

# The Urban Streetwall Redefined

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## INTRODUCTION

As reflected in current revisionist theories of urban design, the replacement of the early models of the Modern City now seems to be complete. The visions of Le Corbusier's *Ville Radieuse*, so influential for the development of the city over the 20th century has been replaced by a clear acceptance of the principles based in the historic city. The city of isolated figures constructed in a field of continuous space has been rejected in favor of the primacy of the defined urban street and plaza as the essential construct of spatial order.<sup>1</sup> Perhaps the most basic and accepted tenet of the current paradigm of city design is the necessity of forming a common setback of aligned building edges, i.e., a streetwall, which through its continuity and integrity establishes the spatial definition of the street as a fundamental concept of urban order.<sup>2</sup>

One must be careful, however, to simply accept that the re-emergence of the streetwall can in itself reclaim the spatial configuration of the historic city, or guarantee desirable urban qualities. During the 20th century radical changes in the economics of the land development and the emerging dominance of the highrise as the building block of the capitalist city has generated a density and vastly different street section which undermines the success of earlier urban patterns. Obviously, while a streetwall of 6-10 storey buildings may produce a desirable spatial proportion on a given street, the same street defined by 40-50 storey towers would be intolerable. Also, because of these same economic pressures, the edge of modern buildings tends to be flattened to its ultimate limit possible, a functional boundary only demarcating ownership and providing basic climatic and security enclosure so as to maximize every possible square foot of lease space within the property boundaries. This is best expressed by the manifestation of the curtain wall, whose minimal surface membrane achieved through the use of modern wall construction of the thinnest materials has allowed the exterior edge of the streetwall to practically coincide with the interior edge of the building envelope. Thus, the qualitative differences of the streetwall in terms of the relationship between the interior and exterior achieved

along, say, Park Avenue in New York below 40th Street (largely the result of development during the 19th century) and the same street between 42nd and 60th Street (essentially developed over the last 40 years) are so vast that they have little in common even though the definition of the street is maintained throughout.

Perhaps the more serious, and less discussed problem is the lack of theory and refinement behind the current implementation of the idea. The intention, as stated in most urban plans is generally a two-dimensional limit with little qualitative description of how the edge needs to be designed in a particular circumstance. The resulting edge, while defined, usually conveys little information about its potential expressive, or symbolic content, and even less about the qualitative nature of the experience of moving through the wall itself from exterior to interior spatial realms. The result is typically an abrupt shift of scale with little sense of transition or intended sequence. Finally, the legislation of the streetwall says little about the relationships that need to be established from building to building along the street in terms of alignment of building elements, materials, and surface treatment. This is due, once again, to the two-dimensionality and simplistic description of the intent, which implies little about how the edge should be articulated in the vertical dimension.<sup>3</sup>

Given this predicament, it still seems to be worthwhile to maintain the formation of the urban street, but within a far more elaborate notion of what the potential of the streetwall is, and how such a potential can be achieved in the Modern City. In developing a "theory" of the streetwall, I would suggest that it is necessary to understand in far more detail what the role of the street edge should be (i.e., how it should perform) and the various possibilities for design elaboration.<sup>4</sup> This paper attempts to examine the potential roles for the streetwall by analyzing historic and contemporary examples in order to generate an expanded range of edge conditions, or formal strategies. The essence of the theory behind these strategies will be based on the implication of thickening the streetwall into a zone of variable limits which can respond to a variety of needs and expressive implications unfulfilled within the two-dimensionality of the modern

wall.

The mediating condition between street and building has historically taken on a number of other roles that qualify the relationship between architecture and the city that go beyond pragmatic necessities. Such roles would include the following:

### 1. Transition

The physical condition that defines the experience of passing from outside to inside, or from public to private realms can be considered to be one of the most fundamental experiences in architecture. Rather than the sudden thrust from sidewalk into interior space as occurs in most modern buildings, the experience of entry can be conceived to be a transitional sequence through one or more spatial events that define the condition of threshold, or the "inbetween." The potential of the streetwall, in fact, is to offer within its depth a chance to mediate and perhaps express contrasting qualities of scale, light, and enclosure occurring between polar conditions. This is typified by most Renaissance palazzos fronting onto a public street. In Palladio's Palazzo Civica in Vicenza, for instance, the wall has been expressed as two separate surfaces: one first approaches the external layer defining the site boundary and is confronted with a neutral colonnade of a monumental, public scale which welcomes the visitor and allows the realms of the street and residence to graciously meet. As one passes through this filter, the scale changes to a series of punctured openings, which while still a rather giant order, attempt to relate to the stature of one's own body and demarcates possibilities of entry vs. exclusion.

More commonly, in residential development, transition is achieved by setting back the building wall from the property line to establish an open zone or landscaped strip which must be passed through prior to arriving at the front door. This is typically seen in the 19th century American streetscapes of attached housing in such places as Georgetown, Washington D.C.; Society Hill, Philadelphia; and throughout New York city. In most cases the setback allowed the development of a stair, or stoop leading up to a partially open or enclosed vestibule on the primary, piano nobile level, with the adjacent left over space used for either landscaping, a private entry court, a depressed basement light court, or merely an extension of the public sidewalk to the face of the building.

### 2. Internal Conditioning

Another role of the urban wall is to qualify the degree and type of relationship established between interior space and the street. By conceiving of the streetwall as a habitable zone rather than a constricted edge, there can be developed highly variable strategies of either: extending interior space to "meet" the street; constricting, or screening the view out or in; shading inside space from the sun, or forming an articulated space or habitable room within the zone. The use of the bay window as in Boston's Back Bay, or San Francisco, for

instance, suggests a swelling and reshaping of the streetwall, and can be seen as a device that allows the normal perpendicular view through an exterior window to be redirected diagonally so as to reframe and extend one's vista. Another reinterpretation of the wall as a kind of conditioning device is exemplified by the development of *brise soleil*, in which an additional layer has been inserted between the streetline and the internal membrane to protect the interior spaces from direct sunlight.

### 3. Narrative Content

All facades are capable of expressing content through the power of architectural language, establishing connections to the cultural characteristics of a particular place or time. These connections, or "clues" can be highly generalized, referring to the fundamental qualities of a region or population, or describe specific designations of function and program. An example of the former might be suggested by the repetitive, punched out windows of a series of buildings on the Rue de L'Opera in Paris, whose consistency and horizontal continuity affirms the absolute control of an autocratic bourgeoisie, as well as the establishment of a new collective bourgeoisie. Vertical transformations refer not only to formal implications relative to addressing the pedestrian, establishing scale, defining the vertical limit, etc., but also narrate a specific social class stratification of the times. Far more often, inconsistencies in fenestration are called for, which refer to unique conditions, or the reading of specific public institutions along the streetwall. In the Madonna del Sacro Cuore in the Piazza Navona, for instance, the streetwall is transformed by the addition of a thin layer whose openings conform to monumental proportions, precise symmetry, and conventional motifs that clearly designate the fact that it forms the front wall of a church, and clearly not a house, or other profane functions. Other additive possibilities can be achieved by the use of specific iconographic forms that are composed on the streetwall, either being pasted on the surface, or exposed through an opening within the wall.

Clearly, the stripped down, flattened state of the modern wall leaves little room for expressive content, other than the exigencies of exposure to light and air. But given the dematerialization of the modern wall, or, the tendency towards openness rather than closure, the content of the wall might be seen as the activity of the inhabitant inside exposed to public scrutiny. Rather than a symbolic, or indirect expression of culture, or function, we find that representation, and presentation become virtually the same condition compressed within the pictorial plane of the open streetwall.<sup>5</sup> Or, we might believe a more political argument referring to the symbolism of the open modern wall as breaking down not only the spatial limits between inside and outside, but supposedly the barrier between the public masses and a governmental elite, a conclusion recently drawn about Terragni's Casio del Fascio.<sup>6</sup> One would think, however, that there is room for a far wider realm of expression through the

incorporation of motif, symbol, and icon leading to new possibilities of ornamentation and figuration, which might more appropriately be read through the articulation of mass rather than surface de-materialization.

#### 4. Contextual Connections

If the streetwall of 19th century Bath or Paris is characterized by its consistent alignments of height, setback, material and fenestration rhythms, the evolution of the capitalist, market driven city after World War II presents quite another scene, whose incremental transformations result in inconsistencies, conflict, juxtaposition, if not out-and-out chaos. Thus, it would seem that a critical role for the streetwall is to make physical connections between disparate events, separated through temporal and stylistic dissociations. While this is difficult to achieve in the flattened surface of the setback line where all conflicting information vies for attention on the same pictorial surface, it is surely possible if allowed to occur in a more 3-dimensional setback condition. As an example: Le Corbusier's Maison Planeix on the Boulevard Massena on the first glance makes no pretensions to have anything to do with its surrounding context by its non-alignment of fenestration and being setback from the street setback line on either side; but when seen obliquely it becomes clear that the central projecting bay re-establishes a relationship to the adjacent apartment building both in terms of setback and alignment with the head of its third storey windows. A more recent example of multiple setback conditions occurs in the First of August storefront on Lexington Avenue, New York by George Ranalli, in which an additional facade layer is added which aligns to the existing first level projections, defers back to the dominant setback wall, and also defines the store entry.

#### REDEFINITION

If the streetwall is to fulfill these roles, it must be conceived in ways similar to the formal possibilities implied in the examples cited above. In other words, instead of the wall being compressed to the property line to form the thinnest possible surface whose role is to simply maximize the amount of internal space, it is proposed that the notion of the property "line" be conceived as a thickened zone, or mass that can generate variable relationships between internal and external space. It is this notion of separating out different conditions within this zone that allow the wall to perform multiple, and sometimes contradictory roles concerning the response to contextual influences, varying degrees of closure, privacy, and narrative content. Another way to understand the urban wall is that the external surface is only one side of a wall that is defined by another side, and thus, contains volume. These two sides may be only 8 inches apart or perhaps 8 feet apart and, the characteristics/expression of the external side is free to differ from the internal condition. The two sides can also be thought of as layers, or "linings"

which perform independently and are positioned at any number of possible locations within the wall zone.<sup>7</sup>

It is further suggested that the "thickening" of the wall zone, while based in design theory, can only be achieved if it can somehow be mandated, or at least encouraged through legislative means. Unfortunately, existing legislation concerning the urban wall in terms of setback, height, and the sky exposure plane is either too specific, i.e., mandates development to meet a single surface limit without appropriate exceptions, or, is too generic, and does not specify variable qualities or levels of performances to be mandated. Specific legislative strategies for establishing streetwall conditions will be addressed in future studies.

#### SETBACK WALL TYPOLOGY

##### Derivation

The four diagrams at the top (see Figure 1, Derivations) describe the simple adjustment of the normal streetwall condition to create the enlarged streetwall zone described above. The key transformation, (Diagram 2), is to simply change the position of the setback line from the normative property line to a position within the lot. This allows for different types of rules to be established for each portion of the lot: the area between the setback and the property line plays a role within a semi-public realm, and is highly legislated to encourage development to take on preferred forms; conversely, the area behind the setback line is within the private realm, and is allowed to be built to the total FAR with few limitations. An equally critical condition in describing the street wall zone is to initially conceive of it as a 3-dimensional construct rather than a 2-dimensional form of standard zoning legislation (Diagram 3). This enables far more specific concepts of design performance to be implemented beyond those limited to resolution in plan, such as describing entry conditions, vertical datums, and other types of articulation throughout the streetwall zone (Diagram 4).

#### STREETWALL TYPES

##### 1. Additive

The initial type of wall formation is based upon letting the streetwall zone be established as a void which can then be selectively filled by the addition of specific elements. These elements can be comprised of various "components," such as entry porches, steps, stoops, balconies, awnings, etc. which are read as discrete forms or objects articulated on the surface of the streetwall (Diagram 1). Or, spaces on the internal side of the streetwall can be extended, or stretched to meet the property line without losing the integrity of the wall plane (Diagram 2). One can also perceive the streetwall as a form of "armature," which allows other volumes such as configured public spaces, architectural screens, awnings, and other components to be supported in place within the streetwall

zone (Diagram 3). Finally, the zone can be largely filled, which attempts to re-establish the traditional streetwall edge at the property line and maximize the overall FAR, yet still maintain the articulation of the internal setback (Diagram 4). In all cases, there exists a clear differentiation between the displaced streetwall which maintains its readings as the primary defining edge between public and private realms, vs. the partial filling of the setback zone with articulated spaces and components.

## 2. Subtractive

In a subtractive strategy, the streetwall zone is partially defined by removing some of the block fabric from the property line to a prescribed limit set back from the property line. The streetwall zone only gets established after a process is initiated to reduce the mass of the block, rather than define the overall zone as a void to be filled. The differences are largely based on the extent of reduction and the relative placement of the resulting void. For instance, the void can be recessed below the existing ground plane, which allows light and air to penetrate a basement condition, as well as define a transitional zone between the street and building (Diagram 1). By removing portions of the zone from the top (Diagram 2), the implications of an internal datum is again defined, encouraging different types of scale and articulation of the streetwall zone vs. the overall mass of the block. Carving out portions of the lower zone, conversely, enables an inbetween, semi-public space to be defined, establishing a richer form of transition and entry (Diagram 3). Finally, it is possible to slice away variable portions of the streetwall zone to leave volumetric readings that express unique aspects of program or particular contextual demands (Diagram 4).

## 3. Layering

The concept of layering suggests that the street edge does not constitute a single limit, but rather can be conceived as two or more limits defined by variable degrees of closure and density. This allows for the street or property line to be spatially defined, but not necessarily form an absolute demarcation between inside and outside, or private and public space; rather, a kind of spatial "inbetween" emerges between the initial layer and the setback line. Within this layer can occur transitional entry conditions, balcony/portico extensions, porches, gardens, or other elements that enhance the street or the experience of entering the building.

Recessing the streetwall allows either single or multiple layers to be defined (Diagrams 1 and 2). A single layer tends to polarize the permeability of the property edge vs. the closure of the setback streetwall. Multiple layers have the advantage of articulating the streetwall, thus breaking up the

building mass and defining a pedestrian datum zone, as well as relate to more complex contextual influences. Solid/void layering (Diagram 3) suggests that the initial layer on the property line can be conceived as both solid and void, or programmed and transitional public space, resulting in a similar carved out condition as the subtractive strategy shown above. Finally, the "configured" layer (Diagram 4) suggests that a shaped zone can result in further separation from the mass behind the setback line, as well as repetitive external spaces serving interior volumes.

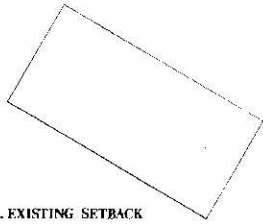
## 4. Context Relationships

Perhaps the most important implication of the setback streetwall zone is the ability to establish particular relationships to buildings on either side, while the volume at the back of the streetwall can independently maximize its developmental potential and conform primarily to internal requirements. The basic idea is exemplified above (Diagram 1) in which the height of the overall mass or wall detail of an adjacent building to carry over within the setback zone, while the mass of the residual block rises to a higher limit. If a similar setback zone is highly truncated (Diagram 2), the sidewalk is conversely widened to set up a logical entry condition into the block behind the setback line. It is also possible to treat the new building as an isolated structure, articulated from the context both in terms of height and setback, yet establish a relationship through the projection and/or alignment of a particular building element (Diagram 3). Finally, a similar relationship can be attained by subtracting a portion of the setback zone to "absorb" the massing of the adjacent building (Diagram 4).

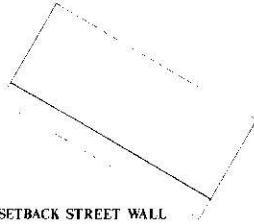
## CONCLUSION

The above study suggests that it is indeed possible to greatly expand the limits of accepted dogma relative to the alignment of the streetwall, and the definition of the urban street. Previous limitations of graphic description and theory have resulted in classroom exercises that are overly simplistic, and become "played out" prematurely. There are perhaps other accepted axioms in architecture that could stand a re-evaluation and be further developed to achieve richer and more multivalent applications, which might include notions relative to "axis", "transition", "spatial interpretation", the "room" and other fundamental theory. I would suggest that such a revisionist thinking about the fundamental constructs of architecture and the city are a part of a continuing evolution of our understanding of architecture, and constitute a possibility of "progress" within the continual cycling of style and fashion.

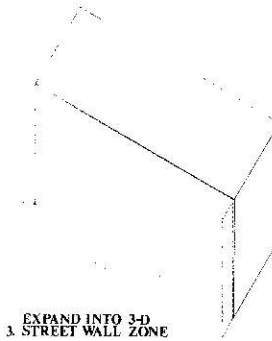
DERIVATION



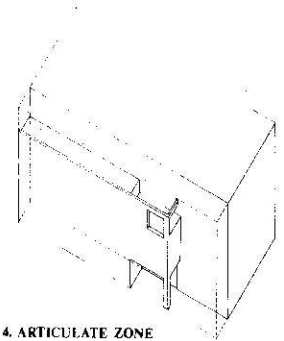
1. EXISTING SETBACK



2. SETBACK STREET WALL

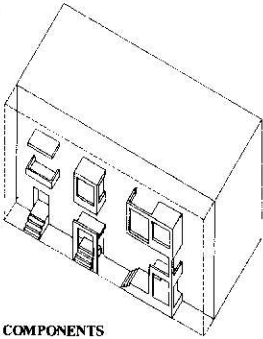


3. EXPAND INTO 3-D STREET WALL ZONE

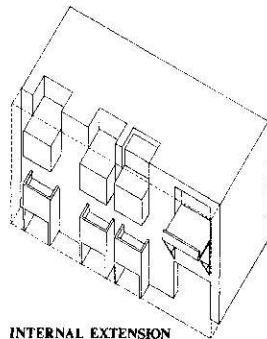


4. ARTICULATE ZONE

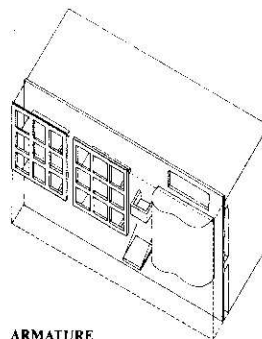
1. ADDITIVE



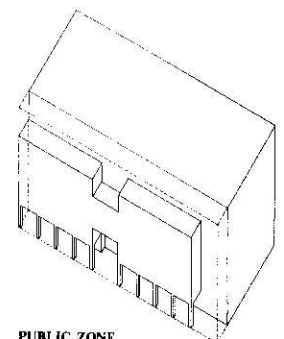
COMPONENTS



INTERNAL EXTENSION

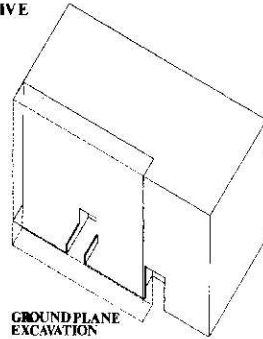


ARMATURE

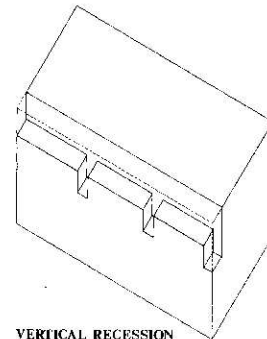


PUBLIC ZONE

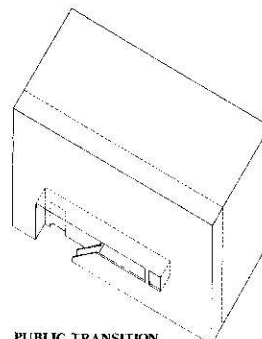
2. SUBTRACTIVE



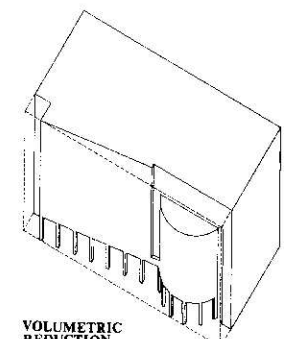
GROUND PLANE EXCAVATION



VERTICAL RECESSION

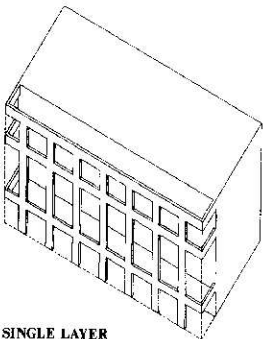


PUBLIC TRANSITION

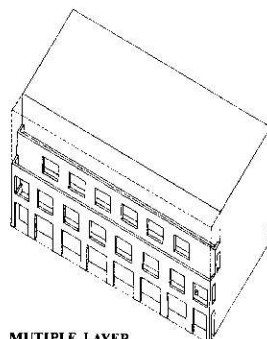


VOLUMETRIC REDUCTION

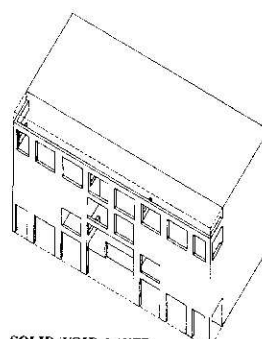
3. LAYERING



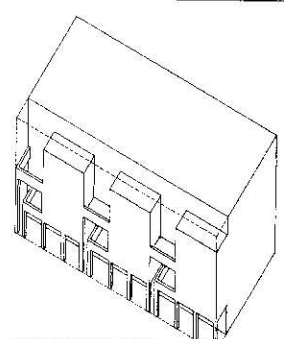
SINGLE LAYER



MUTIPLE LAYER

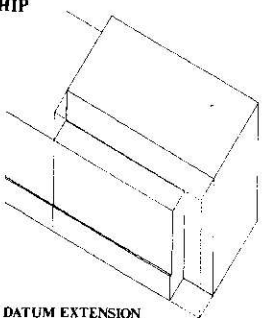


SOLID/VOID LAYER

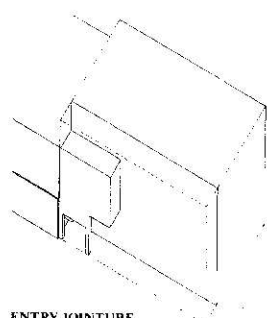


CONFIGURED LAYER

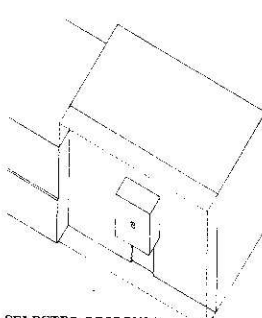
4. CONTEXT RELATIONSHIP



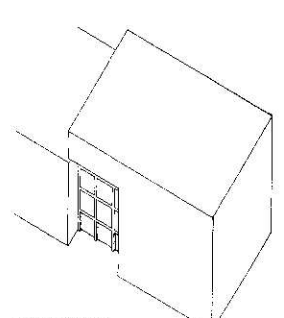
DATUM EXTENSION



ENTRY JOINTURE



SELECTED RESPONSE



ABSORPTION

## NOTES

1. Colin Rowe was one of the first critics to refute the formal breakdown of the Modern City and espouse theories of contextualism that re-examined the form of the historic city and the configuration of defined public space vs. the fragmentation of the Modern City. See Koetter/Rowe, *Collage City*, Cambridge: MIT Press, 1981; also, Robert Krier, *Urban Space*, New York: Rizzoli, 1979.
2. Perhaps the most eloquent description of the idea of the street is Louis Kahn's description of the street as "a room by agreement". See John Lobell, *Between Silence and Light*, Boulder: Shambhala, 1979, p.46.
3. An exception would be the urban design plans for Battery Park City by Cooper/Eckstut, Associates, which legislated a 2-storey masonry datum and upper level string course to interrelate residential buildings.
4. Some work in this area has been initiated by Andres Duany and Elizabeth Plater-Zyberk in terms of streetwall sectional criteria. See Krieger/Lennerty (ed.), *Towns and Town-Making Principles*, New York: Rizzoli, 1991; p 96-99.
5. One of the most potent examples of this condition is the open exposure of commodities for the "modern" home on display through the floor to ceiling windows of the original Design Research Building by Benjamin Thompson and Associates built in Cambridge, Mass.
6. Thomas Schumacher, *Surface and Symbol*, New York: Princeton Architectural Press, 1991.
7. Robert Venturi, *Complexity and Contradiction in Architecture*, New York: Museum of Modern Art, 1977.