

Jazz, Improvisation, and Streetscapes:
Guidelines for In-Fill Development

by
Timothy Germain Jones

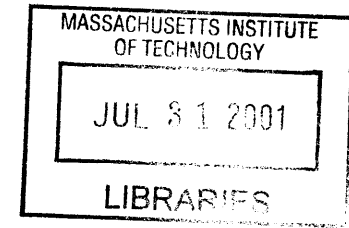
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Submitted to the School of Architecture and Planning
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GUIDELINES FOR IN-FILL DEVELOPMENT**

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Abstract

How can we design in-fill buildings that are frankly new and dynamic, yet respectful and engaging of the context of the streetscape?
Improvisational jazz is a form of music whose practitioners seek to integrate the familiar and the novel into a unified composition. Certain practices guide performers in achieving these dynamic syntheses of new and old. These practices may provide fresh insights into achieving such a synthesis in the streetscape.

This thesis examines the elements, composition, and practices of improvisational jazz for potential application to the compositions of streetscapes, specifically the design of in-fill buildings. It analyzes analogous elements, composition, and practices in the design of the building façades, tests these ideas in an analysis of two case studies, and makes recommendations for urban design.

Thesis Advisor: Anne Whiston Spirn

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In the materialization of this thesis my professor, advisor, and mentor Anne Whiston Spirn inspired me with her enthusiasm and trust in my ideas, encouraging me more than she could ever know.

This thesis is dedicated to the memory of my Grandparents who continue to look after me and my mother and father who's patience and love have supported me through the years.

Thank You.
T.J.

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Forward

Accompanying me as I walk through the city in a thematic way, complementing and often setting my emotional mind state it is forever in my inner ear. It is the inspiration to the way I see and the way I move is in rhythm with it. It is the stimulus that drives my mind to think in non-traditional ways, searching for new solutions to traditional kinds of problems. All this and more it is music, which motivates me to create.

As I traveled through the Newbury streetscape during this thesis I found myself thinking metaphorically of the relationship between the façades within a block and music composition. I noticed a rhythm in the facades when my mind became accustomed to seeing things in a certain pattern in the streetscape and I became relaxed within the environment and tended to know what to expect when traveling down the street.

Melody introduced itself to me as the character of the street. That quality of the street that was distinct and remained in my thoughts even after leaving the site. Similar to the whistling of a melody after the song has stopped playing.

I found harmony when facades displayed a contextual sensitivity of the elements of one building to those within the next. It was a balance between novelty and familiarity, new and old resulting in an order that exceeded novelty by a margin sufficient to dispel uncertainty.

My perception of the Newbury streetscape is based on my analytic view of facades through a process that is inspired by jazz improvisation. While I offer this process of analysis and design I encourage readers to challenge my views and attempt to see and understand our cities in other non-traditional ways in search for unique solutions to traditional problems.

CHAPTER I: STRUCTURED EXPRESSIONS

Overture

Architecture provides a framework for our lives and is the structure of form, space, and order that is responsible for the rhythm that we experience in the built environment. Though the rhythms (i.e. structure) of a space remain constant, the perception of these rhythms will vary based on a person's speed of travel through the space and how cognizant they are of their surroundings. Our perception of a space develops from perspectives over time and through various lengths of exposure. While we may analyze a streetscape from various perspectives, even the most trained eye cannot discover every possible detail during a limited exposure. For this reason it can be said that architecture is experienced through time (for the rate at which a person perceives a space and the speed at which that person moves through it is a function of time) and space (which is how architecture is expressed). Unlike music, which everyone experiences in the same successive manifestation of time, one thing following another, architecture can be experienced at different rates, with individual times depending on the person's movement through the space.

In this thesis, I will address the relationship and the lack thereof between buildings through façade and streetscape analysis. I will analyze several street blocks whose façades respond simply to the mass of a building and those which become part of a whole composition by responding to the existing buildings and urban space. I will propose design guidelines that are inspired by the method of jazz improvisation and tested by my perception of the façades as a pedestrian along these specific streets.

Façade contributions to the aesthetic quality of the streetscape

A person's attraction to a street can be attributed to a number of design decisions that appeal to the pedestrian senses (for example, the placement of buildings in relation to sun and wind, the existence of views, the activity occurring in the place, and the aesthetics of design). The aesthetic quality of the space, however, is at the root of its appeal and is the common determining factor in many people's attraction to a particular street. Furthermore, it is the building façade that is the main determining factor of aesthetics of in-fill buildings, for it is through the façade that pedestrians experience the design of the building.

Façades have the ability to define the continuity or commonality of buildings within a block. In so doing they establish a system that contributes to the sense of community, both visually and socially. In order to comprehend this visual system of communication, it must be possible to recognize systems as a whole while simultaneously perceiving their parts and their interrelationships. This is achieved only when the architect establishes elements that are consistent with other elements on the block instead of designing merely for novelty. Novelty should only be pursued after the establishment of a reoccurring element has been established to ensure a familiar structure to the composition.

Designs that are reflections of the architect's ambitious attempts to achieve novelty can undermine the structure of a street by trivializing its character and consequently destroying the order of the urban space. While façades account for the order experienced on a block, they can also contribute the most to the devastating disorder that can be experienced within the streetscape. Therefore the correspondence of buildings to one another through façade

design is very important, and novelty in design without such correspondence leads to chaos.

Character of the familiar and novel

In establishing a relationship between a new in-fill building and the buildings already on a block, the architect should utilize an existing element (material, window details, ornamentation, etc.) that contributes to the quality of the street in order to maintain consistency of character. This is most easily accomplished through historical reproduction of façades. There are, however, other ways that a façade can offer familiarity, achieving a relationship without historical reproduction and allowing the architect to introduce novelty.

Novelty (representing something outside of the normal things we see) can be applied to and accepted in the physical realm in many ways. It can be brought about through the use of color tones, such as light and dark; textures, such as rough and smooth; weights, such as light and heavy; scale; proportion; and the location of objects. Where familiarity (representing something we have become accustomed to seeing) is achieved through the repetitive use of these same elements. Some of these elements are more noticeable than others are. The texture of an object, for example, is less visible than a contrasting color. Therefore the establishment of the structure of the street should be based on those elements which are most easily perceived or the combination of those which are less noticeable.

Once the character of the street is established throughout the composition (through the recurrence of rhythmic elements), it becomes common for the viewer to discover novel elements within the composition that were not apparent at first sight. If there is a repetitive element that is constant throughout the composition, it will become the foreground in the pedestrian's perception of the site, while novelty will be seen as the background.

A truly harmonious streetscape offers the comfort of familiarity through the existence of repetitive patterns as well as novel elements of design to relieve monotony. In a harmonious composition, novelty and familiarity can be present without the pedestrian's being overwhelmed by either of them. Initially the two elements appear uniform, and it may take time to notice them as individual elements apart from the overall composition. That is the strength of familiarity: once an order is established along a streetscape, novelty can cautiously follow.

The first step in designing a building to fit into an existing streetscape is to establish what elements in the existing facades account for their relationship to each other: are there similar proportions, use of material, geometry, archetype, details, or some other element. Through this comes an agreement as to what the character of the street is or should be. Pedestrians perceive this character, and the street then appears to be unified. If patterns of façades are too ordered (familiarity), involving no disorder (novelty) amongst them, the streetscape may become boring. However, if the design of the entire streetscape reflects the personal expression of an individual architect (novelty), then the streetscape becomes disorganized. It is possible to achieve a balance between novelty and familiarity, and improvisational jazz offers some insight into how this might be accomplished.

Methodology

My research began with the study of jazz improvisation, defining its musical elements, composition, and practices to better understand the nature of the art form and the creation of improvisation. In doing so I discovered analogies between my description of streetscape compositions and jazz terminology and defined parallels to these in streetscape design, with specific focus on façades. I then located two in-fill blocks along Newbury Street to test my hypothesis. One of these I deemed a successful blend of novelty and familiarity in in-fill design (Compositions 1 and 2); the other I judged as a failure (Compositions 3 and 4). The existing character of each block determines the amount of novelty that an architect can achieve through design without adding chaos.

I analyzed the two case studies, utilizing several forms of documentation: a journal (in which my observations were recorded on successive visits in written and drawn form), photographs (used as a form of inquiry), and drawings (elevation, and perspective). I then used Photoshop to create a composite of the photographs to create an elevation of all the façades along an entire block and then to create a series of analytical drawings to test my hypothesis. Through my research, I became familiar with the elements of the sites that contributed to the balance between familiarity and novelty and those that added to chaos. I then illustrated the similarities in terms analogous to music.

My findings result in urban design guidelines that facilitate novelty in design amongst streetscapes. The guidelines establish order along the street while allowing for improvisation within the order to achieve novelty. My intent is not to stifle the creative expression of design along our streets, but to establish a coherent order that facilitates it.

CHAPTER II: CORRELATION BETWEEN THE ARTS

Music metaphors

Music is expressed through harmonious intervals of time and pitch; it is dynamic and subjective and is experienced audibly in one dimension, while architecture is static, objective, and experienced visually in three dimensions. For this reason the two art forms have also been described as being on opposite ends of the art spectrum. Music exists in time alone with no relation to space, while architecture exists in space and time. Musical notes, accents, and tones occur at specific times in a musical piece accounting for the harmony, while architecture is seen all at once. The philosophical description of architecture as frozen music is common and is the basis of many analogies that have been made between the two art forms. I think, however, that the two art forms are more similar in character and analogous to each other than has previously been recognized, and I will later explore the relationship between jazz improvisation and streetscapes.

Jazz improvisation is ideal in establishing analogous relationships to the streetscape, because it adheres to the structure of the musical composition yet allows for the improvisational creativity of the musicians.

Jazz improvisation

To improvise in jazz means to compose, or simultaneously compose and perform on the spur of the moment without any preparation. Improvisation is the communication between musicians using a consistent rhythm. It is the elaboration of a tune while adhering to the melody. Improvisation is analogous to a conversation between several individuals (in fact it is a conversation between band members using instruments rather than words).

In a conversation there is a topic, which is the structure. There might be differences of opinions and the expression of a range of emotions, yet everyone remains on the topic of conversation. If someone engaged in the discussion were to speak about an unrelated issue, changing the topic without informing others, then those who were involved in the discussion would be lost, and others listening would be left behind, feeling as if they had missed something. Similar to conversations, jazz improvisation is rooted in the continuance of a harmonious rhythm that establishes a melody throughout the length of a tune. This keeps the soloists from losing their place and maintains the structure that allows others to jump in and add to the conversation.

There are five factors that are said to be most responsible for a jazz musician's successful improvisation: intuition, intellect, emotion, sense of pitch, and habit. The intuition is responsible for most of the originality; intellect is used in solving the technical problems; intuition and intellect are both used to develop the melodic form; emotion determines the mood; sense of pitch enables the musician to transform heard or imagined sounds into music notes, and playing habit accounts for the quick location of certain pitch patterns.

Improvisation began in African music and was developed in America by slaves. Although the art form occurs to some extent in all music forms, it is most evident and dynamic in jazz. Improvisation in jazz is an example of democracy in action, in the sense that through improvisation musicians are able to express themselves individually while adhering to the agreed upon structure of the melody. Improvisation offers the individual the freedom to create within a group of other individuals with two limitations: adherence to the melody and the order of time.

Improvisation occurs when the artist comes into the studio with no preconceptions of what the entire song will sound like. Sometimes the melody is written out along with the harmonic structure, but the rest is up to the interpretation of the soloist. Improvisation is a way of life. Improvisation in jazz is the search for freedom of expression, which is affiliated with the African American freedom struggle. Early influences on improvisation come from African American spirituals and the historical demonstrations at Congo Square in New Orleans, where spasm bands (bands made of individuals who played makeshift instruments, such as pots and pans) would perform. African American spirituals are laced with improvisation through call and response. This occurs when the lead singer starts a verse often improvising from the hymn and the other singers respond back with the refrain or join in the solo when the words were familiar. Occasionally the response is an octave above or below the call or accentuates other notes to produce a total harmonious piece with no discord.

Jazz musicians, like artist in other fields, view their performances as landmarks in their ever-developing careers. A recording is simply a documentation of their lives evolving artistic vision; in fact many jazz musicians say they can barely listen to their last recording because their artistic vision has changed since it was made. In this way, jazz improvisation is more than a process of creating music for recording; it is a way of life that the musicians aspire to. Jazz as a way of life is the whistling of new melodies against the beat of footsteps in the street or the walking to the rhythm of a particular song. As a way of life it consists of the preoccupation with musical ideas and notions of creativity inside and outside of the studio.

It is a misconception to think that in order to understand the structure of jazz improvisation one must be familiar with music and play an instrument, for the truth is: improvisation is all around us; all one has to do is take notice.

Streetscape improvisation

Jazz improvisation has a framework that establishes familiarity, which allows for improvisation of the musicians (novelty). Similarly, streetscapes that attract the eye also have a framework that expresses familiarity through the pattern composition of the façade. When I walk down a street, I take notice of the activity that is going on. It is on streets that have a familiar quality that I can truly let my mind go and not pay so much attention to the path that I am walking. Instead, the rhythm of the streetscape allows me unconsciously to walk along in rhythm with a familiar structure that carries me from one building to the next. The repetition of the familiar structure is what rhythmically moves me through the space. With in-fill buildings it is necessary for the legibility of the composition from one building to the next to read as a whole becoming familiar to the pedestrian. For it is the appearance of unity that adds to a streetscapes definitive character and makes it memorable. This occurs once the constituent parts of a building or buildings form an apparent whole with unity dominating fragmentation in perception. The establishment of order amongst the façades, however, should not be so apparent as to create a bland composition, for pedestrians enjoy noticing or finding things within the streetscape that they have not seen before.

Similarly in jazz, there is a sense of discovery in listening to, for example, Miles Davis "All Blues" and appreciating it the first time for its simple tempo and the melodic

rhythm and then, at each additional listen, noticing the complexity with which each performer adds to this structure.

Because of these discoveries, one appreciates the song even more and learns to become more cognizant of the instruments within the composition. In the same way I believe that observant pedestrians learn to appreciate the streets that they frequent and become more cognizant of their surroundings if the structure of the streetscape is quite apparent yet allows for improvisation amongst the patterns of the façades.

There is a form of enjoyment that comes from discovery that I think most people respond to, and that is the challenge of extracting order from the complex. But streets should not be complex; they should be well organized for easy navigation. From the grid pattern to the directional flow of traffic, streets should respond to an order that facilitates efficient travel and experiences along the way. If streetscapes were experienced as a moment in time or a picture that hangs in ones living room, they could afford to have an extreme level of complexity that would far outweigh their order, allowing the observer to enjoy the challenge of extracting this order from the complex. But streetscapes are interactive and ever changing. They are experienced from different perspectives and not studied (by the average pedestrian) as compositions but, rather are experienced during people's busy lives. The loss of patterns along the streetscape could, then, result in a disrupted sense of wholeness and an easily forgotten scene. Novelty and familiarity are the fundamental classes of information, one representing maximum complexity and the other total redundancy. The patterns of the façades along the streetscape are the dominating factors providing this class of information and the major contributors to the unity that the pedestrian will experience.

Jazz improvisation is all about taking chances. Sometimes these chances are successful in the creation of a work of art and sometimes they fail to have impact on the listener. To think of improvisation as a step within a process of understanding the streetscape expands the creative design process and opens the venture to infinite possibilities.

Improvisation is a process of design that involves the understanding of the familiar order of the street in order to design dynamic structures that relate to the familiar without historical reproduction. Improvisation begins where understanding the familiar ends. It can only occur after an analysis and understanding of the character of a streetscape has been done, for there is no art in improvisation without recognition of the other buildings within the streetscape, there is only conflict.

CHAPTER III: CASE STUDIES

This chapter consists of empirical research done on two blocks on Newbury Street. Newbury Street was used because of its architectural character of masonry buildings consisting of similar form, scale, proportion, color and texture. Although there are variations, the traditional Newbury townhouse is constructed of red brick or brownstone, is three to five stories high, is sited perpendicularly to the street, is attached on both sides, and is set back 20-22 feet from the front property line. Townhouses along Newbury are generally designed as narrow (18-25 feet wide) rectangular forms with flat facades that have extruding elements including bay windows, porches, stairways, balconies, and cornices. Because the character of the street is expressed in such definitive terms the familiarity of the street was relatively easy to see, making the street a perfect case study to evaluate the design of novel facades within a familiar context.

The process of my analysis involved daily journals during site visits, photographs of significant detail of the site, and panoramic photographs of the street façades as an entire composition, utilizing Photoshop. I investigated the layers of the façade in Photoshop to identify familiar patterns that exist amongst the composition through various layers. Analyzing the composition of the façade through layers enabled me to identify which elements are the strongest contributors to familiarity within the composition and those that are the weaker, resolving the differences between the two. Once I have become familiar with the elements of the façade composition through my visits and photo analysis I created guidelines that allow for the design of a façade on the block that will contribute to the character of the street without mere historic replication.

I then used these guidelines in an improvisational process to design an in-fill building, allowing myself only a brief period for each conceptual design (because the focus of this research is the analysis of each site and the formulation of design guidelines).

Supporting Individuality

Allowing or, better yet, supporting architectural individuality in the context of maintaining the existing character of the street should be the primary issue of today's design guidelines. The belief that the limits of such a context will result in mediocre architecture because it will stifle the creativity of the architect is an overstated argument. It is my contention that the creation of an aesthetic gem within the constraints of a neighborhood structure is a true sign of creativity. In jazz music, the improvisation of Miles Davis would not be so phenomenal if it were just the sounds of one man playing outside of a structure. For improvisation to occur, it is necessary to adhere to the structure of the tempo, for it is this structure that allows each performer's solo to contribute to a whole harmonious composition. Without the structure there would simply be several solos. However beautiful they might sound, they would be individuals playing in discord with each other.

Design guidelines offer a structure that is a necessity in both architecture and jazz improvisation. Architecture has to follow rules of physics and visual harmony achieved through the use of materials and proportions, while music follows the rule of audible harmony. Music is free of the burden of materiality, making it one of the most unencumbered of all art forms, yet, like architecture it has set rules that must be followed. It is within those rules that something so profound as "All Blues" can be achieved. As in architecture the rules of music are instinctively obeyed not followed consciously.

Though they are necessary, consciously following rules during the design or composition process could stifle creativity. The guidelines that I am establishing will be strict enough to enforce a certain harmonious order of the street, yet flexible enough to permit individual translations of the rules (improvisation). The following section derived from notes out of my journal and photographic analysis of the four facade compositions along Newbury Street. The combination of the two forms of analysis were used to create design guidelines that are specific to each site. Through my interpretation of these guidelines derived two designs for each site.

Structure and Improvisation

Composition 1 North Side of Newbury Street on the Fairfield and Exeter

I attribute the rhythm of the composition to the regular extruding forms on the facades—the bay windows. The bay windows are the dominant reason my eyes continue moving in the horizontal direction across the entire composition. Through the rhythm of the bay windows, my eyes follow the horizontal pattern, jumping from one window to the next. Even when a significant distance or another building separates the bays, the rhythm is easily detectable.

The composition is made of six buildings of varying size, two of which are significantly smaller than the others, giving the composition a sense of novelty (since the façades aren't perceived as unified in their form). Yet the strength of the bay windows maintains the rhythm needed to keep my eye consistently following a linear path, and the change in the building heights does not drown out the melody of the composition that is established through the successful rhythmic recurrence of the bay windows.

A few buildings that are smaller than the norm can reduce the unity of the composition, if these buildings are not designed with care. When a one-story in-fill building is added to a site whose composition is predominately four-story, perpendicular walls become visible to the eye and easier to perceive because they are oriented to pedestrians. The blank walls that are exposed due to the change in building heights can undermine the character of the composition by deflecting the eye from the linear path of the street. However if the character is stated strongly enough, the composition will allow for change in the height of the buildings without distracting the eye of the observer (i.e. the bay windows led my eyes in a horizontal direction despite the separation of building facades).

Similarly, there are many details of the façade that my eye misses due to the ease with which I perceive the rhythm of the bay windows. For example, there tend to be other windows on either side of the bay windows. Those on the side opposite to my direction of travel are almost always missed (unless there is something in the window that makes me stop to look or turn around) because my eye follows from one bay to the next almost hypnotized by the rhythm.

The character is represented by elements of the façade that are constant throughout the composition and are reinforced over and over again, becoming its most familiar element. These elements occur regularly and are similar in characteristics and location in the composition. The repetition of these elements establishes a familiar pattern along the façade that is perceived as the character of the composition. The most easily perceived elements of the composition are those that are visually oriented to the pedestrian. In the case of Newbury Street, these happen to be signage and forms that extrude from the surface of the façade. There are several reoccurring elements of this façade that establish the character (the red

brick, mansard roof, and extruding surfaces). But none are as easily perceived by my eye as the red brick, of which each building within the composition is constructed, and the bay windows, which form the main part of the composition through their domination of the façade.

The bay windows are about the same width as the spaces separating them, which is apparent in the elevation analysis. However in experiencing the façade at street level, the bay windows were the main elements that captured my attention (Photograph 1). My eyes naturally follow the rhythm of the bay windows, and because the red brick is ever constant, the façade is legible as a whole composition. The mansard roofs are consistent amongst the façades, but they are not as easily perceived at my eye level as I traveled the street. The roof becomes a main contributing element of the composition only when it is viewed from the opposite side of the street. As I walk down the street, the melody experienced along the first two floors keeps my attention, and I seldom look up to notice the roof.

A variation may occur in the character of the facade through the adding of something new and engaging to the context of the streetscape. A successful variation can only be accomplished through understanding the existing character of the street and then improvising within the familiarity of the composition while not overpowering the melody. Once the elements are dominant enough to establish a character for the composition, variations can occur within that theme. The examples of the variations in this composition follow a definite theme of the street that is structured through the characteristics of various elements. One of the most noticeable variations is the change in the window pattern of the last building on the right. The window pattern (the relation of windows to each other) of the façades on this street appears to repeat itself across the entire composition. Through the



Photograph 1. Bay Windows along Newbury Street

location of the windows along the same regulating lines, the façades read as one composition. There are, however, several variations that are present within the composition, one of which occurs at the second row of windows of the building on the right. The increase in the size of the window on this building discontinues the top regulating line. Instead of aligning with the other windows in its row, the top of the second row window responds to the bottom of the third row of windows, changing the horizontal window pattern.

The dimensions of the bay windows also vary, having different heights and widths. The variations in the bay windows are easier to see in the elevation than while walking along the street. This shows the amount of novelty that can be permitted within a familiar context while not overpowering the melody.

The distances that the bay windows extrude from the surface of the façade are the same, which makes them an easy repetitive pattern to follow. It is not that the bay windows appeared dissimilar from my eye level, rather it is the constant melody of the bay windows that maintain my attention and keep me from noticing the variations at first sight. Similarly, in jazz improvisation the melody is announced in the beginning of the piece and reintroduced at various times throughout the composition while the musicians perform their solos around it in an attempt not to overpower its familiarity.

The elements of the composition that are most easily perceived are the elements that are oriented to the pedestrian (signage, bay windows, or other extrusions from the surface of the façade). Because the pedestrian's eye is constantly moving horizontally with the repetition of the bay windows, the space in is barely noticed, and their width appears constant throughout the composition.

However there is some variation in the width of the space between the bay windows and in the height of the bay windows themselves. Both of these variations are understated in comparison to the distinct melody of the street and barely noticeable from a pedestrian's point of view.

A variation is also experienced through the irregular rhythmic pattern of the bay windows, which occurs once where the width of the bay windows is doubled. This variation was not apparent to me during my visits to the site and I only discovered it after analyzing the semi-elevations. The change in width would have had to be exaggerated for my eyes to have noticed the change. The extruding forms of the bay windows of the building on the right are also a variation of the rhythmic structure through a change in the size. Again, the size is evident in the elevation analysis but was overpowered by the rhythm of the bay windows as I walked down the street.

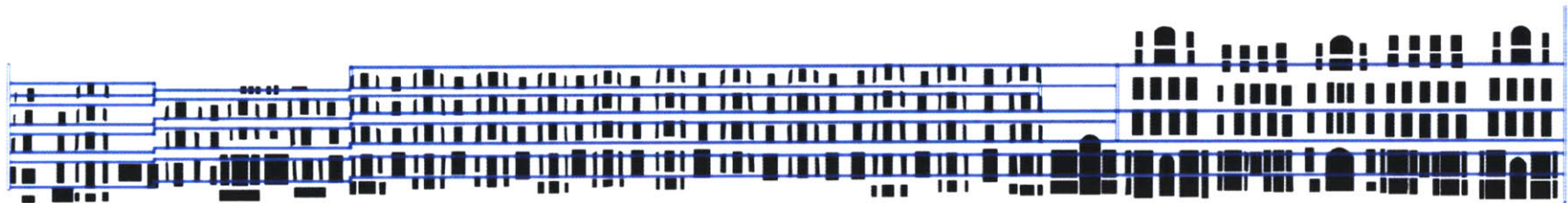
The balance between the familiar and the novel in this composition is in harmony, because the two coexist with each other (a distinct character of the street with variations on the elements). However, the character of the façades is so strongly announced throughout this composition that variations of the theme could have been exaggerated more than they were without overpowering its unity. For instance, with the strong repetition of bay windows, opportunities to explore novel designs between the bay windows could have been pursued while adding little distraction to the character of the street. Because the width of the bay windows is greater than the width of the space that separates them and they are emphasized through their extruding from the surface of the façade, the bays form a dominant order of the composition.

The façade composition has a strong familiarity, which is established, by the Victorian-style architecture that gives the street its definite character. The constant red brick used throughout the composition changes in color because of the shadows that are cast through the use of solid and voids. The bay windows cast a shadow that is $1/5$ the size of the space between the bay windows during the afternoon hours. Where there is a greater width between the bay windows the amount of shadow in relation to the surface decreases. The distance of the extruding shape from the façade surface determines the size of the shadow on the composition. The façade of the last building to the right has three distinct extruding solid masses and six bay windows. The two solid masses on the ends of the façade appear to extrude the same distance from the façade surface as the bay windows on the rest of the composition, and they cast a similar size shadow on the surface of the façade. While in elevation the width of the extruding masses is drastically bigger than the width of the bay windows, as a pedestrian walking down the street I barely noticed this variation in width. The bay windows and other extrusions of the façade establish a dominant familiarity, while the alteration in the size of the bay windows and other extruding surfaces causes variation of the shadows. The windows have four constant regulating lines throughout the façades that are at the pedestrian's eye level. The window line is easily perceived in elevation and, more important, in perspective while one is walking down the street. The location of the regulating lines at the pedestrian's eye level is essential to the establishment of the character, for the first two floors are the most easily perceived. As the composition extends farther in the vertical direction, the windows of the last building on the right no longer relate to the regulating window lines of the façade.

Because the character was successfully established on the ground levels it can vary at the higher levels of the composition without the risk of upsetting the balance of novelty and familiarity. The scale of the windows is constant through most of the composition, with a change in size at the façade of the last building on the right.



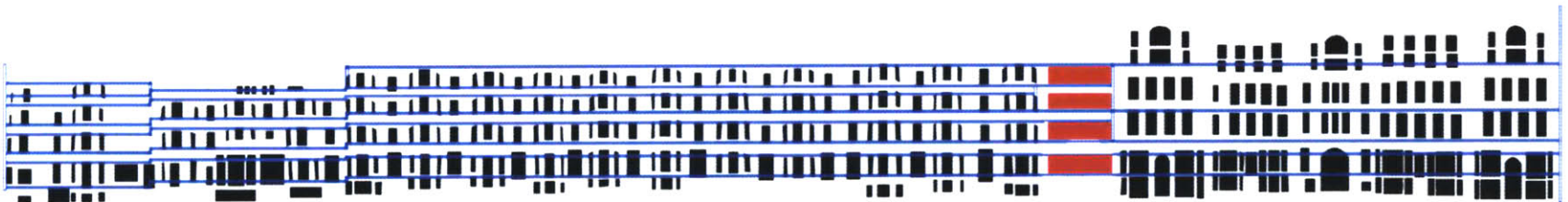
Composition 1 located on the North Side of Newbury Street on the Fairfield and Exeter block.
The in-fill site is highlighted.



Layer 1 Openings

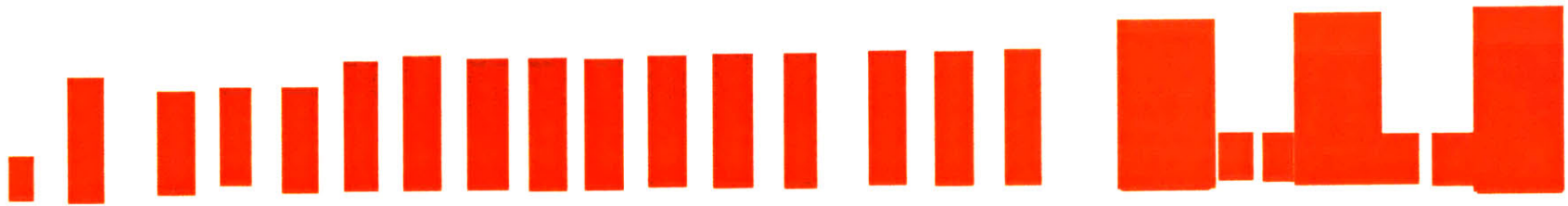
Illustrates the openings within the composition (windows, dormers, doors).

There is a linear relationship amongst the windows across the facades illustrated by the lines of regulation. This contributes to the familiarity of the openings in the horizontal direction from one facade to the next.



Design Guideline

A consistency amongst the openings will be continued in the design by relating to the familiar patterns of the facade to the left. To ignore the familiarity of the existing door and window relationship by designing a novel pattern that responds only to the building would be an exaggeration of novelty that can only be sustained by establishing strong relationships amongst the remaining layers.

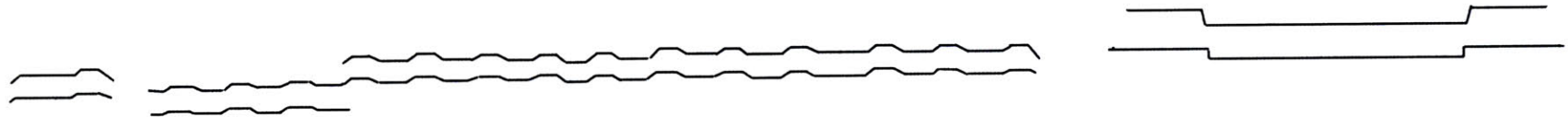


Layer 2 Change in Plane

Bay windows and other extrusions of form are frequent across the composition. They establish a consistency in the form of the buildings from one facade to the next.

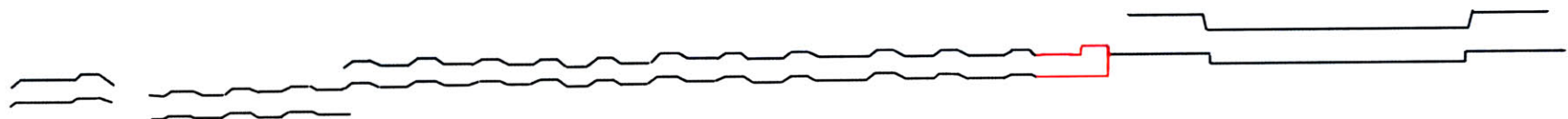
Design Guideline

Frequency of bay window is consistent enough that this design will not have to incorporate bays to build a familiarity amongst this layer. Because my eyes tend to jump from one bay to the next within this composition (often missing the width between the bays) and the width of the in-fill site is minor in comparison to the rhythm of the bay windows they will be omitted from the facade.



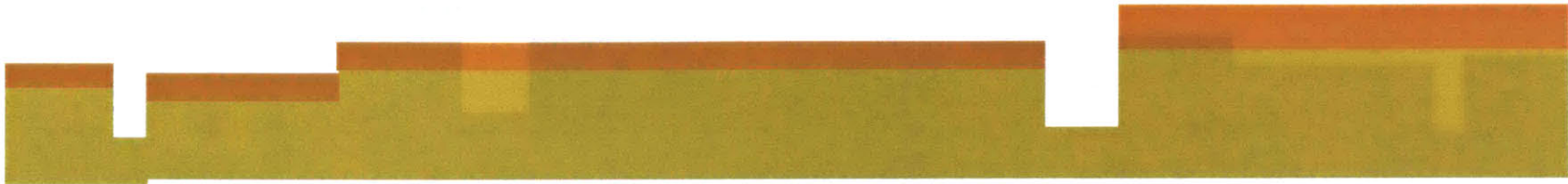
Layer 3 Roof and Cornice Line

There isn't one consistent roof or cornice line across the composition, but there are connections between the two that unify the roofs.



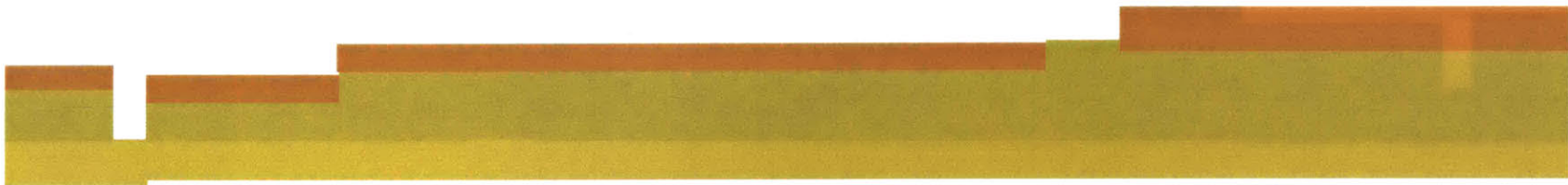
Design Guideline

The roof and cornice lines of this design can undulate in the manner that the other mansard roofs do without replicating the mansard style, becoming novel in design while maintaining the familiarity of the existing lines.



Layer 4 Ratio of Roof to Wall

The roof to wall ratio fluctuates between 1:4 and 1:5. The second and fifth buildings have no roof. The first building is 1:5 the third is 1:4 the fourth is 1:5 and the sixth is 1:5.



Design Guideline

Because the mansard roof is predominately familiar in the character of this composition, this design will have no roof (achieving novelty amongst this layer) and still be unified due to the emphasized mansard roofs.



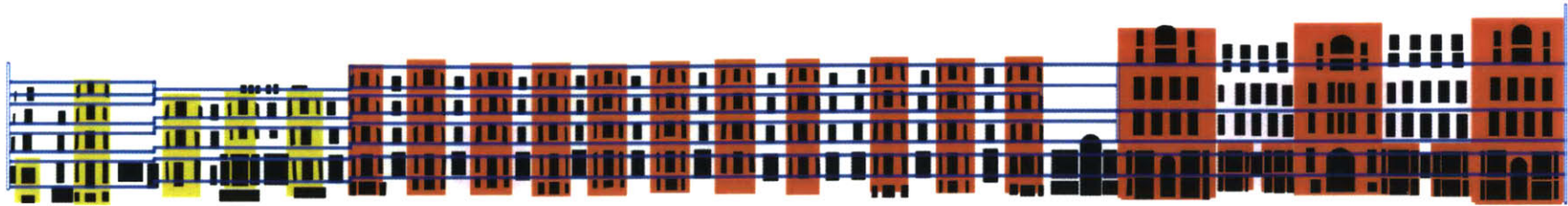
Layer 5 Materials of Construction

The composition is consistent in its red brick material of construction from each facade. The color of the material is perceived over the brick material and establishes the unity among the facades.



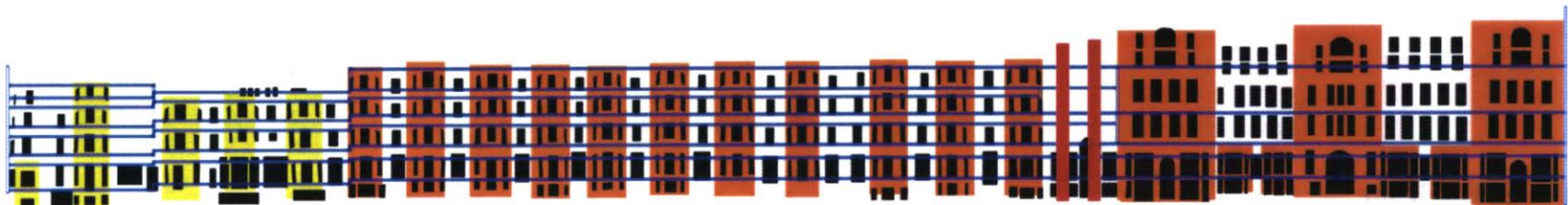
Design Guideline

The materials used in the construction of the façade will be similar to the existing. Because of the strong established consistency, a change in material of this new construction would build an exaggerated hierarchy within this layer.



Layer 6 Ratio of Horizontal to Vertical Features

The bays are the vertical features of the composition and the windows are the vertical. The lines of regulation illustrate the strong horizontal relationship established between windows across the facades. The horizontal connection between the window placements makes for a stronger connection in the horizontal direction than the bay windows.



Design Guideline

Because the horizontal pattern is strongly established and more familiar than the vertical features, a vertical pattern can be emphasized without overstating the horizontal pattern.



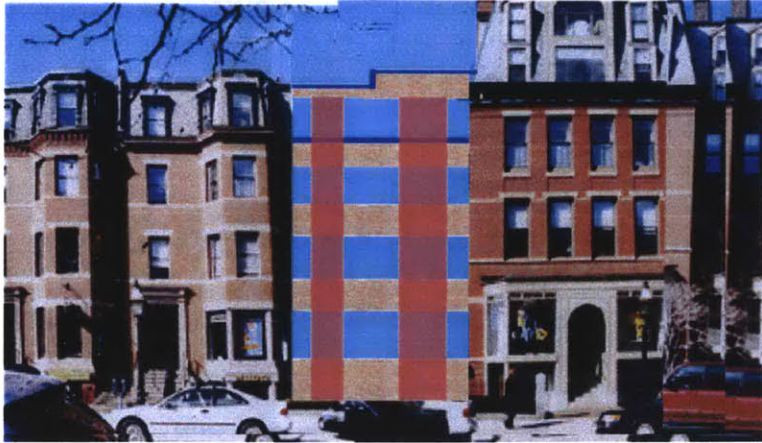
Layer 7 Separation of Buildings

This composition is divided into six visually detached buildings, however the relationship between the layers of the facade establishes a unified perception.



Design Guideline

This layer is divided into six visually detached buildings because of the details in the façade that separate them, but the height difference is the most pronounced in this layer. The height of the new façade will be similar to one of the existing buildings on the right or the left of the in-fill site. This means that the details of the other layers can be more improvised and novel in their design.



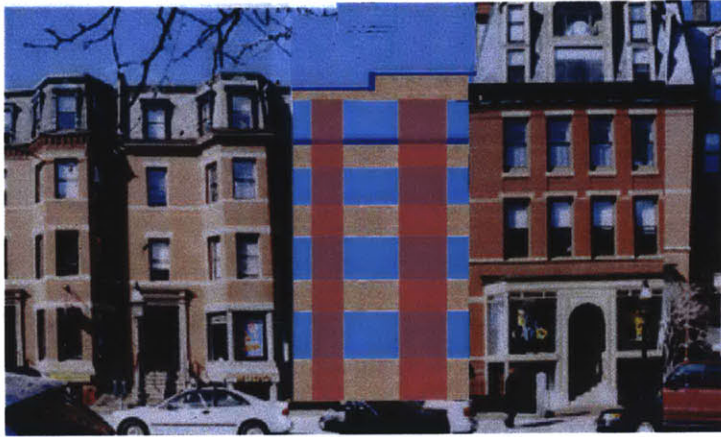
The pattern that was derived from superimposing the analytical layers



Design 1 achieved through my interpretation of the analytical layers



Facade within the existing context



The same pattern that was derived from superimposing the analytical layers



Design 2 achieved through another of my interpretations of the analytical layers



Facade within the existing context

Composition 2 South Side of Newbury Street on the Fairfield and Exeter block

Although it is not consistent throughout the entire composition, the rhythm of the street is expressed through the bay windows and other extrusions from the face of the façade. The rhythm of the bay windows and display windows of this composition occupies less of the façade than that of composition one. But the rhythm of the façades is no less definitive. Waiting to cross the street to the left side of the composition, my eyes take in the whole site. I notice the extruding bays and display windows immediately. As I walk up the street from the left side of the composition my eyes glance first at the bays of the first building on the left. My eyes have a few seconds more to explore the verticality of the façade as I walk through the site. The neighboring building's display windows extrude at the first floor only, and there is a significant distance between the continuance of the rhythm (approximately 24 feet). Because of this, I take in more of the verticality of the first façade (not immediately noticing the continuing rhythm) before my attention is pulled back down by the extruding display windows that are on the first level of the next building. It is these kinds of linear undulating motion that is characteristic of this site and also present in the way the bays move up and down. This composition directs my eyes up and down the façades while maintaining its rhythm.

Unlike the composition on the opposite side of the street, there are no constant elements that are reinforced over and over again in this composition. Forms extrude from the surface of the façade in the representation of bay windows or simple display windows, however they are far from regular and similar in their design or location. Instead, the extrusions appear more random in their locations (with respect to the composition as a whole) and vary in their shapes (some bay windows are round, and some are cornered).

However the consistency in the height of the buildings and the lack of separation between the forms maintains a unity amongst the façades.

Four-fifths of the buildings in the composition share the same regulating lines across the top of the bay windows. Being the only line of relation between the façades, this line seems to be located at eye level to exaggerate the consistency of the character, which works well in first directing my eyes down the façades within my first glance (Photograph 2).

For me, the first seconds on the block are the most important in my recognition of the character. If I don't experience similarities between the façades during my first look, my eyes will wander aimlessly back and forth, up and down the composition.

Instead of one distinct characteristic trait across the façades this composition uses several variations on a single trait to convey an order of familiarity from one individual façade to another. The rhythmic pattern of the bays have verticality in their design yet are horizontal in their relation to each other. Their heights tend to undulate in an almost random way, but further analysis of the façades shows that they rely on similar lines of relation. While this composition possesses less of a definitive character than the composition across the street, the unity established by the building masses is stronger in this composition. The composition can be divided into four separate buildings based on height, design similarities, and form. One of the structuring elements of this composition is the fact that the buildings all share relatively the same height and are not separated by smaller buildings as in composition 1. This allows for a more unified canvas to design on and decreases the chance of the façades being perceived as dual compositions.

The modern design of the bay windows of the farthest left façade is an example of a variation. The designs of the modern bays relate to the melody of the bays further along the



Photograph 2. The relationship between the bay windows of the first floor

composition. The relationship is made across the façade of a building that does not have bay windows (only display windows). So the design of the modern bay windows becomes a variation of the display windows and the bay windows that are familiar throughout the composition.

This composition has less of a unified appearance than composition one, not in its character but through the individual design of each façade. Contributing to this are the four colors schemes amongst the façades. The architecture of this composition is more modern in design in comparison to composition one, which has a strong Victorian aesthetic. The two buildings on the left of the composition share regulating lines that align the windows of the first floor. This is extremely important in the establishment of the melody because the windows are display windows that extrude from the surface of the façade and are oriented to the passing pedestrian.

The irregularity in the rhythm of this composition is its chief characteristic. The heights of the bays and display windows is never constant, it moves in a rhythmic motion up and down the façade as the repetitive pattern emphasizes the linear rhythm. There are no constant repetitive elements in this composition that account for a distinct character, and the variations that occur are predominantly amongst the repeated bays.

Because the character of the façades is not distinct, the variations that occur cannot be exaggerated further without the loss of the familiarity of the composition. In fact, the two buildings on the left have a sufficient amount of novelty to risk a loss in the familiarity of the façades. But the distinct element of the bay windows established by the third building from the left prevents this from happening. This building provides such a strong character—even though it is not repeated throughout the composition—that it allows for novel

designs along the block. Because the building façades are similar in height and appear as one form upon which several variations of patterns occur, the variations of the window pattern, modern details, and colors do not promote a dual perception of the composition.

Again, most of the differences in the patterns of the façade were not experienced during my travels down the street. It was during my analysis of the elevation that variations became apparent. As I walk down the street, my eyes constantly follow the rhythm of the first floor display windows and sometimes wander beneath the street surface to the stores in the basements. It was normal for me to follow this linear path of progression amongst the patterns because I naturally kept my eyes at the level necessary to navigate around pedestrians along the sidewalk. With this perception of the site, it was not visually apparent that the last façade on the left was constructed of red block instead of red brick, which is familiar to most of the composition. It was not until I returned to the photographs of the site that the variations become evident.

I also noticed that most pedestrians around me also looked straight ahead while walking, only occasionally looking up. In fact, the only time I really noticed people looking up was when they saw me looking up taking photographs. The only time I naturally looked up to take notice of my surroundings was when I was at the corner of an intersecting street, waiting to cross. It is at this point that the composition of the façade is most susceptible to conveying the pattern of the composition.



Composition 2 located on the South Side of Newbury Street on the Fairfield and Exeter block.
The in-fill site is highlighted.



Layer 1 Openings

Illustrates the openings within the composition (windows, dormers, doors).

There is a linear relationship amongst the windows across the facades that ends at the building on the left. The change in the window proportions disrupts the linear window pattern.



Design Guideline

The consistency of the patterns of the openings is familiar in its linear design across the composition, with the exception of the far building on the right. The pattern will be continued from the most familiar pattern within the composition (the window patterns established by the set of buildings in the middle of the composition).



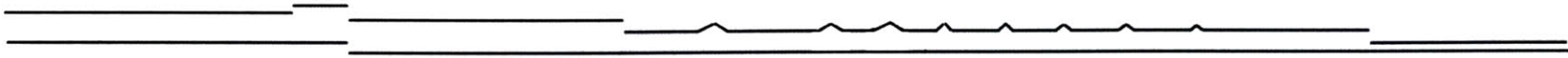
Layer 2 Change in Plane

Bay windows and other extrusions of form are less frequent across the composition. They begin and end at various locations and don't build a distinct consistency across the facade, however they have a similar base line of origin.



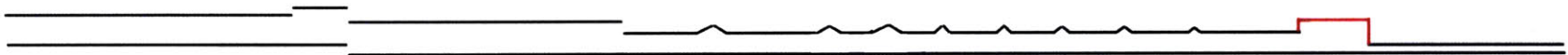
Design Guideline

The frequency of the bay windows is consistent in this composition and could be omitted from this façade. However, because this building is located near the beginning of the composition and the façade at the far right is absent of the bays it is necessary for this façade to establish the change in plane that is consistent through the rest of the composition.



Layer 3 Roof and Cornice Line

There isn't one consistent roof line across the composition, but there is a cornice line that is closely related through the facades unifying the roofs.



Design Guideline

The relationship between the roof and cornice lines across the composition are linear in their relationship because the roofs are either flat or the cornice lines of roof that are not flat are connected to the cornice line of neighboring facades. The cornice line will relate to the neighboring buildings and the roofline will relate to the second building from the left.



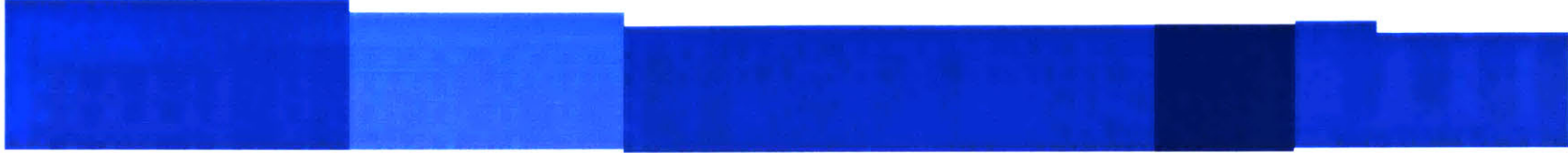
Layer 4 Ratio of Roof to Wall

The roof to wall ratio fluctuates between 1:4 and 1:5. The second and fourth buildings have no roof. The first building is 1:4 the second is 1:5.



Design Guideline

The ratio of the roof to wall is consistent in the facades of the building to the left, while the building to the right has a flat roof. Because of the consistency of the ratio amongst the neighboring façade this design will have a more novel ratio and remain familiar to pedestrians. This is especially possible because the roof ratios are not easily perceived to a pedestrian on the street.



Layer 5 Materials of Construction

The composition has three color patterns and two types of material changes amongst the facades. The first facade is red stone, the second is a sandstone, the third is a group of identical designed buildings with red brick, the fourth is brick painted grey, and the fifth is red brick.



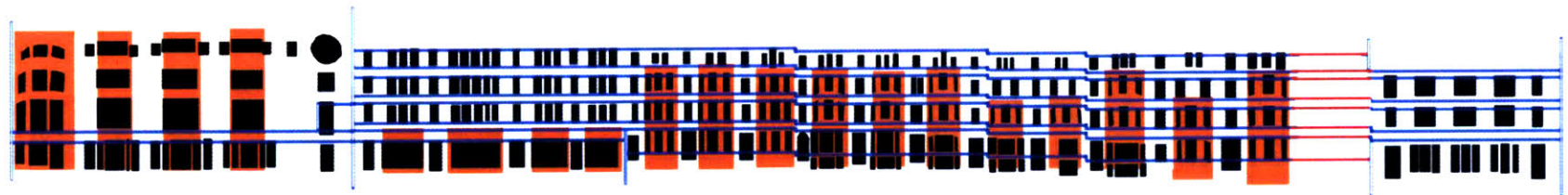
Design Guideline

The material used in the construction of this facade will be sandstone to accent the other sandstone building in the composition.



Layer 6 Ratio of Horizontal to Vertical Features

The bays are the vertical features of the composition and the windows and the roof/cornice lines are the horizontal. The lines of regulation illustrate the strong horizontal relationship established between windows across the facades (with the exception of the last building on the left). The horizontal relationship is stronger than the vertical relationship.



Design Guideline

Ratio of Horizontal to Vertical Features: The horizontal features of the new façade will be emphasized through the window placement or other details that relate to the existing window pattern. The vertical features of the new façade will not overstate the horizontal.



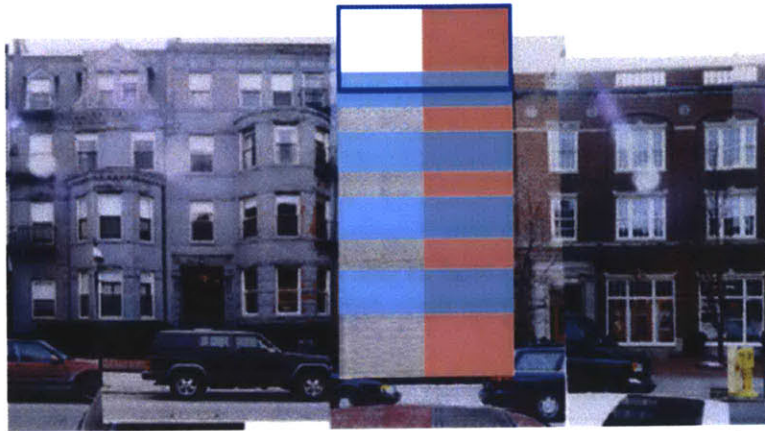
Layer 7 Separation of Buildings

This composition is divided into four visually detached buildings. The strength of the facades to read as one composition is due to the fact that the buildings are not apparently separated, rather they read as a whole composition despite their differences.



Design Guideline

Because this layer is only divided into four layers (there is less individuality amongst the facades) the design will seek individuality within this layer.



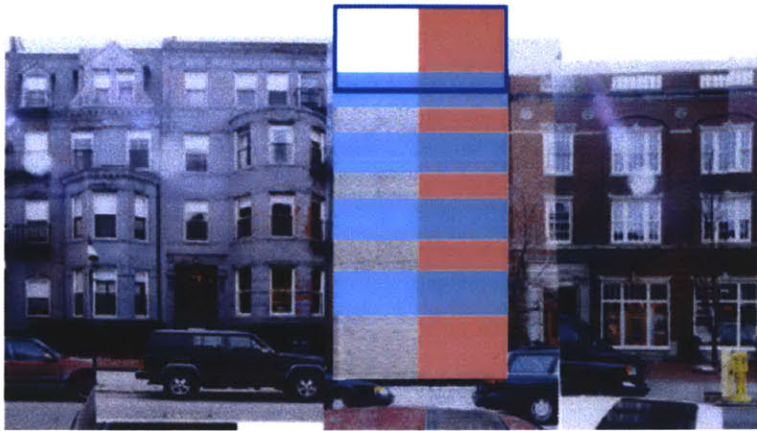
The pattern that was derived from superimposing the analytical layers



Design 3 achieved through my interpretation of the analytical layers



Facade within the existing context



The same pattern that was derived from superimposing the analytical layers



Design 4 achieved through another of my interpretations of the analytical layers



Facade within the existing context

Composition 3 North Side of Newbury Street on the Dartmouth and Clarendon block

This composition lacks the relationship between the façades, which contributes to the lack of rhythmic elements within the composition. The rhythm of the window patterns is only experienced within individual façades not as a composition as a whole.

To create a rhythm, it would be necessary to give the composition an element that is repeated at least along the first floor of the façades. This would encourage the pedestrian's eye to follow the linear path of the composition at first sight and then return to the less familiar elements (the individuality of the window placement, the heights of the buildings, the materials of construction, etc.) with a clear rhythm already established.

I tried, but was unable to find a reoccurring element in this composition. The fact that I had to analyze the façades in an attempt to find one emphasizes how a lack of a clear characteristic trait can cause uncertainty about the character of the street. Other blocks of Newbury can be described by one or two of their characteristic traits; however this composition lacks a definitive theme.

Bay windows appear throughout the composition, but they only respond to the mass of the individual building not to the composition as a whole. As I have witnessed in the other compositions, the extruding elements of the façade have the greatest opportunity to pull the individual buildings together into one composition.

This also means they have the greatest ability to destroy any chance of establishing a character. In this example, the composition has a division amongst the façades due to the separation of the two buildings on the ends and the lack of a strong repetitive element to pull it together linearly.

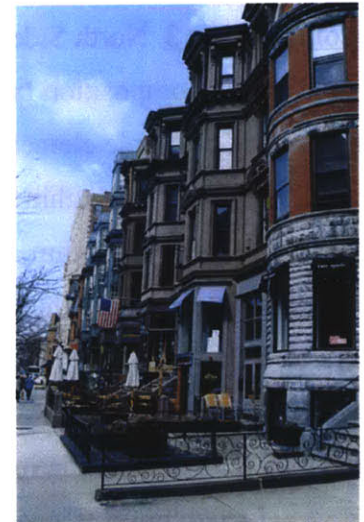
There is too much variation in the height of the buildings, which was apparent as I walked through the site. The lack of any consistency amongst the cornice lines emphasized the differences in the heights of the buildings.

As I walked through the site the windows appeared to be located along the same regulating line; (Photograph 3) but as I passed the façades, I noticed the difference in their lines of relation (Photograph 4). The windows are not far off alignment from each other, which makes the lack of relationship look accidental rather than intentional.

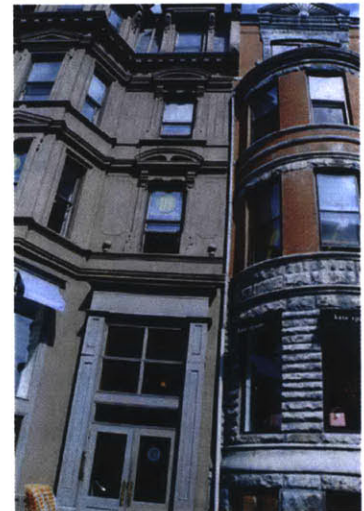
Because the composition lacks a definitive rhythm, my eyes were not pulled across the composition in a linear fashion, and it was easier for me to notice the space in between the bay windows and the lack of relationship between the façades. This testifies to the power of the reoccurring rhythm to move the eye horizontally through the site.

It can equally be said that there are too many variations within this composition and that there are no variations at all (I have referred to the variations above). A variation occurs through understanding and improvising on the existing character of the street; and because there is no character within this composition, there can be no variations. Instead this composition represents a collage of novel designs with little familiarity amongst them to sustain the novelty. Although sometimes it appears as if there are hints of a characteristic element in the composition, finding one is impossible because of the many distractions occurring through the novel designs.

The variations of the bays are what I experience most within this composition. The irregular rhythmic patterns of the bays is exaggerated, which is devastating to the composition because there is no consistent reoccurring element for my eyes to return to when I get lost in the irregularity of the buildings.



Photograph 3. the illusion of a familiar window pattern



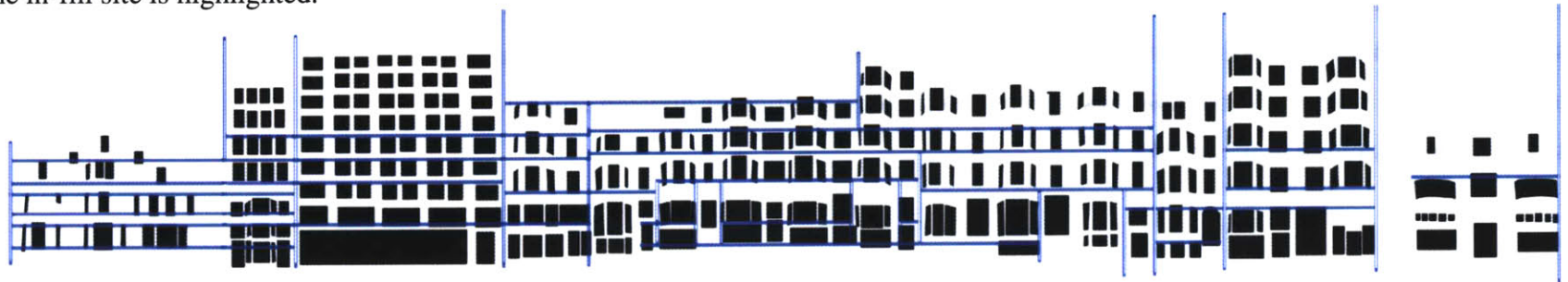
Photograph 4. the lack of a familiar window pattern

The composition formed by this site is void of harmony because of the un-pronounced character and the lack of a repetitive element. Harmony is only achieved through the balance of the familiar articulation of the characteristic traits and the novel expression of the variations. It arises from the coexistence of the two within the same composition, with the dominance of a distinct character being uncontested by the quantity of the variations.

The complexity of the composition is apparent in facade analysis, but more importantly, it is easily experienced as I walked down the sidewalk. The composition is bookend by buildings with similar design details, but the relationship across the whole composition stops there, with the disjunction of the two buildings from the rest of the façades. The form and similarities in the two end buildings creates a definite perception of division emphasized by the separation in the façade.



Composition 3 located on the North Side of Newbury Street on the Dartmouth and Clarendon block.
The in-fill site is highlighted.



Layer 1 Openings

Illustrates the openings within the composition (windows, dormers, doors).

There is a little linear relationship amongst the windows across the facades illustrated by the lines of regulation. This contributes to the lack of familiarity of the openings in the horizontal direction from one facade to the next.



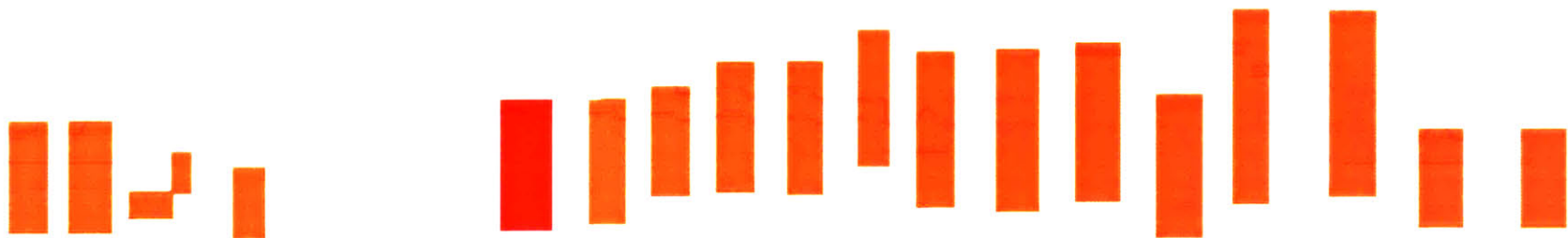
Design Guideline

The design will address the lack of linear relationship between the openings. The openings will relate directly to the building on the right and left of the in-fill site.



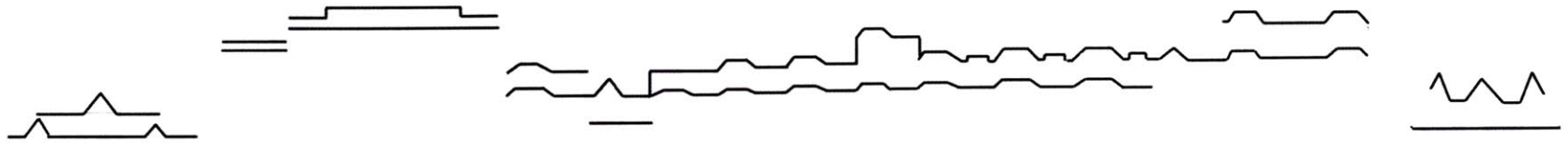
Layer 2 Change in Plane

Bay windows and other extrusions of form are frequent across the composition, with the exception of one building. However, they appear random in their linear location and in their vertical placement.



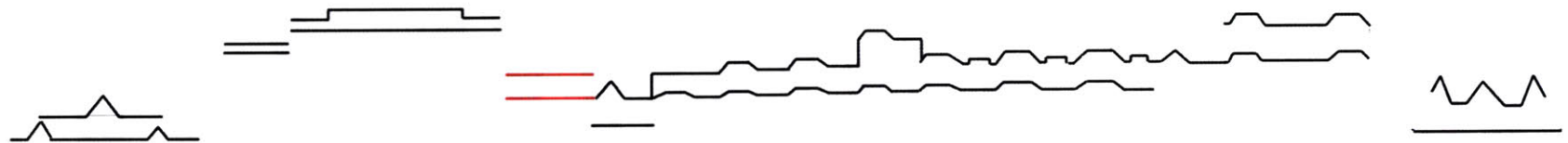
Design Guideline

The design will continue the change in plane rhythm that is familiar across the composition with forms that extrude from the composition reminiscent of bay windows. The form should connect with the street, bringing the rhythm of the existing bays to the street.



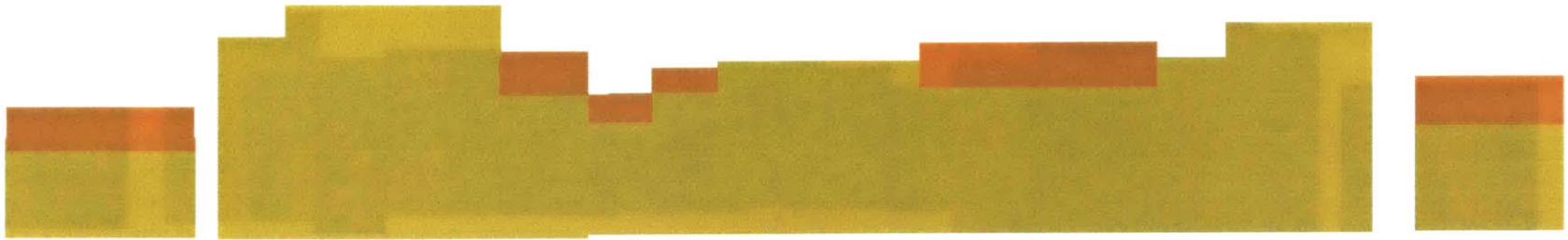
Layer 3 Roof and Cornice Line

The lack of a relationship between the Roof and Cornice lines are reflections of the individuality of the buildings. There isn't a consistent roof or cornice line across the composition. There is one set of buildings that attempts to make a connection with the cornice and roof line but where the cornice line connects to others the roof line doesn't, similarly with the roof line connections.



Design Guideline

The roof and cornice lines will relate to the the sixth building in the composition, because it is the most familiar. Designing the facade to relate to theses lines will strengthen the composition.



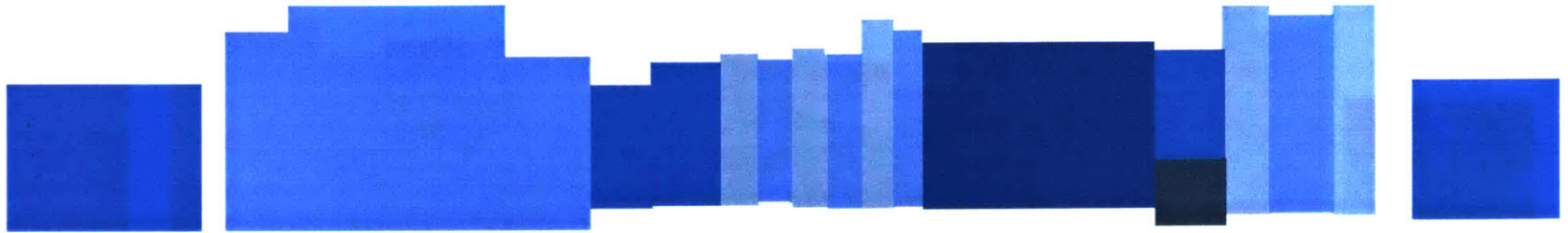
Layer 4 Ratio of Roof to Wall

The roof to wall ratio in this composition has four variations that are not visually related. The first building has a ratio of 1:3, the fourth 1:5, the fifth also 1:5, the sixth 1:7, the eighth 1:4, and the last building 1:3.



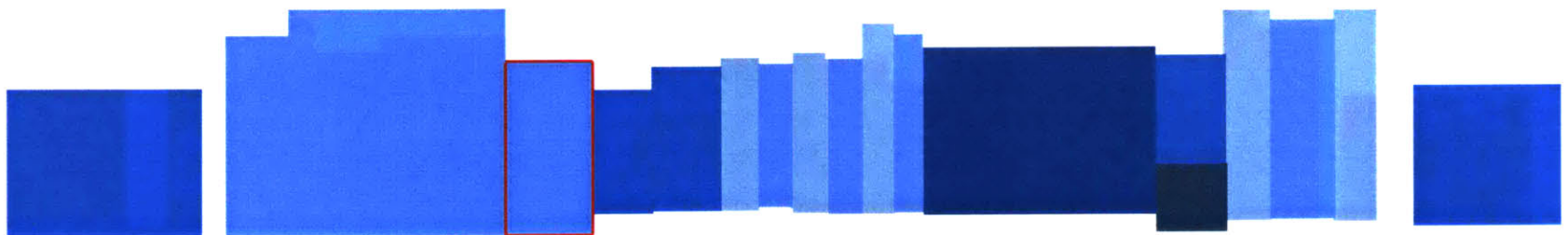
Design Guideline

The ratio of roof to wall will be 1:7 (the same as the sixth building from the right) to build a relationship between buildings four, five and six.



Layer 5 Materials of Construction

The composition has five color patterns and two types of material changes amongst the facades. The first facade is red brick, the second, third and fourth is a sandstone, the fifth and sixth is red brick, the seventh is a combination of green and sandstone, the eighth is brownstone, the ninth is red brick and stone, the tenth is green and sandstone and the eleventh is red brick.



Design Guideline

The material used in the composition will be sandstone, because it is the most represented material in the middle of the composition. Any change in the material or color would add to the individuality of the buildings within this layer.



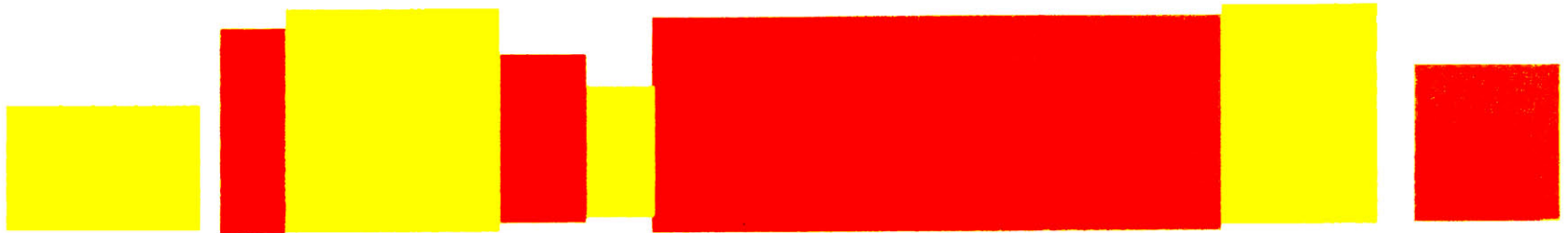
Layer 6 Ratio of Horizontal to Vertical Features

The facades have a weak relationship between the windows and bays. The bays appear randomly placed across the composition and the windows respond to individual building facades, which results in a lack of a clear pattern in either horizontal or vertical direction.



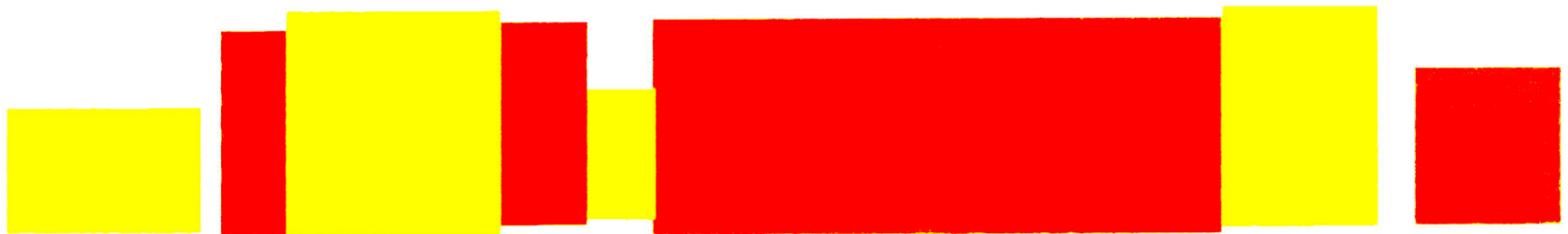
Design Guideline

The vertical features of the new façade will outweigh the horizontal features. Because the pedestrians along the streets perceive the bays easier they will be used to convey a sense of unification amongst the composition.



Layer 7 Separation of Buildings

This composition is divided into eight visually detached buildings. The buildings appear to have more in common in this layer than any other layer. Because of the relationship between the canvas of each building, it becomes apparent that the details of this composition are one of the main contributing features to the lack of unity between facades.



Design Guideline

Because this layer is divided into eight visually detached buildings, the new façade will relate to the larger of the established building sizes (the sixth from the right) to establish a rhythmic change in the heights of the building separation.



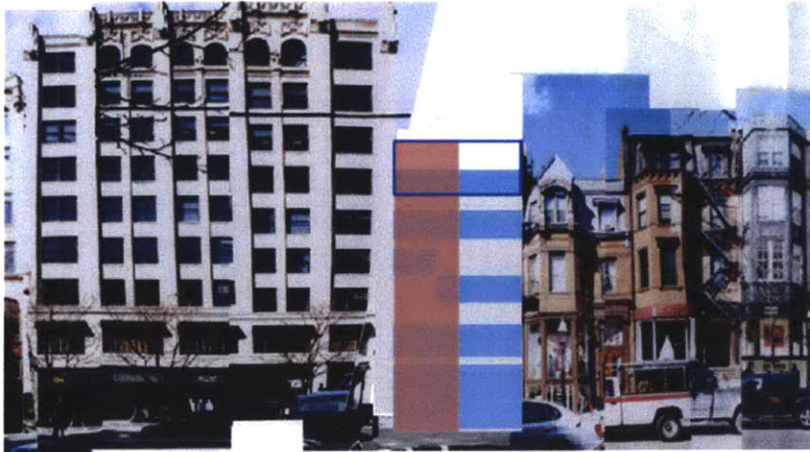
The pattern that was derived from superimposing the analytical layers



Design 5 achieved through my interpretation of the analytical layers



Facade within the existing context



The same pattern that was derived from superimposing the analytical layers



Design 6 achieved through another of my interpretations of the analytical layers



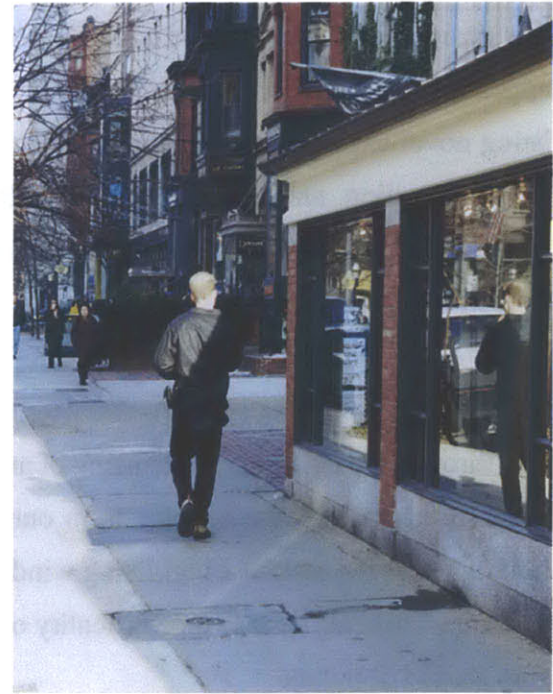
Facade within the existing context

Composition 4 South Side of Newbury Street on the Dartmouth and Clarendon block

There is no rhythm to this composition, although there opportunities to establish a reoccurring element. The building on the far right has an extruding form that interrupts the path of the pedestrian by invading the public walkway. The form is the most intimate in scale and has a distinct repetition of solid and void in its window patterns (Photograph 5). Similarly, the long building in the middle of the composition has a linear repetition that is experienced through its window patterns. These façades should become the basis for establishing a rhythm within the composition that is adopted by the other façades.

Similar to composition three, the character of this streetscape is not pronounced, and as I walk the street I am unaware of any element that is consistent throughout the façades. There are two elements that do establish a relationship amongst some of the façades, but they were all discovered during my analysis of the façades in Photoshop, not on the site. One is a replication of facades. There are facades within the composition that are larger-scaled versions of other facades; but buildings that relate only to themselves, detracting from the similarity, separate these buildings from one another. The other is a close relationship of window patterns among some of the buildings, but, again, the perception is difficult when the repetition is not continuous. The various colors applied to the façades adds to the lack of consistency. Through my earlier observations I noticed that the color of the façades is easily perceived in my field of vision and that the material or texture was less noticeable.

Again, this composition has no consistent character so there are no variations. It too is nothing more than a collage of individual ideas upon a canvas. If the character were strengthen with either a consistent or reoccurring element, a progressive variation could occur within the composition without the risk of destroying the structure of the street, but



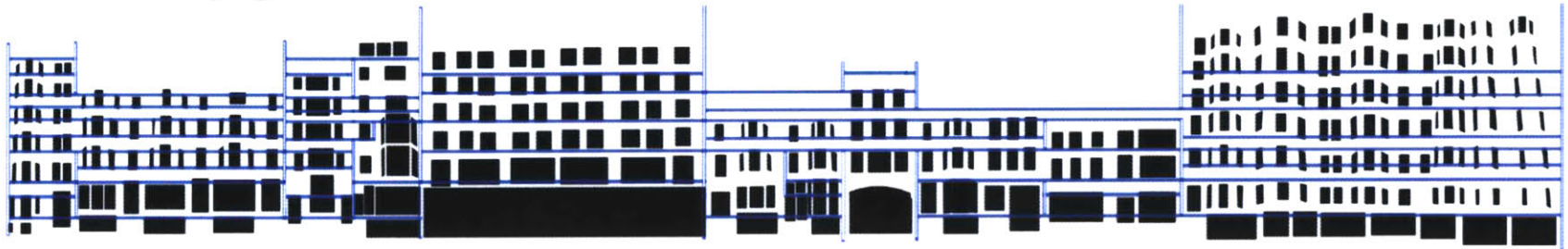
Photograph 5. the intimacy of the street

this design has far too much novelty and too little that is familiar. In order to give the appearance of variation, the characteristic traits would have to be designed around the existing novel expressions. Generally the character would be used to establish the theme of the composition, and variations would follow; but in this case, it would be like working backwards because there are so many novel designs within the façades. A structure is needed to relate them all.

This composition, again, is void of harmony; it simply has too many novel designs within an unfamiliar context. A character needs to be established throughout the composition through the rhythmic reoccurring of an element that will become familiar to the pedestrian. The façades vary in color from one to the next, which gives individuality to each building, and the lack of a regulating window line between buildings disrupts a linear relationship. This emphasizes the verticality of the composition where the horizontal relationship should dominate.



Composition 4 located on the South Side of Newbury Street on the Dartmouth and Clarendon block. The in-fill site is highlighted.

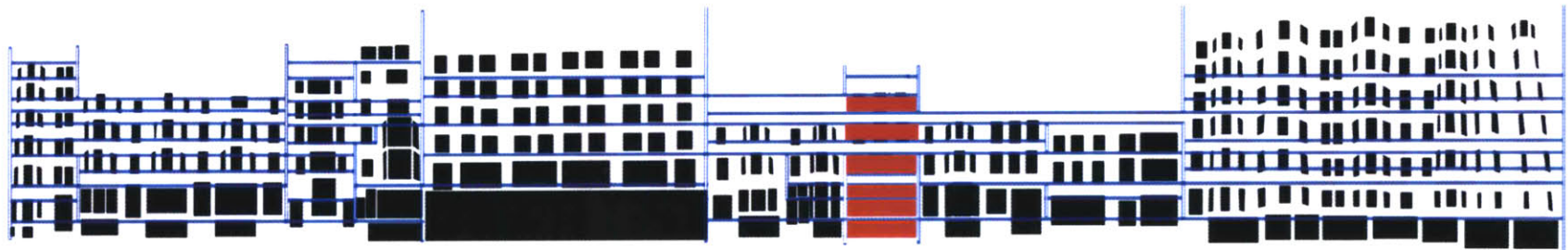


Layer 1 Openings

Illustrates the openings within the composition (windows, dormers, doors).

There is an intricate linear pattern between the windows of each composition that is difficult to image seeing without this analysis.

The windows have an irregular relation across the facades. Regulating lines relate to either the base or the top of opposing windows.



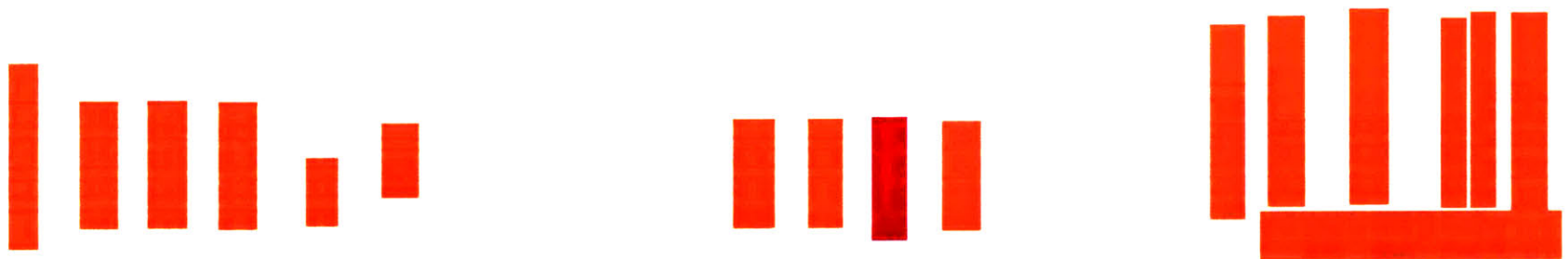
Design Guideline

This layer is chaotic and needs much attention to design. The façade design will rely heavily on the established neighboring window and door patterns.



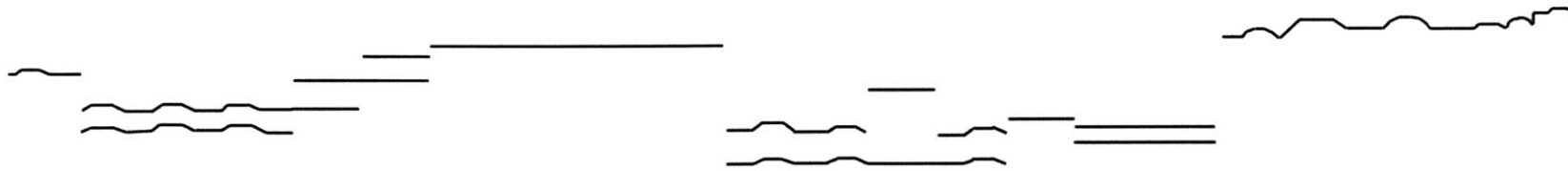
Layer 2 Change in Plane

Bay windows and other extrusions are strong at the ends of the composition, but decrease in their representation toward the middle. They appear random in their linear location and in their vertical placement.



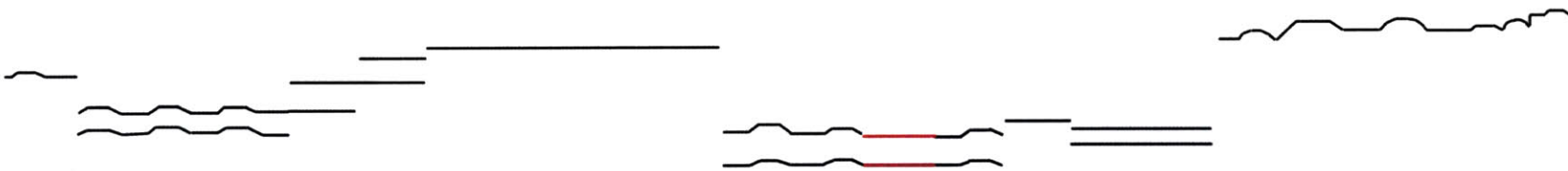
Design Guideline

The in-fill site currently has no change in plane and is sited between two buildings that have façade extrusions. The design will have a change in plane to compliment the existing rhythm.



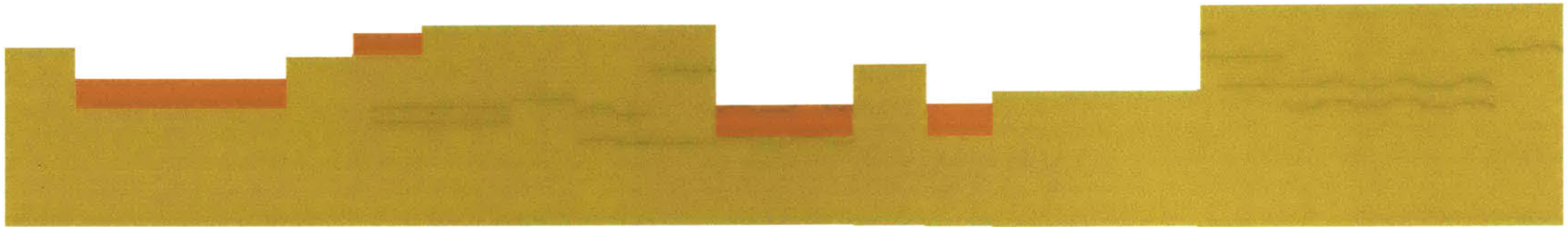
Layer 3 Roof and Cornice Line

The Roof and Cornice lines have no relationship outside of the individual building. Some of the larger buildings are flat roofed and only have a cornice line that are so high in elevation that they could not relate to the cornice lines of the shorter buildings.



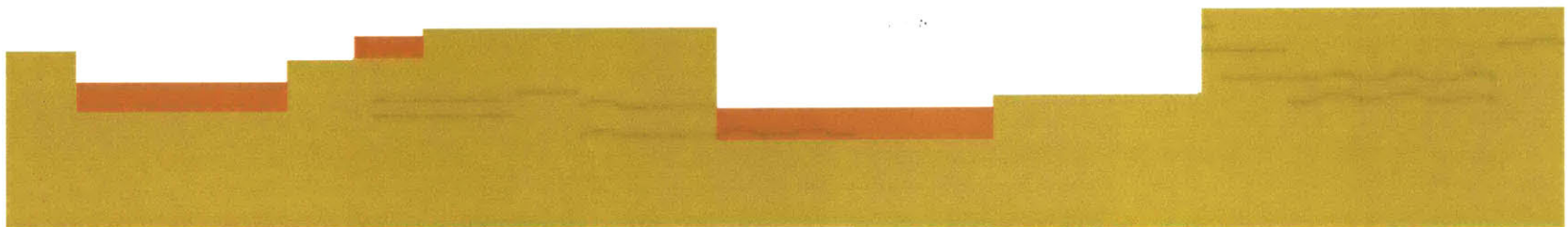
Design Guideline

The roof and cornice lines will be the same as the buildings on both sides of the in-fill site.



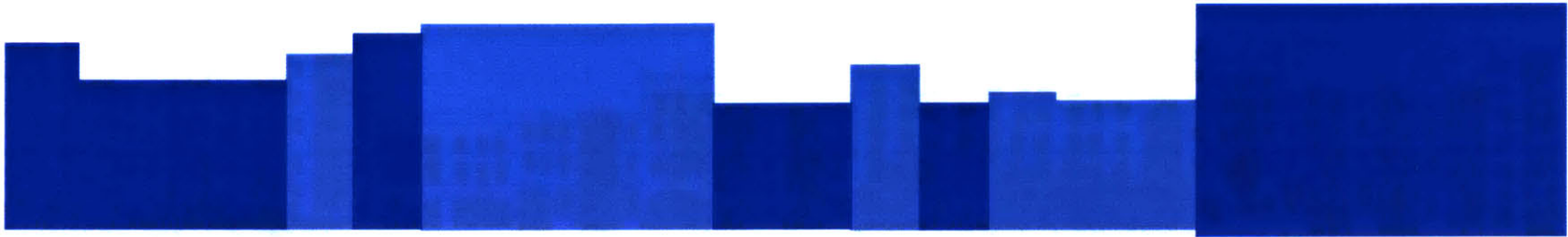
Layer 4 Ratio of Roof to Wall

The roof to wall ratio in this composition has three variations. The second building has a ratio of 1:5, the fourth 1:8, the sixth and eighth 1:4.



Design Guideline

The ratio of the roof to wall will be 1:4 (the same as the two neighboring buildings).



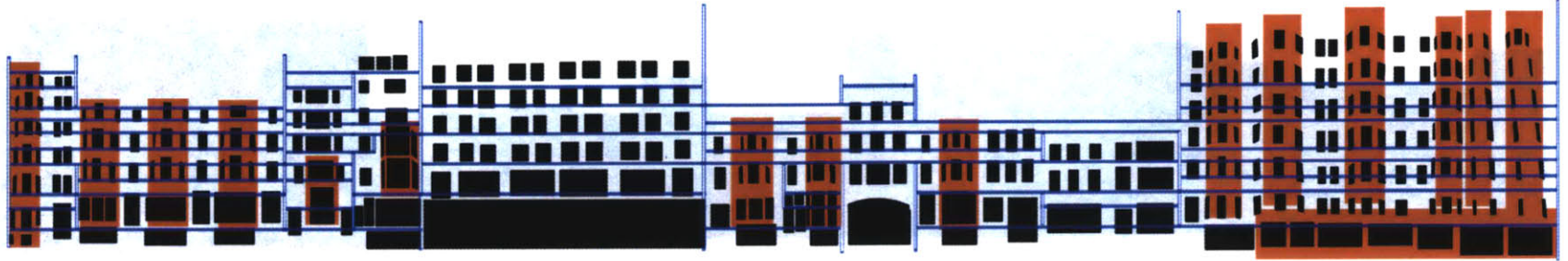
Layer 5 Materials of Construction

The composition has two color patterns and two types of material changes amongst the facades. The first two facades are red brick, the third is sandstone, fourth is brick, fifth is sandstone, sixth is brick, seventh is sandstone, eighth is red brick, ninth and tenth is sandstone, and the eleventh is red brick.



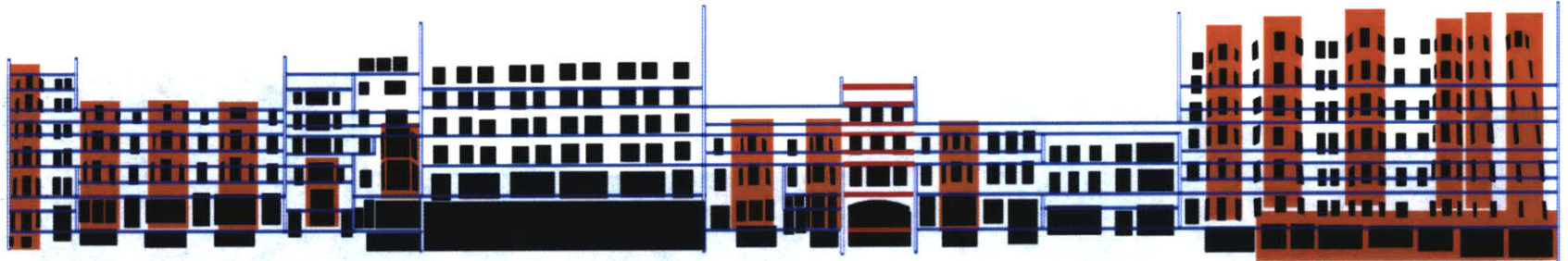
Design Guideline

The material of construction will be red brick (the same as the two neighboring buildings).



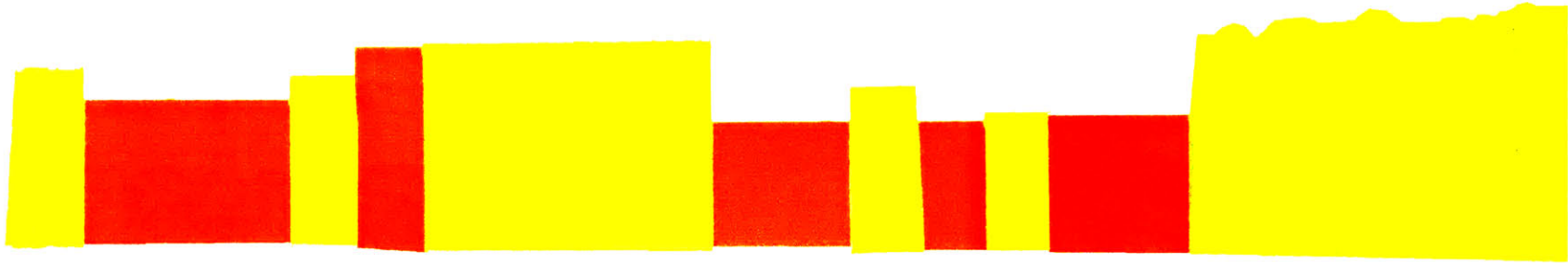
Layer 6 Ratio of Horizontal to Vertical Features

The horizontal features formed by the windows is stronger than the vertical features of the bays. The windows of the composition become stronger at points where the bay windows intersect. The windows in the bays emphasize the horizontal connection with the addition of windows in another dimension.



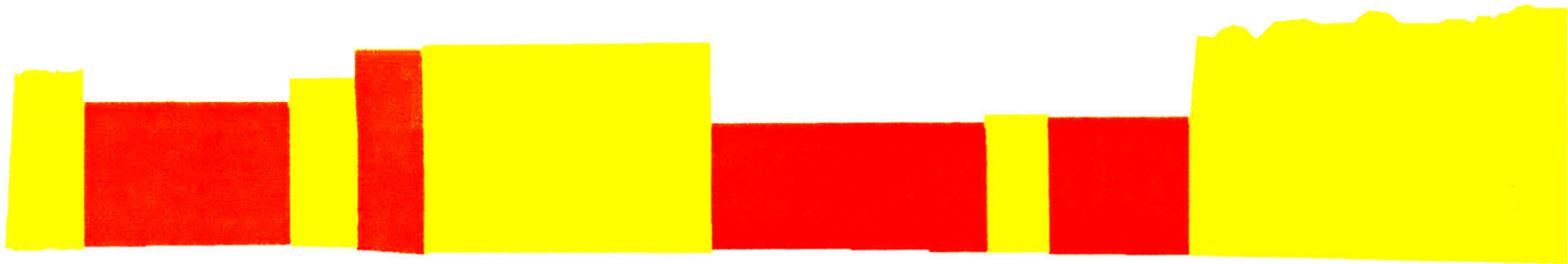
Design Guideline

The vertical features of this layer overstate the horizontal features. The new façade must establish a heavy horizontal design to counteract the vertical features within the composition and help establish a linear relationship.



Layer 7 Separation of Buildings

This composition is divided into eleven visually detached buildings. The separation of the buildings was apparent before this layer was analyzed, testifying to the individuality of the buildings.



Design Guideline

This layer is in need of an established relationship between the varying divisions of buildings. The design of the new building will respond to this significant separation of buildings in this layer by achieving a similar area for the façade as the neighboring building.



The pattern that was derived from superimposing the analytical layers



Design 7 achieved through my interpretation of the analytical layers



Facade within the existing context



The same pattern that was derived from superimposing the analytical layers



Design 8 achieved through another of my interpretations of the analytical layers



Facade within the existing context

CHAPTER IV: CONCLUSION

Using jazz improvisation as a metaphorical point of departure in this thesis was significant in the way I perceived the structure of streetscapes. In understanding the elements that contribute to the familiarity of a jazz song while allowing for improvisation I began to discover the analogies between the structure of a streetscape and the structure of a jazz tune and how familiarity and novelty play a role in each. In order to improvise a musician has to feel the rhythm and be familiar with the melody. Similar to designing streetscapes, a framework can be established through the understanding of the familiar at which point improvisation can occur achieving novelty in façade design.

Jazz improvisation inspired me to create a process of design that relies heavily on the structure of familiarity in order to achieve novel designs, although the specifics will vary from site to site as the character of the street varies; the process remains the same. Even within the one block separation of the sites along Newbury the character of the street changes so much that my analysis identified different contributing elements to the familiarity of the street.

The process of designing in-fill buildings that are new and dynamic, yet respectful and engaging of the context of the streetscape must begin with an identification of the familiar elements that contribute to the unification of the façade composition. Once these elements are identified they can be weighed for their visual contribution to the character and unification of the composition and improvised upon to achieve novel design solutions.

Findings

Elements that were easily perceived by me and occur throughout the composition are key in establishing the order of the street and contribution to the unification of individual buildings. Through my site visits as a pedestrian, I became aware of the significant familiarity of each composition and the ease at which they were perceived by me and possibly by other pedestrians.

Observation 1

The regular reoccurrence of an extruding element keeps the eye in motion.

The bay windows were the dominant reason my eyes continued moving in the horizontal direction across the entire composition. Through the rhythm of the bay windows, my eyes follow the horizontal pattern, jumping from one window to the next. Even when a significant distance or another building separates the bays, the rhythm is easily detectable.

Observation 2

To make the character of a streetscape distinct certain traits should be continuous throughout the composition, as for example, the material and its color. If the characteristic trait is only reoccurring, it should be oriented toward the pedestrian so that it is easily perceived.

There were several reoccurring elements of facades that establish the character of the streetscape (the materials used, mansard roofs, and extruding surfaces). But none are as easily perceived by my eye as the continuous use of materials and the bay windows, which dominated certain compositions.

Observation 3

The establishment of similar traits in the first two floors of a series of buildings is paramount to the pedestrian's perception of the street's character. After similar traits are established on these levels, variations can occur within them and at a greater extent on the upper levels.

As I walked down the street the first two floors are easiest seen in my periphery, while those that were higher are not as easily perceived at my eye level. They only become a main contributing element of the composition when they are viewed from the opposite side of the street.

Observation 4

A variation in size or proportion of an element within a composition can be successfully achieved while relating to the character if there is a relation to the established line of reference.

Through the location of the windows along the same regulating lines, the facades read as one composition, even when there are variations in the size and design of the windows.

Observation 5

The characteristic traits of the composition should be oriented more to the pedestrian, while any variations should be parallel to the street, in order to make the character easily perceived and more familiar to those walking by the façades.

The dimensions of the bay windows vary, having different heights and widths. The variations were easier to see in the elevation study than while walking the street because dominant bay windows keep my eyes moving forward. Also the width of the bays are oriented parallel to the street and their length is oriented to the passing pedestrian.

Observation 6

The distance that a form extrudes from the face of the façade is apparent as an accentuation of the element on the façade from a pedestrian's point of view.

When the distances that the bay windows extrude from the surface of the façade are similar they make an easy repetitive pattern to follow and maintain my attention.

Observation 7

Extruding rhythmic forms from the façade can maintain a pedestrian's attention, keeping the eye moving horizontally along the composition enough to allow for novel patterns without overpowering the melody.

Because the pedestrian's eye is constantly moving horizontally with the repetition of the bay windows, the spacing is barely noticed, and their width appears constant throughout the composition.

Observation 8

If the character is to be understated in the composition by minimizing its consistency, it needs to be located at the pedestrian's eye level where it can be experienced more quickly.

Regulating lines that were not consistent in a composition were located at eye level to exaggerate the consistency of the melody, which directs one's eye down the facades within the first glance.

Observation 9

Similarities in building forms can help maintain the character of the composition if a distinct element (such as bay windows) is not used throughout the composition.

The fact that buildings share relatively the same height and are not separated by smaller buildings was the main structuring element of a composition.

Observation 10

Material change does not disturb the familiarity of the composition if the color is in tune with the predominant color of the composition.

I rarely noticed a material change in facades as I traveled the street. It was not until I returned to the photographs of the site that the variations become evident. However, a difference in the color of the facades was noticed as I walked the streets.

Observation 11

The buildings on the ends of the composition are subject to closer scrutiny than any other buildings along the composition.

The only time I naturally looked up to take notice of my surroundings when I traveled through the street was when I was at the corner of an intersecting street, waiting to cross. It is at this point that the composition of the façade is most susceptible to conveying the pattern of the composition.

Observation 12

A cornice line can be used to create a visual relationship between the buildings without their necessarily being the same height.

I noticed the variations in the heights of the buildings while walking the street when there wasn't a continuous cornice line. The lack of any consistency amongst the cornice lines emphasized the differences in the heights of the buildings.

Observation 13

If the windows are to follow separate lines of relation, then the lack of relationship between them needs to be exaggerated to appear intentional.

If the windows are not far off alignment from each other, their lack of relationship looks accidental making the facades look random in their relation.

As an analytical tool, spending time at each site was key to my understanding of the pedestrian's perception of the façade. Analyzing the façades, as they are experienced, as successions of encounters through individual paths rather than one whole composition, assisted in my evaluation of the elements within the facades.

The façade analysis in Photoshop was most helpful in viewing the facades as a whole composition and in the analysis of individual layers. Through the façade analysis, I was able to see the patterns as they relate from building to building. Although the street is not experienced in this way (through what I like to call semi-elevation) it helped me weigh the contribution of the elements of design, as they are perceived in semi-elevation versus the perception of a pedestrian. This process of comparing and contrasting resulted in my understanding of what was easily perceived while walking down the street and what elements were not.

In looking back on my journal entries and comparing what I learned about each composition in comparison to the analysis of the semi-elevation in Photoshop I became increasingly aware of the importance of the perspective as a tool of design. It was through my understanding of the streetscape from my visits that I became familiar with the parts of the façade that were less likely to be noticed as a person walked down the streets and those parts which were emphasized through their orientation. Analysis of the site through visits was my first tool of discovery and a conscious decision to prevent me from discovering façade patterns too easily (identifying patterns through photographs took less time). After I began my photo analysis however, I did find myself going back and forth between the two, often noticing things I had missed in the photo analysis from my site visits and vice versa. The combination of the two contributed to my understanding of the elements and their

relationship within individual layers.

Dissecting the compositions into separate layers of significance allowed me the opportunity to understand the individual contributions of the elements of the facades to the unity of the composition as a whole, by first understanding their relevance to the contribution to the unity and character of the individual layer. Patterns became clear and evident in their relationship when they were previously complex and elusive.

This analytic view not only shows the strength of each contributing element to the design, but also identifies elements that contribute to the lack of unity within the composition. Each element had to be understood for its significance within the individual layer before I was able to understand its significance to the composition as a whole. This process began my familiarity of the composition, which led to the improvisation through design to achieve a sustainable amount of novelty.

Through analyzing the compositions in various layers, I was able to determine uncertainties I had about the contribution of elements within the entire façades. I found that the elements that contributed to the unification of one layer often contributed to the sense of discord that I experienced within another, unity being directly related to the rhythm (repetitive occurrence) of an element. After the individual elements were located through the analysis, it was my decision to use certain combinations of the layers in forming a design. The results of the design's novelty with respect to the entire composition was determined by the contribution of each layering of the design recommendations.

By formulating the guidelines through layers of analytical drawings, they were more susceptible to interpretation and less restrictive on my creative process. For the various guidelines can be valued individually by their layers and used as tools of design based on

the contribution of each layer to familiarity. Because we perceive elements differently, the combination of layers will vary from architect to architect, resulting in varying designs using the same guidelines. The guidelines can even be organized by city planners to form different combinations based on their contribution to the familiarity of the street, giving architects the opportunity to select various sets of recommendations.

Success and Failures

This thesis could have explored the many elements that contribute to the character of the streetscape outside of the façade. I would have enjoyed studying the relationship of the sidewalk widths, the design of the street, and the activity occurring along Newbury in respect to establishing familiarity within the streetscape. However, my time was limited and analyzing all of these elements would have taken several additional months.

Although this thesis does not investigate the other contributors to the character of a street, it does establish a process of analysis that is open to the exploration of other variables. Through this process it is easy to imagine a similar analysis occurring on the plan of a street. Dissecting the street plan into layers of familiarity and weighing the contribution of each layer would highlight those elements that were most significant in my perception of character and those which were less noticeable.

My understanding of the characteristic elements of the façade composition resulted in design guidelines that were used to facilitate novelty in design amongst streetscapes. The fact that the analytical layers can allow for the individual interpretation of the significance of each layer to familiarity, supports my notion that guidelines should not be used to stifle the creative expression of design along our streets, but to establish a coherent order that facilitates it.

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