The High Line is a unique and well-conceived public space in the Greenwich Village and Chelsea sections of Manhattan. The park was built on the overgrown, elevated tracks of a disused freight line – a piece of aging infrastructure, donated to New York City in segments by CSX Transportation, that had once provided rail access to the city’s now defunct West Side Piers. The High Line is an excellent example of an obsolete industrial relic that has been converted to a meaningful present-day use. Its success provides an interesting opportunity to examine the potential value of an underdeveloped area of urban design: the integration of an upper tier into our urban public spaces.

An upper tier system is not primarily about providing an escape for pedestrians being menaced by bicycles and taxicabs below. Rather it is about having an increased ease of access to infrastructure while also featuring a unique third dimensional perspective on the city. Added benefits include access to fresh air, sunshine, a breeze, and the joys of flora and fauna in a setting that doesn’t exist downstairs.

The purpose of this white paper is to promote the continued consideration of the upper tier as a value-added attribute of New York City real estate. Wisely planned and built to be resilient to even the most powerful storm systems, upper-tier structures can and will serve as examples for the development of other urban settings in cities and towns throughout the United States and around the world.

**Precedents**

Cities in Western countries have a long history of developing around important public spaces. Athens had the Agora. In Roman towns, the forum was traditionally a central gathering space. More recently, the English tradition established villages around central greens. Because of the permanence of land use patterns, public spaces were built in increments, over decades or even centuries. Originally, such spaces were reserved for town or city centers, and they also frequently served as both gathering places and centers of political power. As a result, such spaces have historically commanded a reverence that surpasses what might be expected from their immediate impacts through design or functionality.

Public spaces often evolve over time. An important example of a public space that has grown and changed over a very long period is the Piazza San Marco in Venice, Italy. Since the civic and religious spaces took their original forms, the Piazza has continued to develop and evolve for a period of more than a thousand years. Complementary to the main landmarks, architecturally distinct functions were tied together by the structures and the places formed between them.

As they do today, large public spaces have historically raised concerns about security, especially during events that bring about large assemblies. The High Line is no exception, and the methods for handling these matters have evolved to the point that they are often addressed very discretely today.

Thus, we have identified several possible direct antecedents to the High Line.

**Upper Tiers in NYC**

Examples of upper tier connections in New York City are found at locations such as Hunter College, Bloomingdales, New York Life, the James A. Farley United States Post Office, Credit Suisse and Grand Central Station, while upper tier (Piano Nobile) lobbies are found in the Hearst Tower, JPMorgan Chase, the Roosevelt Hotel, the Grand Hyatt and the World Financial Center.

A comprehensive upper tier bridge network, however, such as the one that has been constructed in Minneapolis, does not exist in New York City. The Minneapolis Pedestrian Master Plan includes a well-connected walkway system, safe streets and crossings, a pedestrian environment that fosters walking, a well-maintained pedestrian system, and a culture of walking. Perhaps the City of New York could encourage architects and developers to include upper tiers as logical and beneficial connection features in both new construction and renovation designs. Principles and ordinances pertaining to air rights and eminent domain could be reexamined and contemporized accordingly.

The **High Line**

The High Line was operational from 1934 until 1980, allowing for rail service deliveries and loadings at, and, in some cases, within buildings. Running from Gansevoort Street at the south end near 12th Street to 30th Street at the north, the High Line will run north to 34th Street when its third and final phase is opened to the public. Thus, it will be strategically positioned to embrace the yet to be developed Hudson Yards mixed use neighborhood that will be partially constructed over the Penn Station rail yards.

Upon examination, the redevelopment process of the High Line is complemented by lessons recently learned at Ground Zero. Perhaps it was the two-fold introduction of the Upper Tier Right-of-Way and the Piano Nobile (noble level) in Renaissance Italy that led to the concept of the design-enhancing upper tier. These architectural innovations became the signal for the development of an important vertical hierarchy and interconnectivity considerations within structures and between places. It was the second tier that became the prime activity level of the Italian Palazzo, a level more refined and removed from the noise and toil of the mandatory ground level service and servant functions. A primary reason for locating the main reception rooms on this upper tier was also for its finer views.

In Venice, the upper level offered a preferred position above the canals and away from the dampness and intrusion of the maritime activity. Venice placed great value on the connecting bridges between buildings and, in some cases, districts. Similarly, in Florence, we find the grand introduction of Vasari’s upper tier right-of-way passageway over the Ponte Vecchio, connecting the Uffizi and the Pitti Palace.

According to Amanda Burden, the Director of the New York City Department of City Planning, the price of apartments near the High Line had doubled since the park opened, and properties now command about $2000 per square foot. Ms. Burden also called the area “Architects’ Row,” since nearby buildings are the work of such great designers as Jean Nouvel, Annabelle Selldorf, Frank Gehry and Neil Denari.

Mayor Michael R. Bloomberg also considers the High Line to be an extremely positive addition to the City. In fact, he
proclaimed that preserving the High Line as a public park revitalized an entire section of the city. He estimates that it generated $2 billion in private investment surrounding the park.12 Due to this success, the park has led numerous cities to “rethink the value of old or abandoned infrastructure.”13 Included are San Francisco, Los Angeles, Chicago, St. Louis, and Philadelphia.

**Features & Issues**

There are several notable features that can help to give an upper tier its unique identity.

1. **Separation from Traffic:** One of the main advantages to an integrated upper tier for the movement of people is that real pedestrian safety can be achieved. Providing a quiet and safe place in the sun via vertical separation from traffic makes sense in Manhattan and other urban settings.

2. **Aesthetics:** Urban design features and upper tiers can be inviting and visual assets. Special urban materials and features that can be creatively integrated include:
   - Light transmitting structural glass
   - Lightweight carbon fiber tension cable
   - Hydroponic landscaping and integrated watering systems
   - Overhead structures that complement people movement with lighting
   - Urban, electronic signage
   - Open steel mesh space dividers.

3. **Security:** Opening connection points to buildings in proximity to an upper tier enhances the sense of mutual protection. Nonetheless, in urban settings, a security staff presence is essential. In places like Times Square, which is 24/7, a feeling of safety and security more commonly relates to crowd control and maintaining emergency and egress corridors through the space. Although not 24/7, the same can be said of the High Line when the park is heavily populated.

12 The High Line Isn’t Just a Sight to See; It’s Also an Economic Dynamo,” The New York Times, N.Y. / Region section, June 6, 2011.

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**The Future Hudson Yards & the High Line**

The palette of the upper tier of any urban design composition must follow in harmony or intentional contrast with the local urban aesthetics and that of the ground level and higher levels. The goals should be to create an urban place of quality and historical context that is well received by the majority of the public and satisfies the purposes for which the design is intended. The following palette characteristics must be considered:

- Form
- Color
- Texture
- Shade and Shadow
- Orientation & Focus
- Image & Profile

Successful aesthetics bring people to a place and encourage their extended use of its features.
4. **Accessibility**: Positioning convenient and functional access points for the public is important. Providing those having special access requirements with ramps and elevators is also an essential, legally-enforced design requirement. These features need to be successfully integrated into the activity pattern.

5. **Services Integration**: The upper tier requires sound and lighting systems, as well as signage systems. Food and refreshment kiosks, drinking water, and restroom facilities can be presented in imaginative ways, as added amenities.

6. **Sustainability**: Solar and wind energy generation and storm water control systems can be successfully integrated into the upper tier to minimize energy and landscape maintenance costs.

7. **Value Added**: Upper tiers can add value to the real estate properties either adjacent or in close proximity. As a case in point, the board and management of the Whitney Museum, an important cultural landmark, recognizes the High Line’s added value. The entire institution is planning a synergistic move from its uptown venue to a new 200,000 square foot location adjacent to the High Line in 2015. Renzo Piano, the building’s architect, stated, “Here, all at once, you have the water, the park, the powerful industrial structures and the exciting mix of people, brought together and focused by this new building and the experience of art.”

Adding an upper level gives pedestrians the opportunity to oversee the urban scene and to gain contextual vistas. It should be noted, however, that not all portions of nearby structures gain from the overview, as some will have new issues with greater screening and privacy requirements. These issues, however, can largely be overcome by proper design. Market rents and sales prices will adjust downwardly for living spaces that have privacy compromises or concerns.

Another concern, as illustrated at the Gateway Center in Newark, NJ, upper tier connections can discourage or prevent access to the street level. Thus, strategies to help ensure that the street level is integrated into upper tiers are important.

**Conclusion**

The High Line has attained its own notable public identity, adding to and stimulating the urban discourse. With this in mind, perhaps a series of focused upper tier plans should be created within the City’s neighborhoods to stimulate new possibilities. The potential of other elevated spaces could be examined on a metropolis-wide basis. Reinterpreted from historic urban precedents and merged with the New York City fabric, promising upper tier opportunities may well be identified in all five boroughs.

The lessons learned from the upper tier can bring additional works of urban design to New York City and provide valuable inspirations for cities and towns worldwide. Upper tiers are an important urban design feature and present the potential to enhance urban settings with rich overlays.