large and lasting improvements. The Hotel Plaza, whose massive street wall poses one of the greatest challenges to enhancing Rue Ducoste, could become the catalyst in bringing life back to this corridor. By merely reducing the height of the wall and introducing an entrance onto Rue Ducoste, the hotel could enhance the node's aesthetics, while increasing pedestrian traffic. The active investment of an established neighborhood enterprise like the Hotel Plaza has the potential to encourage other property owners to do the same.

8

Gingerbread houses

16

total buildings



S.W.O.C.



> Avenue Lamartinière at 2ème Rue Jérémie.

Analysis of Strengths, Weaknesses, Opportunities, and Challenges (SWOC).

Secondary research, fieldwork, and conversations with various actors have informed and shaped the studio's methodology, data analysis, and outcomes. They have also confirmed both the widespread appreciation for the Gingerbreads and FOKAL's position as a neighborhood steward. While there has been general agreement that Gingerbread architecture is a valued aspect of Haitian heritage, the preservation of Gingerbread structures is not always a priority for residents and tenants. Additionally, the challenges of political volatility, vulnerability to natural disasters, and the lack of infrastructure are also apparent, affecting daily concerns of safety and sanitation as well as deterring long-term goals of preservation.

Despite the difficult conditions in Port-au-Prince and the limited governance structure for urban planning and heritage conservation, the team recognizes a great deal of potential for capitalizing on the existing strengths of FOKAL, the Gingerbreads, and the neighborhood in general. To better delineate their findings, the team undertook an analysis of Strengths, Weaknesses, Opportunities, and Challenges (SWOC) to synthesize the rich information gathered throughout the course of the studio.

FOKAL has proven capable of implementing ambitious projects in the area, such as the restoration of Maison Dufort.



Strengths.

- Public appreciation for the Gingerbreads.
- Aesthetic value of the Gingerbread style.
- Structural resilience of the Gingerbreads.
- Diversity of Gingerbread owners (comprising a variety of socioeconomic statuses).
- Vibrant and diverse street life within the study area.
- Youthful population with an entrepreneurial mindset.
- Concentration of institutions in the study area:
 - Schools, NGOs, churches, and government offices.
- FOKAL's legitimacy as a neighborhood institution:
 - Proven capacity to engage the community and pool resources.
 - Political and economic network at home and abroad.
 - Demonstrated experience with Gingerbread restoration.



The lack of local timber and other materials hinders the preservation of the Gingerbreads.

Weaknesses.

- Inability to rely solely on government (legislation, infrastructure, etc.).
- Lack of a cadastral survey.
- Lack of local capital or access to loans for the built environment.
- Loss of traditional craft knowledge and building materials.
- Safety concerns.
- Lack of public spaces.
- Land tenure/ownership issues, absent property owners.



The Gingerbread houses range from small, mixed-use properties to large, impressive residential villas. Socioeconomic diversity of stakeholders presents a opportunity to engage a wide cross-section of the neighborhood.

Opportunities.

- Current density of Gingerbreads in the study area: opportunity to replicate successful programming through scaling and distribution.
- Diversity of Gingerbread stakeholders: opportunity to explore a range of funding needs.

- Strong interest among students (UEH, HELP, Quisqueya) and community groups in participating in projects led by FOKAL: opportunity to leverage interest to grow network and implement small interventions for potentially large impact.
- Gingerbreads are present, just obscured: opportunity to reintegrate Gingerbreads into the streetscape with minor adjustments.
- Significant Haitian diaspora: opportunity to engage with diaspora population for expertise and financial support.



Engaging the local community is crucial to the success of any future proposals.

Challenges.

- Barrier between local community and NGOs: further community engagement may be necessary before, during, and after implementing any proposals. (Due to disillusionment associated with foreign aid in Haiti, our survey was generally met with apprehension. This suggests that any interventions should actively engage the community to ensure their positive reception.)
- Fast demolition rate of Gingerbreads: brought on by a lack of a regulatory framework, the age of the structures, the cost of repair, and the densification of the neighborhood. This exerts pressure on Gingerbread owners to demolish.
- Absent owners: many owners of Gingerbreads live abroad and are not aware of the condition of their properties.
- Lack of expertise or incentives to restore according to restoration standards: access to information and expertise is still a hurdle where capital is available.
- Access to construction materials: given the lack of natural resources for building construction in Haiti, basic materials like timber and high-quality concrete are more expensive and must be imported from abroad.
- Lack of vocational training and employment opportunities: to insure a larger pool of workers with the relevant skills to perform restoration work.
- Ongoing volatile political climate in Haiti: will prevent any governmental role in protecting heritage resources.
- Continuing threat of natural disaster.

Proposals.



> Restoration work at Maison Dufort, 9 2ème Rue du Travail.

Proposals.

As the SWOC analysis highlights, challenges for the preservation of Gingerbread extend beyond property owners to larger systemic issues of political instability and lack of a regulatory framework, affecting skills retention, economic viability, and infrastructure fragility. In this environment, implementing top-down large-scale approaches will continue to prove difficult. Instead, many opportunities exist to engage the community at the local level and leverage the institutional and educational stewards of the neighborhood. These proposals aim to work locally and creatively toward Gingerbread preservation through the broader lens of strengthening community engagement in concert with valorizing Gingerbreads. The proposals are presented within four main strategies: incremental infrastructure improvements, streetscape activation, public space generation and access, and alternative funding sources.

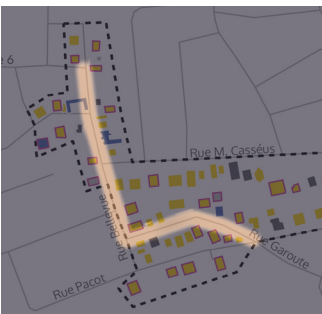
Infrastructure.

The network of streets works well to connect and delineate the study area, yet the lack of infrastructure greatly impacts daily life. Most of the study area is without street signage and street lighting. There are only a handful of traffic lights, and these lights operate unreliably. The absence of pedestrian sidewalks and crosswalks creates issues of pedestrian safety and traffic safety. Sanitation, road, and sidewalk maintenance are also inadequate, with cars, pedestrians, vendors, and refuse all sharing the streets. While the area manages to stay vibrant and active despite these challenges, small-scale infrastructure improvements would be beneficial for all levels of activity. The following proposals offer (A) lighting; (B) wayfinding; and (C) crosswalk implementation for specific nodes and demographics. Proposals focus on encouraging residents to take ownership of their streets, advocate for the safety of their children, and discover the value of the Gingerbreads as a defining characteristic of their neighborhoods. Instead of focusing only on Gingerbread owners or tenants, these proposals take an inclusive approach in which all community members are potential stakeholders and contribute to the preservation efforts.

A. Beacons of Light: Student Paths to Safety.

This proposal is structured as three pilot projects, aimed to improve student safety and increase awareness of the Gingerbreads as an integrated heritage resource. While street lights would benefit the entire survey area, their implementation requires coordination, funding, infrastructure upgrades, maintenance, and partnerships with local government and the community, making it difficult to implement at a broad scale. Instead this proposal draws on the strong presence of Gingerbreads, schools, and students in the survey area to catalyze the effort.

Three areas have been selected for the launch of the pilot projects. The key factors in determining these three areas are the strong presence of educational institutions, a distinct Gingerbread presence, and nearby active commercial corridors. The educational institutions range from primary and secondary schools to colleges and universities, with some even operating out of Gingerbread houses. Additionally, these are primarily residential areas that contain a significant number of Gingerbread houses. The mixture of residential and educational uses seems to create more stable neighborhoods, making collective investment into infrastructure improvement more feasible. Their proximity to lighted commercial corridors is another main feature. The proposal focuses on determining one specific pathway to light in each pilot area, connecting students and residents in the unlit areas to the active corridors nearby.



Proposed lighting path in Pacot.

By starting small and focusing on a specific pathway, the project becomes not only logistically more manageable, but also creates a good starting point for the community to begin working together. In each node, FOKAL can engage the local schools to form a working task force to carry out the project in phases. Conversations can start around perceptions of neighborhood safety and student safety. Each school can select a teacher, administrator, or parent group to lead the students in the roll-out process. While this proposal shows a recommended pathway for lighting, each community should work together to determine which pathway would benefit them most. Students at all levels can engage in the project, whether it is learning about lighting solutions and solar power, canvassing the neighborhood in a field survey, learning about the Gingerbread houses alongside the history of the neighborhood, or being part of a participatory planning process. FOKAL can share their previous knowledge working with lighting consultants and can even bring in a neighborhood lighting designer to help each pilot group identify the appropriate lighting options and lay out a feasible scope, timeline, and budget.

In the Place Jérémie node, Gingerbreads could serve as beacons of light to activate not only Ruelle Lota Jérémie but Place Jérémie as well. In Node Pacot—where walls are consistently high, the lots are big, and the buildings are set back from the road—landscape lighting mounted on trees within the properties could serve to illuminate both streets and houses. HELP’s growing presence in this neighborhood and its interest in Gingerbread preservation would allow it to serve as a steward to educate through student engagement and implementation on their own campus. Node Lavaud is situated between Avenue John Brown and Avenue Lamartinière, where a lighted pathway could benefit more than just the students and residents along 2ème Rue Lavaud. Depending on access to funding, lights can be rolled out incrementally. As the pilot projects near completion, best practices can be shared with neighboring streets, other nodes, etc.

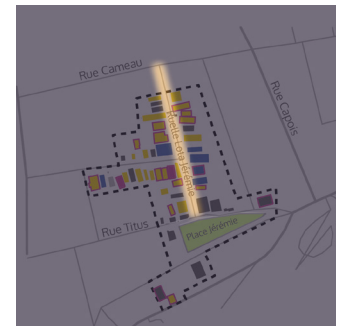
B. Wayfinding in the Gingerbread District: Student Street Sign Design Competition. I am the deSIGNer! / Je suis le deSIGNer!

This proposal aims to provide Haiti’s youth with a sense of ownership of their neighborhood and heritage through designing their own street signs. Building on the successful Gingerbread house drawing competition that FOKAL—in partnership with ICOMOS-Haiti—conducted in 2012, this proposed intervention can be a next step in which students’ art skills are translated into street signs with a lasting impact on the urban landscape and neighborhood life.[1]

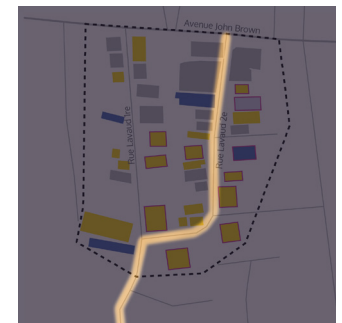
Navigation is difficult in Port-au-Prince, where a lack of street signage and reliable maps present challenges to wayfinding. This street signage intervention will serve as a practical solution to this issue, while at the same time, the design process can serve as a community empowerment tool through involving youth in the creation of these important markers. Situating the project in the Gingerbread neighborhood also provides an invaluable opportunity to valorize Haiti’s unique architectural heritage. It is envisioned that street signs in this part of Port-au-Prince will represent their locality through their designs. As suggested in the phased layout below, competition guidelines should emphasize that design submissions evoke the Gingerbread heritage or style directly or indirectly. Symbolically too, the Gingerbread houses are an eclectic style where each one is unique; thus, the competition encourages creativity and difference, rather than aiming for a standardized design. It is envisioned that providing young artists with the freedom and ability to make their unique mark on the streets of Port-au-Prince will contribute to a greater sense of pride in and ownership of their neighborhoods and their heritage.

The Street Sign Design Competition will consist of three stages:

1. Competition: The design competition is announced through schools. FOKAL can decide on an age group or age group categories that make sense. Competition guidelines may



Proposed path in Place Jérémie.



Proposed lighting path in Lavaud.



Villa Thérèse, Rue 3
Like Villa Thérèse, several
Gingerbreads still preserve their
original signs and maintain use
of these historical names.

include information about the street names or where the signs will be erected, information about the Gingerbread houses and their value as heritage, and the requirement to evoke the Gingerbread heritage or style (e.g. actually drawing a picture of a Gingerbread house, detail, ornament, etc.). A paper template delineating approximate dimensions, size, or shape of the street sign may be distributed to schools for optional guidance. This first stage may be prefaced with visits to schools to educate the students about the Gingerbread houses or with walking tours of the Gingerbreads in the neighborhood, similar to what was done for Gingerbread Watch Day.

2. Charrette: winners of the competition are invited to a workshop session with FOKAL/craftspeople/sign-makers. These workshops will translate the students' designs into more permanent materials and forms to make the street signs. The finalized signs may consist of various materials or mounts (on wall, post, tree etc.) as deemed feasible or appropriate to the setting and the students' visions. Each charrette session will bring in five to ten student designers for a day-long or weekend-long workshop. The charrettes can take place in the neighborhoods where the street signs will be erected, perhaps in or around locally identified Gingerbread houses, or they could be conducted at a centralized location (e.g. FOKAL headquarters). The student designers can be drawn from the same neighborhood or from different neighborhoods to encourage building networks across neighborhood boundaries. Thus, the design charrette can be a great community-building and socializing opportunity for these young designers to meet and make friends, whether from their own neighborhood or elsewhere.

3. Unveiling: the installation of the street signs can take place with mini ribbon-cutting celebrations on each corner where signs are erected. The student artist will be recognized and there can be cultural festivities as well as other associated activities, like Gingerbread walking tours of the neighborhoods where the signs are erected. The unveiling can take place over a longer period of time, so as to spread out the usefulness and festivities across the entire area.

The project can be rolled out either a) by neighborhood or node, or b) across the entire Gingerbread neighborhood. In the first case, the project can target a neighborhood or node and conduct all three stages of the project there. Then repeat the process in different neighborhoods and nodes, adapting to different conditions and incorporating different partners. In the second approach, the project could identify targeted streets or intersections on a larger scale and can send out a single open call to all students in the area (Stage 1). After this, the charrettes and unveilings (Stage 2 and 3) could be phased across different neighborhoods or nodes.

The street signs created through the Street Sign Design Competition will contribute to neighborhood improvement by increasing navigability and safety for both local residents and visitors. In addition, drawing greater attention to the Gingerbread houses as Haitian heritage through their visual representation in street signs can encourage civic and community pride as well as enhance tourism. Beyond the effects of the physical street signs themselves, the competition and design process empowers youth by enabling them to create something that has a visual and social impact in their communities, as well as through educating them about the Gingerbread houses and district, which constitute a vital part of their heritage.

Repetition of the process is key to the intervention's effectiveness, whether over space or time. Thus, it is recognized that the street signs created through the intervention need not be permanent. If successful, and in the interest of the country's large and growing young population, the competition may be repeated after an interval of time. This is an important consideration as the process of making the signs, from competition, to charrette, to unveiling, is just as important for community building, youth empowerment, and neighborhood improvement as the signs themselves. Thus, both the process and the outcome of the Student Street Sign Design Compe-

tition have the potential to serve as significant mechanisms to effectively connect young Haitians to each other, to their neighborhoods, and to their heritage.

C. Crosswalks.

Port-au-Prince's busy traffic and lack of pedestrian infrastructure make it a difficult and sometimes dangerous city for walking. Crosswalks are rarely present and traffic regulations are not always followed. This proposal aims at raising awareness on the importance of proper pedestrian infrastructure while at the same time calling attention to Gingerbreads that are often overlooked because they hide behind high walls and busy street activity.

Through a community engagement action, FOKAL can organize a group of people to take matters into their own hands and paint crosswalks on streets where they are most needed and where Gingerbreads can be highlighted. This is a threefold opportunity: firstly, it can contribute to the improvement of pedestrian life. It not only provides crosswalks that are needed, but also educates people on where to cross the street and drivers on where to yield to pedestrians. Secondly, it is a chance to bring people together in a creative, artistic initiative. Crosswalks can be designed by community members with unconventional patterns and drawings—where colors, messages, and forms call attention to this important urban element. Finally, it is an instance where Gingerbreads can be integrated into the street life through the high walls that conceal them. The crosswalks do not have to be limited to the pavement, but can continue all the way to the walls, rising to point at the Gingerbreads behind them.

Streetscapes.

Historically, the Gingerbread houses have been recognized as landmarks in the streetscape of Port-au-Prince. However, both the landmarks and their surrounding streetscapes have progressively deteriorated in part due to high levels of insecurity. Insecurity and concern for safety has translated into high, solid walls and barbed wire on walls and gates, where more transparent fences once stood. These changes have created inhospitable streetscapes in which people walk through walled “tunnels” that (1) prevent visual accessibility from the streets to the Gingerbread houses and vice versa; (2) are pedestrian-unfriendly; and (3) create desolate corridors with limited activity, thereby subverting security and deteriorating the streetscape. Consequently, three strategies are proposed to deal with these issues. They are (A) introducing a community bike-patrol program; (B) developing street rehabilitation through art murals; and (C) creating a catalogue of Port-au-Prince's historic fences and gates. Altogether, these projects initiate a process that aims to decrease perceptions of insecurity and enhance streetscapes.

A. Community Bike Patrol.

The Community Bike Patrol is a short-term intervention aimed at lowering perceptions of insecurity through the provision of a stronger police presence in the study area. Based on the satisfactory results of the Community Bike Brigade, a program supported and implemented by the United Nations Police (UNPOL), the National Police of Haiti (PNH) and the National School of Police (ENP) since 2013 in Croix-des-Bouquets, Pétionville, Delmas and Cité Soleil, the proposed intervention can improve street safety while building relationships with the Gingerbread neighborhood's residents through a Community Bike Patrol.

The Community Bike Patrol proposal should be reinforced and expanded within the neighborhood, especially in those areas showing a higher perceived crime rate and little street life. The Community Bike Patrol serves both as an immediate measure to deal with security issues and promotes social cohesion among residents by making streets safer and inviting greater interaction among neighbors. In addition, the Community Bike Patrol program will add value to



The project 'Zebras por la Vida' carried out in several Colombian cities is a successful case that could be easily replicated in Port-au-Prince.



The community bike patrol implemented by UNPOL in other areas of Haiti could be successfully replicated in Port-au-Prince [Image 05].

the entire neighborhood by creating safer, more accessible public spaces. For these purposes, the Community Bike Patrols could focus on Gingerbread clusters with high walls, little street activity, and inhospitable streetscapes to implement their pilot brigades. FOKAL, the National Police of Haiti (PNH), and the National School of Police (NSP) can design and coordinate strategies and set guidelines to develop a security coverage plan, which identifies priority areas. FOKAL could monitor this intervention through security and social perception surveys that will help to qualify safety conditions. This in turn can provide a bargaining tool for the better allocation of resources and wider support from potential partners. Finally, this proposal, in creating safer conditions for the pedestrian and fostering more public interaction along streets and points of egress, hopes to create the environment necessary for the successful implementation of the next proposal.

B. Art Murals.

The Art Murals intervention considers art and culture as a foundation for generating productive, self-sustaining environments and communities. These medium-term interventions could be implemented in the Lavaud, Waag, Lamartinière, and Ducoste nodes where two-story Gingerbread houses can be found with high masonry perimeter walls and inhospitable streetscapes.



Example of a mural that could be painted in the study area.



Results of the United Nations 16/6 project in other areas of Port-au-Prince [Image 06].



The 16/6 project was carried out by local workers and construction companies [Image 07].

A partnership between FOKAL, Ecole Nationale de Art (ENART), and the Haitian government is recommended for the successful implementation of this proposal. While ENART could provide training, expertise, and technical assistance, and the government could provide funding for materials and street condition improvements, FOKAL would act as manager of this project, introducing the proposal to the community, seeking local involvement in the mural competition, and organizing the competition to choose the best mural designs. In order to incorporate the valorization of the Gingerbreads into this proposal, the mural projects would be asked to thematically integrate the presence of these creative and historical elements of heritage into the proposed murals. In understanding the Gingerbreads as pieces of art in the urban canvas of the city, contemporary murals can engage with ideas of patrimony and landscape that might resonate more broadly. This artistic view of the Gingerbreads also serves to raise awareness of these structures as more than merely structures.

The use of a competition (as in the Street Sign Design proposal) allows for broad dialogue and initiates neighborhood involvement and stronger feelings of ownership. The mural designs should be subject to a vote, and the winners would eventually be implemented as street murals. These murals would also be used to guide the pedestrian to, from, or past the Gingerbreads, acting as a visual connection between the structures. By placing visually appealing murals on the Gingerbread properties' envelope walls, these murals can draw attention to these structures' unique status as heritage buildings.

Street rehabilitation through art murals is not new in Port-au-Prince. Again, the United Nations developed a project in the past called 16/6, which was launched to rehabilitate 16 neighborhoods in 6 different areas in Port-au-Prince, with funding from the Haiti Reconstruction Fund. It was a joint collaboration between four implementing organizations: The United Nations Development Programme (UNDP), the International Labor Organization (ILO), the International Organization for Migration (IOM), and the Haitian government.

This project contracted local companies and trained local workers through vocational programs developed by ILO. The 16/6 project considers resilient housing and infrastructure a foundation for generating productive, self-sustainable environments and communities. The resulting



Hypothetical rehabilitation with art murals in Rue Duconste. This mural installation, coupled with street improvements could be developed by the community, local workers, artists, and community partners like FOKAL.

new housing features works from local artists, including paintings and mosaics. Remarkably, 95% of the workforce came from the community, including a large number of women. This project, as well as the Community Bike Patrol proposal, suggest that these types of interventions and synergies are feasible in Haiti and should be replicated within the Gingerbread neighborhood to improve streetscapes and street conditions. Finally, street rehabilitation through art murals is the second step—out of the three envisioned here—in the process to improve streetscape and increase security. The successful implementation of this and the previous proposal will allow for the increased chance of success of the final proposal, listed below, regarding streetscape improvements.

C. Catalogue of Port-au-Prince's Historic Fences.

Once security and social cohesion have been consolidated through the Community Bike Patrol and the Art Mural interventions, FOKAL can proceed with the incorporation of historic fences and gates to increase visual accessibility, thus alleviating both alienating and inhospitable streetscapes in Gingerbread clusters.

During the last three decades, the traditional fences of many Gingerbread houses in Port-au-Prince have been replaced by high, opaque concrete walls. The change has been primarily influenced by security concerns, as the streets of Haiti's capital are perceived as unsafe. However, the increasing height of walls can be counterproductive, as they can prevent homeowners from seeing what is happening on the street. Furthermore, these new opaque walls block the view of the Gingerbreads from the public space, making streets appear significantly more inhospitable and unattractive than they were only a few decades prior. Historically, Gingerbread houses were actually surrounded with lower, more permeable walls. These fences combined masonry columns, wrought iron railings, and stone banisters to frame the view of the house and its traditionally landscaped garden.

The creation of a catalogue of historic fences of Port-au-Prince that explains their advantages, even for security reasons, could encourage homeowners to lower or redesign their properties' fencing. The catalogue could not only promote the use of traditional fencing design, but also the development of new, contemporary approaches relying on the character-defining features of the historic fences of Port-au-Prince's most significant architectural style.



Historic fences provide greater visual access to Gingerbreads.

Public Spaces.

The lack of adequate gathering spaces for leisure within the study area means that most outdoor social interaction occurs on sidewalks. These sidewalks are narrow, in poor condition, and are frequently overtaken by cars or vendors. The following set of proposals offers strategies that, through simple interventions, introduce new activities and create spaces for social interaction. These strategies draw from the vibrant street life of Port-au-Prince, and from FOKAL's capacity to engage the community, bringing people together in underutilized places and creating enjoyable public spaces.



A community garden proposal in the garden of a Gingerbread.

A. Community Gardens.

The lack of publicly accessible space stands in sharp contrast to the large, often underutilized lots found throughout the study area. However, these spaces provide an opportunity to meaningfully engage with different members of the community. Building off of similar work at Parc de Martissant, the strategic introduction of community gardens into the private yards of large Gingerbreads would create a new set of stakeholders with a sense of ownership of these places. Gardeners would have access to fresh produce and have the opportunity to sell their goods to passersby. A prime location for this is at Rue 2, where a large Gingerbread with an absentee owner sits on a huge expanse of property looking out over the city. Working on the property, neighbors will be given the chance to intimately engage with a Gingerbread while providing the landlord with an additional set of hands to take care of the space.

B. Outdoor Cinemas.

The same types of space that lend themselves to community garden activities can also easily be adapted to other programs that engage diverse users at different times of day. Sloped terrain, for instance, is not ideal for garden plots but well-suited for use as an outdoor cinema. On the aforementioned property at Rue 2, a gentle hill with views looking out over the city can host a projection screen and space for seating. This typically quiet portion of the neighborhood will take on a new vibrancy at night as residents now have reason to leave their walled-off properties. Gardeners may sell their produce to moviegoers and start conversations with new visitors. All of this activity takes place in the shadow of a dignified Gingerbread, ascribing meaning and value to a structure previously inaccessible to the public.

C. Lookouts.

This proposal taps into the dramatic tropical landscape of Port-au-Prince and the aesthetic value of the Gingerbreads to create spaces for social interaction, by making small gathering spots centered on outstanding views of the built or natural landscape. Besides raising awareness of the beauty of these landscapes, the Lookouts also provide much-needed public spaces that improve the livability of the neighborhood through simple elements like seating and lighting.

These temporary interventions could serve as experiments that help determine possible locations and characteristics that permanent public spaces should have once funds become available. For this reason they are meant to be easily implemented and made with creatively used affordable materials. The process of building and designing these Lookouts can be used as an opportunity to engage the community in the creation of their own public space, generating a sense of ownership in the built environment, and contributing to the project's purpose of raising awareness on the importance of social spaces, and the uniqueness of Port-au-Prince's landscape and architecture.

The first step for implementing this proposal is choosing the location of the lookouts. They should be anchored on outstanding views of Port-au-Prince, and can be located on sidewalks

(imitating the way vendors use the space), or on the street (taking up the space that a car would usually use for parking).[2] The locations should be chosen carefully, providing enough pedestrian traffic so that the Lookouts receive attention and attract users, but not so much activity that they end up becoming an obstacle on busy streets. The second step in the proposal is to design the different elements that will make up the interventions. While only three basic elements are needed, they can be complemented with ornament and decoration that make the lookouts more attractive and inviting.

The first element is a surface on the ground. This serves for marking the space, which is a crucial gesture in the appropriation process. Here designs can easily be done with paint, and can draw from some of the creative principles of the Art Murals and Crosswalks proposals or community charrettes in order to make it attractive and appealing.

After defining the location, and marking it, seating should be provided. Several strategies can be used to ensure that the seats remain in the space and are not taken elsewhere and then lost. One of these strategies is to use existing walls as support for benches by anchoring corner brackets and wooden boards to the wall. Another strategy is making seats heavy so that they cannot be easily carried away, but can still be shifted around a little bit so that the user can arrange the space as he pleases. These seats can be anchored with a heavy concrete base and then made more comfortable with the use of wooden elements for the seats themselves.

Finally, lighting should be introduced to make the space usable at night. Solar powered lamps can be attached to nearby structures making Lookouts active after sunset, and thus contributing to the safety and general streetscape of the neighborhood. The lighting element of this proposal can tie back to the Beacons of Light proposal (described previously under Infrastructure proposals) by contributing to the lighted paths, and providing a space from where to appreciate the lighted Gingerbreads.

Two locations have been chosen as pilot projects for intervention. Both are within the Turgeau node, which seems to fulfill the need for well-balanced street activity, and has the added value of gorgeous, visually accessible Gingerbreads, and beautiful views of the Port-au-Prince bay. The first spot lies among a concentration of Gingerbreads on Rue 4, and the second one is at the top of the hill on Rue 2. These suggestions are only examples of places that might be selected as Lookouts, but there are many other locations that could be adapted, creating a network of public space that improves quality of life throughout the study area. If successful, these temporary projects could work as a tool to attract funding for more permanent interventions.

Alternative Funding Sources.

Many lesser-developed countries often experience difficulties in obtaining traditional financing, especially during times of political or economic instability. Furthermore, these nations rely heavily on remittances and direct foreign investment as substantial sources of funding. This scarcity of capital can significantly hinder the completion of vital projects and advocacy efforts. Since government-affiliated funding alone cannot cover these financing gaps, it becomes necessary to develop innovative financial instruments.

A. Gingerbread Sponsorship Programs.

The unique nature of Gingerbreads within the study area presents an interesting opportunity for broader audience engagement and international collective action. The creation of an “Adopt-A-Gingerbread” program would offer individuals, groups, and organizations alike the opportunity to sponsor the restoration of a Gingerbread in Port-au-Prince. By incorporating each



Schematic Lookouts proposals.

individual structure into a digital interactive catalogue, interested participants could further examine the history and significance of a property. Such a website would not only allow for the project-specific allocation of funds but also introduce advocacy efforts on a more global scale.

B. Microfinance Loans.

The term “microfinance” generally refers to the provision of financial services to low-income individuals or to individuals without access to traditional banking services. These services typically involve small amounts of money that larger institutional lenders consider incidental. Unlike traditional banking institutions, microfinance providers assist underprivileged or under-represented communities in accessing the necessary capital by developing products and methodologies more conducive to their financial needs. In addition to these financially inclusive efforts, microlenders frequently provide mentoring and educational support services for their borrowers.[3]

Crowdlending platforms like Kiva and CauseVox allow individuals and organizations to solicit contributions from online communities, offering access to previously inaccessible capital and providing greater independence than traditional bank loans. These websites provide an online link between donors in more economically developed nations and entrepreneurs in developing countries; donors can browse project profiles and select which borrowers to support. Over the course of the loan, borrowers repay the principal and any interest from their profits.[4]

C. Diaspora Bonds.

Diaspora bonds allow countries with substantial diaspora populations to access a previously untapped market beyond traditional foreign investments and loans. Diaspora bonds offer an attractive new source of financing, providing a relatively stable and inexpensive source of external investment. Since expatriates are more likely to overlook the financial shortcomings of their home country and accept returns lower than those on the open market, countries can essentially receive a “patriotic discount” when they issue diaspora bonds. Furthermore, a successful issuance of these bonds may help improve a country’s sovereign credit rating.[5] Since 1951 and 1991 respectively, Israel and India have collectively raised over \$35 billion in development financing from their expatriate communities.[6]

According to official statistics, over one million Haitians currently live overseas, accounting for nearly 10% of the country’s total population. Furthermore, Haiti receives nearly \$2 million in remittances annually, more than half of the country’s national income.[7] If just one-third of the Haitian diaspora were to invest \$500 each in diaspora bond, it would total over \$165 million in additional financing. While sales can be restricted solely to members of a specified nationality, these bonds could likely prove attractive to international investors or charitable institutions as well. By opening sales to all buyers, the Haitian government could further expand the pool of investors in the country’s diaspora bonds.

However, the weakened state of Haitian governance could prove to be a major obstacle in regards to diaspora bond issuance. To combat the lack of investor confidence, the government could establish a partnership with internationally reputable organizations like World Monuments Fund. However, due to the country’s high sovereign risk, these bonds would likely still require credit enhancement from bilateral or multilateral organizations.[8]

Next Steps.



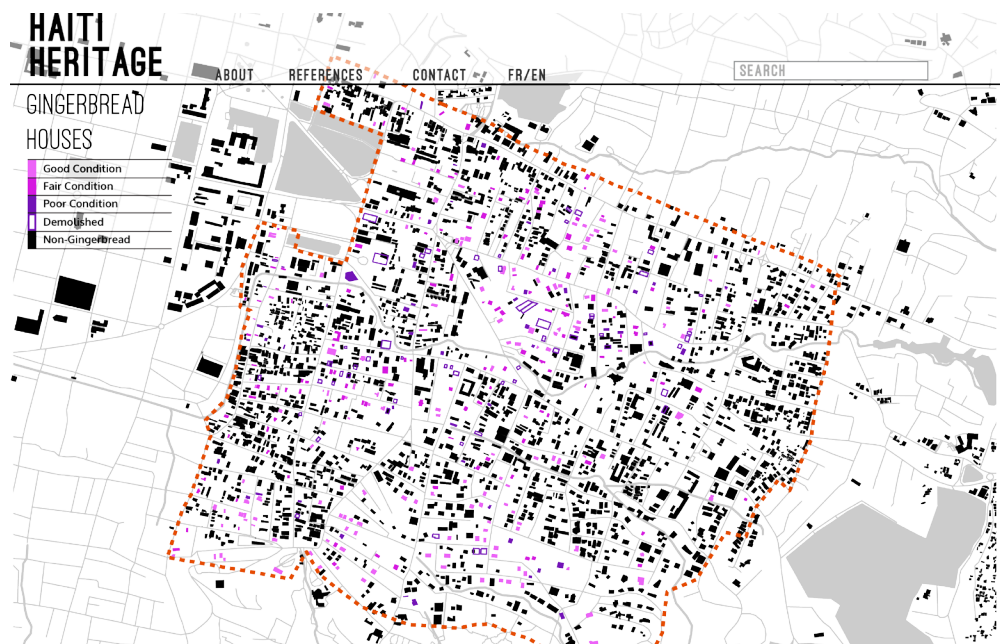
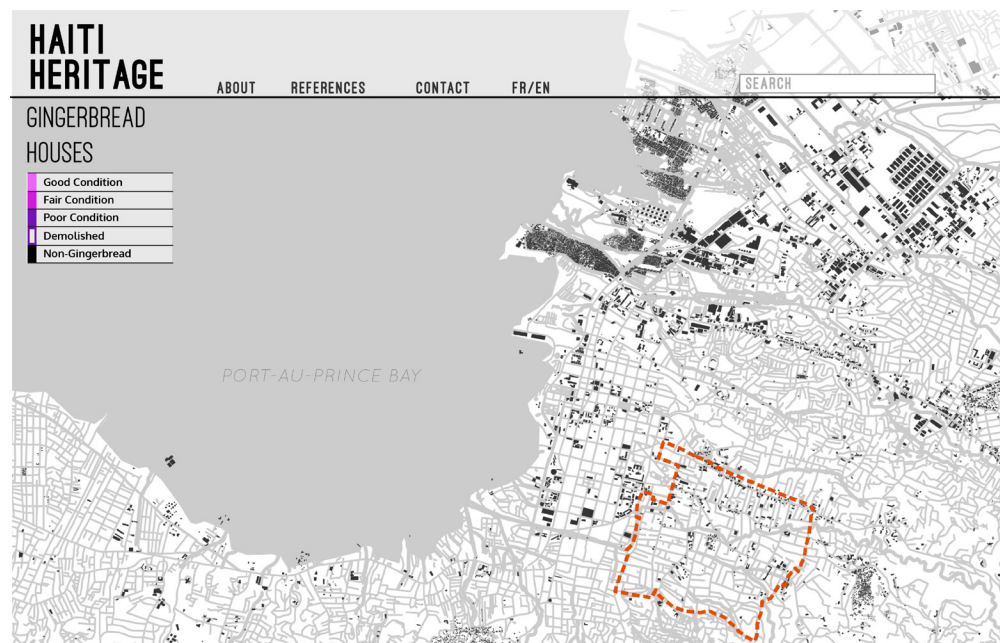
> Maison Dufort, 9 2ème Rue du Travail.

Next Steps.

As this studio project was limited to a single semester, there are many opportunities for further study and action. The following 'Next Steps' have been identified for future studios, the client, student collaborators, and other interested parties to carry forward and to build on the preliminary findings and proposals presented in this report.

From the data collected in this studio, a digital catalog can be created to document the Gingerbread houses that have been lost, preserve their designs and histories, and provide the historical context of their construction. Information from the survey, analyses, and further data collection can be added and shared online, providing resources for future restoration and monitoring projects. The continued monitoring of the Gingerbread houses is another important next step. Recognizing that at least fifty-nine Gingerbreads have been lost since 2010, that many continue to be under threat of demolition or collapse, and all are subject to physical and functional alterations, a systematic monitoring program can inform a longitudinal assessment of the changing conditions of the Gingerbread houses within their urban context.

Mock-up version of a digital catalogue of the Gingerbread houses of Port-au-Prince.





As the studio was limited in the scope of data it collected, it would be interesting and beneficial to enhance the dataset with information on ownership and demographics. During the studio's fieldwork, some team members were able to talk to a number of the owners of Gingerbread houses, and it was found that their stories were extremely valuable in understanding the properties' characteristics and the challenges and opportunities surrounding their preservation. It is thus proposed that gathering more information about the owners of Gingerbreads, both qualitative and quantitative (e.g. census-style data), would enable better targeting of proposals and more robust evaluations of their feasibility. Any ownership and demographic data should be collected into a database that can mirror or integrate the data collected during this study, thus enriching the understanding of the Gingerbread houses and their future.

Currently, the data that was collected in the studio is limited to ArcGIS, and as such, is not readily available to a wider audience. In order to make the data as accessible as possible to colleagues in Haiti as well as other interested parties, sharing the findings of this studio through an open source platform is desirable, and can then serve as a database for future studies and collective action.

For the client, a key next step would be to test and localize select proposals featured in this report. FOKAL can begin to reach out to local residents, students, architects, and artists to test proposals in pilot areas. Active feedback from these pilot tests can help to refine the proposals for wider implementation. While it is difficult under unstable and highly changeable governments, under the right conditions FOKAL has the stature to lobby the local and national governments to adopt preservation policies regarding the Gingerbreads. By joining forces with government actors and sharing knowledge and resources, FOKAL can help to integrate the implementation of this studio's proposals with urban improvement projects that may be initiated at the municipal level.

Community outreach through charrettes, workshops, and other forms of stakeholder engagement will serve as important arenas within which the needs, desires, and motivations of the Gingerbread homeowners as well as other residents in the study area may be discussed and understood. An owners group can also be formed to serve as a network of resources, information, and funds, to encourage dialogue on the preservation of these heritage buildings and the means

to carry this out. Finally, FOKAL can direct financial resources toward funding future studies about the Gingerbread houses and neighborhoods, and continue its collaboration with universities. Student collaborators can participate by assisting FOKAL in the pilot projects, joining the survey efforts, and raising awareness through continued study, publication, project initiation, and community engagement.

Next steps might include reaching homeowners and business owners of Gingerbread houses.



These are just a few of many potential opportunities to build on the data, findings, and proposals that this studio has generated. A process of continued exposure, exchange of ideas, and sharing of resources—locally and internationally—can effectively serve to increase the awareness, understanding, and valorization of the Gingerbread houses, and the role that this heritage can play in enriching urban life.

References.



> 7 Rue 4.

End Notes and Image Credits.

Studio Aims and Scope.

[1] Pierre-Louis, M. D. 2010. "Restoration and Social Value of the Historic Gingerbread Houses," *Museum International* 62 (4).

Introduction.

[1] Daniel Elie, *Maisons Gingerbreads à Port-au-Prince* (Lecture, Université d'Etat d'Haïti, October 7, 2015); Jardon, Lisandre. *Gingerbread: Patrimoine de Port-au-Prince?* (Thesis, Université Libre de Bruxelles, 2014), 30-31.

[2] Corvington, Georges, *Port-au-Prince au cours des ans* (Montréal: Les Éditions du Cidihca, 2001-2007), 284; Erica Avrami (editor), *Preserving Haiti's Gingerbread Houses: 2010 Earthquake Mission Report* (New York: World Monuments Fund, 2011), 16.

[3] Lisandre Jardon, Op. cit., 34.

[4] Ibid., 33.

[5] Ibid., 40.

[6] Ibid., 47.

[7] Erica Avrami (editor), *Preserving Haiti's Gingerbread Houses: 2010 Earthquake Mission Report* (New York: World Monuments Fund, 2011), 16.

[8] Lisandre Jardon, Op. cit., 47.

[9] Ibid., 41; Roland Devauges, "Une capitale antillaise: Port-au-Prince (Haïti)," *Les Cahiers d'Outre-Mer*. Tome VII (1954): 48.

[10] Daniel Elie, *Maisons Gingerbreads à Port-au-Prince* (Lecture, Université d'Etat d'Haïti, October 7, 2015); Lisandre Jardon. Op. cit., 41; Roland Devauges, Op. cit.: 48.

[11] Lisandre Jardon. Op. cit., 41; Roland Devauges, Op. cit.: 32.

[12] Georges Anglade. *Atlas Critique d'Haïti* (Montréal, Québec : ERCE & CRC, 1982), 8.

[13] Lisandre Jardon. Op. cit., 34.

[14] Ibid., 58.

[15] Georges Anglade, Op. cit.; Laura Zanotti, *Governing Disorder: UN Peace Operations, International Security, and Democratization in the Post-Cold War Era* (University Park, PA: Pennsylvania State University Press, 2011), 81-82.

[16] Ibid.

[17] Laura Zanotti, Op. cit., 81-82.

[18] Lisandre Jardon. Op. cit., 41.

[19] Roland Devauges, Op. cit.: 38.

[20] Georges Anglade, Op. cit.

[21] Ibid., 66.

[22] Ibid., 60.

[23] Ibid.

[24] Daniel Elie, *Maisons Gingerbreads à Port-au-Prince* (Lecture, Université d'Etat d'Haïti, October 7, 2015).

[25] Daniel Elie. *Maisons Gingerbreads à Port-au-Prince*, (2013), 36.

[26] Erica Avrami (editor), Op. cit.

[27] Quartiers pour Haiti. *Quartier des Gingerbreads, Port-au-Prince*. Bruxelles, 2012.

[28] Daniel Elie. Op. cit., 36.

[29] Lisandre Jardon. Op. cit.

Gingerbread Survey Comparisons.

[1] To see how these images were used after the earthquake for the identification of heritage resources, please refer to: Erica Avrami (editor), *Preserving Haiti's Gingerbread Houses: 2010 Earthquake Mission Report* (New York: World Monuments Fund, 2011); For access to the images themselves, please visit: Randolph Langenbach, "Haiti: After the 12 April 2010 Earthquake," <http://www.conservationtech.com/PROJECTS/2010HAITI/Haiti-Gingerbread.htm>

Proposals.

[1] For more information about the drawing competition and other components of Gingerbread Watch Day, see: http://www.fokal.org/en/index.php?option=com_content&view=article&id=155%3Athe-value-of-gingerbread-homes-explained-to-young-people&Itemid=54.

[2] See "Park(ing) Day" initiative. <http://parkingday.org/about-parking-day/>

[3] Marotta, David John. "Microfinance: Loans That Change Lives." *Forbes*. Last modified May 15, 2014. <http://www.forbes.com/sites/davidmarotta/2014/05/15/microfinance-loans-that-change-lives/>.

[4] Kiva. "How Kiva Works, The Long Version." Kiva. Accessed December 15, 2015. <http://www.kiva.org/about/how/even-more>.

[5] Nath, Trevir. "How Diaspora Bonds Work." *Investopedia*. Last modified January 28, 2015. <http://www.investopedia.com/articles/investing/012815/how-diaspora-bonds-work.asp>.

[6] Ketkar and Ratha. "Diaspora Bonds: Tapping the Diaspora During Difficult Times."

[7] Ibid.

[8] Ibid.

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Image Credits.

[Image 01] "Haitian President Dies In Explosion At National Palace." *100 Years Ago Today* (Blog), August 8, 2012. <https://100yearsagotoday.files.wordpress.com/2012/08/191208085.jpg>.

[Image 02] Map on p. 36- "Plan de la Ville de Port-au-Prince, 1897." Jardon, Lisandre. Op. cit. (originally from Corvington, Georges. *Port-au-Prince au cour des ans*. Montréal: Les Éditions du Cidihca, 2001-2007, vol. 4, p. 212).

[Image 03] Carpenter, Frank G., Lands of the Caribbean: the Canal Zone, Panama, Costa Rica, Nicaragua, Salvador, Honduras, Guatemala, Cuba, Jamaica, Haiti, Santo Domingo, Porto Rico, and the Virgin Islands, facing page 238 ; New York Public Library (Wikimedia Commons).

[Image 04] Map on p. 28- "La Republique de Port-au-Prince." Anglade, Georges. *Atlas Critique d'Haïti*. Montréal, Québec : ERCE & CRC, 1982. Retrieved from Les Classiques des Sciences Sociales, Université du Québec à Chicoutimi. http://classiques.uqac.ca/contemporains/anglade_georges/atlas_critique_haiti/atlas_critique_haiti.html

[Image 05] Mélanie Malenfant, UN/MINUSTAH. <http://www.rcmp-grc.gc.ca/gazette/vol76no1/news-actualites/bike-velo-eng.htm>

[Image 06] UNOPS/Claude-André Nadon. <https://www.unops.org/english/News/UNOPS-in-action/Pages/Haiti-166.aspx>

[Image 07] UNOPS/Claude-André Nadon. <https://www.unops.org/english/News/UNOPS-in-action/Pages/Haiti-166.aspx>

[Cover and Chapter Images] Maria de la Torre.

[All other images] Columbia University (GSAPP), Haiti Studio Fall 2015.

References.

- Anglade, Georges. *Atlas Critique d'Haïti*. Montréal, Québec: ERCE & CRC, 1982.
- Arnold, Margaret, and Sergio de Cosmo. *Building Social Resilience Protecting and Empowering Those Most at Risk*. Washington, DC: The World Bank, 2015.
- Avrami, Erica (editor). *Preserving Haiti's Gingerbread Houses: 2010 Earthquake Mission Report*. New York: World Monuments Fund, 2011.
- Comité Interministériel d'Aménagement du Territoire (CIAT), Etude Pré—Opérationnelle de Rénovation Urbaine: Morne À Tuf, Port-au-Prince. March 2013.
- Comité Interministériel d'Aménagement du Territoire (CIAT), *Lois et Règlements d'Urbanisme: Guide du Professionnel*, July 2013.
- Corvington, Georges. *Port-au-Prince au cour des ans*. Montréal: Les Éditions du Cidihca, 2001-2007.
- Deeb, Robert, et al. *Ressources documentaires*. Port-au Prince: Atelier d'urbanisme, 1986.
- Devauges, Roland. "Une capitale antillaise: Port-au-Prince (Haïti)." *Les Cahiers d'Outre-Mer*. Tome VII (1954). pp 105-136.
- Dorsainvil, Daniel. *Saving the Gingerbread Architectural Heritage in Port-au-Prince: A Financial Strategy based on "Flagships."* FOKAL and The Open Society Institute.
- Earthquake Engineering Research Institute Reconnaissance Team. "Performance of Buildings in the Haiti Earthquake," *Building Safety Online*, April 2010.
- Elie, Daniel. *Maisons Gingerbreads à Port-au-Prince* (lecture). Université d'Etat d'Haïti, October 7, 2015.
- Estime, Régine. *Les Dentelles d'Octave* (thesis). 1986.
- FOKAL. *Espaces de Parole: Parc de Martissant*. 2014.
- Global Facility For Disaster Reduction And Recovery (GFDRR). *Community-led Partnerships for Resilience*. Washington, DC: The World Bank, 2015.
- Global Facility For Disaster Reduction And Recovery (GFDRR). *Haiti Earthquake 2010: Recovery from a Mega Disaster* (Recovery Framework Case Study), August 2014.
- . *Resilient Recovery: An Imperative for Sustainable Development*. Washington, DC: World Bank, 2015.
- IHSI + Herrera, Javier, et al. *L'évolution des conditions de vie en Haïti entre 2007 et 2012: La réplique sociale du séisme*.
- Institut Haitien de Statistique et d'Information. *Enquête sur les Conditions de Vie en Haïti* (reports & appendices).
- Irazábal, Clara. *Revisiting Urban Planning in Latin America and the Caribbean*. Regional study prepared for *Revisiting Urban Planning: Global Report on Human Settlements*, 2009.
- Jardon, Lisandre. *Inventaire des Gingerbread, Port-au-Prince* (working document). In association with FOKAL and Quartiers pour Haiti. July 2012.
- . *Gingerbread: Patrimoine de Port-au-Prince?* (thesis). Université Libre de Bruxelles. 2014.
- Jean-Julien, Olsen. "Port-au-Prince: Historical Memory as a Fundamental Parameter in Town Planning," *Museum International*, 62 (4), 2010.

- Jha , Abhas K., Todd W. Miner, and Zuzana Stanton-Geddes (eds). *Building Urban Resilience Principles, Tools, and Practice*. Washington, DC: The World Bank, 2013.
- Mayne, Thom (editor) et al. *Haiti Now*. Culver City, CA: The Now Institute/Stray Dog Cafe, 2014.
- Office National du Tourisme et des Relations Publiques, Haïti. *Inventaire général des ressources touristiques*, 1984.
- Pierre-Louis, Michèle Duvivier. *Presentation of Fokal's Gingerbread House Project*. (lecture). FOKAL, October 5, 2015.
- . "Restoration and Social Value of the Historic Gingerbread Houses," *Museum International*, 62 (4), 2010.
- Phillips, Anghelen Arrington. *Gingerbread Houses : Haiti's Endangered Species*. Port-au-Prince: H. Deschamps, 1984.
- Peirce, Neal. "Creative Ideas for Ravaged Port-au-Prince," *Nation's Cities Weekly*. March 14, 2011.
- Pointl, Johannes, (editor). *Destination sud, Haïti : une approche en réseau vers un tourisme durable (A nodal approach towards sustainable tourism)*, Columbia University. Graduate School of Architecture, Planning, and Preservation, 2012.
- Quartiers pour Haiti. *Quartier des Gingerbreads, Port-au-Prince*. Bruxelles, 2012.
- Régulus, Samuel. "Haitian Heritages and the Need to Foster Cultural Diversity," *Museum International*, 62 (4), 2010.
- Rigaud, Candelon. "Promenades dans les rues de Port-au-Prince." Port-au-Prince: Cheraquit, 1927.
- Shah, Fatima, and Rederica Ranghieri. *A Workbook on Planning Resilience in the Face of Disasters*. Washington, DC: The World Bank, 2013.
- Tobin, Kathleen. "Population Density and Housing in Port-au-Prince: Historical Construction of Vulnerability," *Journal of Urban History*. 39(5), 2013.
- UN-HABITAT. *Strategic citywide spatial planning: A situational analysis of metropolitan Port-au-Prince, Haiti*. 2009.
- World Bank. *Risk and Opportunity: Managing Risk for Development*. Washington, DC: World Bank, 2013.
- . *Social Resilience and State Fragility in Haiti*. Washington, DC: The World Bank, 2007.
- Zanotti, Laura. *Governing Disorder: UN Peace Operations, International Security, and Democratization in the Post-Cold War Era*. University Park, PA: Pennsylvania State University Press, 2011.



Appendices.

Appendix 01: Lost Gingerbread Houses.



150 Avenue Jean Paul II.



89 Avenue Lamartinière.



9 Rue Camille Léon.



6 Rue Duncombe.

Below is a list of Gingerbreads that are known to have been demolished since 2010. The table is sorted by street and then by address. 'Id. 2010' refers to the unique identification number created during the 2010 fieldwork undertaken by World Monuments Fund, ICOMOS, and FOKAL. The corresponding 'Id. 2015' refers to the unique identification number created by KoBo during the 2015 survey. Many of these addresses do not have a value for 'Id. 2015,' as these properties were not surveyed (being neither extant Gingerbread houses, nor in a node). Please refer to the Gingerbread Survey Comparison section, within Data Analysis and Findings, for more information on how this was accomplished.

The photos arranged in the margin were taken in 2010 and depict a few of the lost Gingerbreads listed in the table below.

Address #	Street	Id. 2015	Id. 2010
45	Avenue Charles Sumner	272263	43075
62	Avenue Christophe	274094	44553
64	Avenue Christophe	274091	44525
8	Avenue Jean Paul II		46769
44	Avenue Jean Paul II		44441
48	Avenue Jean Paul II	272092	44387
65	Avenue Jean Paul II	272257	43089
74	Avenue Jean Paul II		44359, 44373
150	Avenue Jean Paul II		47297
9	Avenue Jean Paul II (Docteur Audain)	274138	44338
16	Avenue Jean Paul II (Docteur Audain)		46741
34	Avenue Jean Paul II (Docteur Audain)		46727
8	Avenue Lamartinière		43218
14	Avenue Lamartinière	278352	43204
19	Avenue Lamartinière	279071	43562
37	Avenue Lamartinière	278372	42792
89	Avenue Lamartinière		43366
6	Avenue N	272094	46831
3	Impériale Lerebours		44324
3	Rue 4 Pacot	276429	47331
8	Rue 4 Pacot		47255
3	Rue Baussan		44182
6	Rue Berne		42627
	Rue Boussan et Avenue Marguerite		44023
3	Rue Camille Léon		43963
9	Rue Camille Léon		43883
79	Rue Capois	276223	47153
110	Rue Capois		46305
167	Rue Capois	275962	45781
35	Rue Capois & the Champ de Mars	274411	44296
	Rue Capois & the Champ de Mars		44310
16	Rue Castrom		43338
44	Rue Castrom		43424
22	Rue du Travail 1ère	279230	43027
8	Rue du Travail 2ème	279250	41883
17	Rue du Travail 3ème		42923

Address # Street

6 Rue Duncombe
8 Rue Duncombe
19 Rue Duncombe
29 Rue Duncombe
5 Rue Lavaud 1ère
10 Rue Lavaud 1ère
Rue Lavaud 1ère & Rue Lavaud 3ème,
Adj to property at corner of
5 Rue Marcelin
7 Rue Marcelin
14 Rue Marcelin
18 Rue Marcelin
19 Rue Marcelin
13 Rue O
25 Rue O
37 Rue O
38 Rue O
33 Rue Robin
50 Rue Vilmenay
52 Rue Vilmenay
7 Rue Waag
43 Rue Waag
76 Rue Waag
79 Rue Waag

Id. 2015

279187
279207

276305

279280
279246
279108
249037

Id. 2010

43983
44162
44003
43843, 42062
45855
45931

42219
46319
46651
46637, 46851
46665
46679
46983
46943
46903
46923
46155
42432
42385
46181
46251
45552
45520



13 Rue O.



37 Rue O.



38 Rue O.



50 Rue Vilmenay.

Appendix 02: Gingerbread Photo Comparisons.

Below is a partial compilation of the Gingerbread houses for which there were both early 1980 inventory photos and contemporary photos taken in the field in 2015. The 1980s photographs on the left were taken as part of the inventory by the Office National du Tourisme and the Institut de Sauvegarde du Patrimoine National (ISPAN). These images were graciously provided by Daniel Elie, and reproduced here with his permission.

For additional photographs and drawings that assist in demonstrating the changes to—and the resilience of—these impressive structures, the following sources will be of interest: Anghelen Arrington Phillips' *Gingerbread Houses: Haiti's Endangered Species* (1975), Quartiers pour Haiti's *Quartier des Gingerbreads, Port-au-Prince* (2012), and Lisandre Jardon, *Inventaire des Gingerbread, Port-au-Prince* (2012).

Rue 2.



Rue 3,
Villa Therese.



8 Rue 6.



9 Rue Bellevue.





26 Rue Cadet Jérémie.



28 Rue Cadet Jérémie.



Avenue Charles Sumner.



7 Avenue Charles Sumner.



17 Avenue Charles Sumner.

Avenue Christophe.
Castel Fleuri.



18 Avenue Christophe.



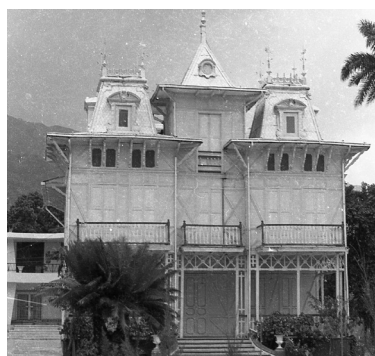
84 Avenue Christophe,
Hospital St. Gilbert.



18 Rue Garoute.



118 Avenue Jean Paul II.





79 Avenue John Brown.



Avenue John Brown.



112 Rue Lafleur Ducheine.



5 Avenue Lamartinière.



18 Avenue Lamartinière.

14 Avenue Lamartinière.



34 Avenue Lamartinière.



46 Avenue Lamartinière.



Avenue Lamartinière, between
Impasses 13 and Ascensio.



13 Rue Lavaud 1ère.





Corner of Rue Lavaud 1ère and
Rue Lavaud 2ème.



3 Rue Lavaud 3ème.



13 Rue Lavaud 3ème.



59 Rue Lavaud 3ème.



15 Rue M.
Maison Gauthier,

4 Rue M. Casséus.



64 Rue M. Casséus.



Rue des Marguerites between
Rues Camille Leon and Baussan.



39 Avenue N.



3 Rue Pacot,
Université d'Etat d'Haiti (UEH).





5 Rue Pacot.



33 Rue Titus.



35 Rue Titus.



Rue du Travail 1ère at Rue du Travail 2ème.



10 Rue Waag.

Appendix 03: Survey Forms.

#

Group #

House #

Street Name

Building Name

Visual accessibility of the property
(select one)

☐ Good ☐ Fair ☐ Bad

Development stage (select one)

☐ Vacant ☐ Built
☐ Under construction ☐ Informal

Number of stories (select one)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+

Use (can check multiple)

☐ Commercial (office) ☐ Industrial
☐ Commercial (retail) ☐ Recreational
☐ Cultural ☐ Religious
☐ Educational ☐ Residential
☐ Government ☐ Restaurant/Bar
☐ Healthcare ☐ Unknown
☐ Hotel/Guesthouse ☐ Unoccupied

Condition (select one)

☐ Good ☐ Fair ☐ Bad

Is it a 'Gingerbread House'?

☐ Yes ☐ No

Primary materials used

(can check multiple)

☐ Cinderblock ☐ Reinforced concrete
☐ Informal materials ☐ Sheet Metal
☐ Masonery ☐ Timber

GPS Latitude

GPS Longitude

Photo (check to confirm)

☐ 1 ☐ 2 ☐ 3

Notes

#

Groupe #

Adresse #

Adresse (Rue)

Nom de la propriété (s'il y en a)

Accessibilité visuelle

☐ Bonne ☐ Moyenne ☐ Mauvaise

Phase de développement

☐ Vide ☐ Construit
☐ En construction ☐ Improvisé

Nombre d'étages

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+

Utilisation

☐ Commerciale (bureaux) ☐ Industrielle
☐ Commerciale (vente) ☐ Récréative
☐ Culturelle ☐ Religieuse
☐ Educative ☐ Résidentielle
☐ Gouvernementale ☐ Restaurant/bar
☐ Services de santé ☐ Inconnue
☐ Hôtel ☐ Inoccupée

Condition

☐ Bonne ☐ Moyenne ☐ Mauvaise

Est-ce qu'un Gingerbread?

☐ Oui ☐ Non

Matériaux principaux

☐ Parpaing ☐ Tôle
☐ Béton armé ☐ Maçonnerie
☐ Matériaux impro- ☐ Bois

GPS Latitude

GPS Longitude

Photo

☐ 1 ☐ 2 ☐ 3

Notes

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