The Highline Competition

Submission for Arch 384: Competitions Essay Component

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August 22, 2005

Building Type: Elevated Park

Materials: Wood Deck, Earth, Gardens, Steel, Glass

Precedents:

- Foreign Office Architects: Yokohama Terminal
- Field Operations: Fresh Kills Lifescape
- MVRDV Dutch Pavilion, Expo 2000 Hanover, Germany

Designing The Highline was a competition to design a1.5 mile (2.41 kilometres) park on top of a disused elevated rail structure in New York City. The High Line was built in the 1930's in Chelsea and the Meat Packing district on Manhattan's West Side as part of one of New York City's largest investments in transportation infrastructure, called the West Side Improvement Project. The highline went out of service over 20 years ago and has since been overrun with nature to become a lush urban wilderness, nearly seven acres in total. A group called the Friends of the Highline organized the competition with the idea of saving the elevated structure for a public park. The competition entry entitled "Surge" was awarded a citation by the jurors, exhibited in Grand Central Station and published in a pamphlet entitled "Designing the High Line".

Surge was based on the idea of saving and enhancing the existing micro-ecosystem that had evolved on the deck of the highline by making a second deck above the ecosystem to host the linear park. The second deck was an undulating wooden structure that wove along the highline connecting existing buildings at their floor plates with new connections and

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amenities. The undulating deck was punctuated by islands of ecosystem that were continuously connected underneath the deck. Programming for the scheme was based on an analysis of the existing neighbourhood based on 6 categories that were used to create themed linkages across the highline and back into the neighbourhood. The cultural cross-fertilization was essential to keeping the elevated park active and urban. Finally the proposal envisioned a typology of adjacent building renovation and reuse to urbanize the edge of the highline at the second level.

As the existing High Line structure is a unique place to propose a public park direct precedents were difficult to identify. Research discovered only a few elevated linear parks none of which were designed in any formal way. None of those linear parks was remotely as long or extensive as the High Line. Another unique factor of the highline was its mid block location which created back yard frontage along its length.

The three precedents that influenced the Surge proposal come from different typologies. Foreign Office Architects' Yokohama Terminal was influential in the choice of an undulating topology. Field Operations' Fresh Kills Lifescape influenced the ecosystem design and MVRDV's Dutch Pavilion at Expo 2000 in Hanover was a good precedent for stacked landscape forms.

Foreign Office Architects won a design competition in 1995 for The Yokohama International Port Terminal. Two central concepts define the FOA scheme. The circulation was based on a topological landscape connecting desire lines on different levels of the terminal. Supporting this undulating topology is an

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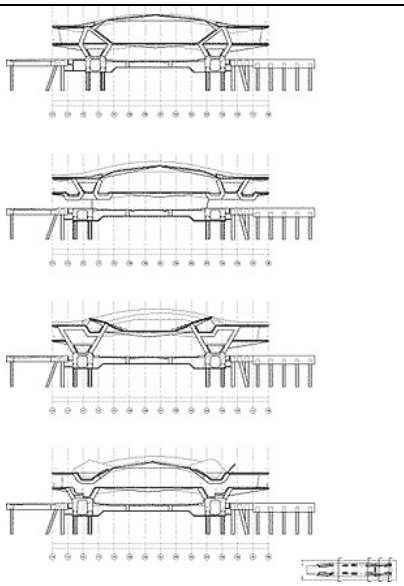
Foreign Office Architects: Yokohama Terminal

innovative structural framework that uses a series of interlocking steel plates that are formed and joined in ways that permit a more natural internal flow of people and freight instead of using conventional horizontal and vertical support beams. This non-orthogonal framing design integrates the building's use with its structure and appearance. The appearance of the steel plate structure is unified with hand-rail, glazing systems and most importantly a continuous wood-deck flooring system. The wood deck system is the principal organizing feature of this artificial landscape and connects differentiated spaces along the length of the terminal.[1]

The most striking images of the terminal are the roofscape which is a public space that connects to the open space system of the Yokohama waterfront and offers amenity acts as a focal point and belvedere. The structure pulls the observer out onto its surface more like a bridge or highway than a building. This landscape frustrates any further architectural comparisons because it is difficult to define a primary façade or identity beyond the topological surface.[2]

Surge – a proposal for the High Line draws reference from the Yokohama Terminal scheme. The use of an undulating wooden deck unifies the linear park and allows for subtle level changes between existing floorplates and connections. The topological surface inflects the hyper-rational railway bed and creates and artificial nature more akin to a typical park. The structural system for the wooden deck is similar to the FOA scheme in its modularity but is comprised of a much lighter truss system as it relies on the heavy structure of the original railway bed.



FOA: Yokohama Terminal

"The architecture is nothing more than a point of passage, an instrument of change of velocity between modes of transportation or aspects of nature."
Toyo Ito[6]

FOA: Yokohama Terminal

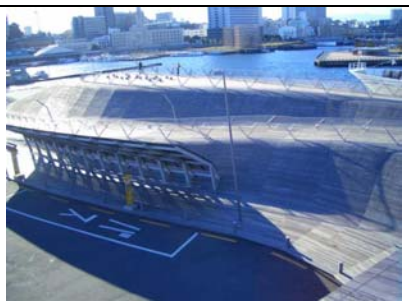
FOA: Yokohama Terminal

The second precedent for the Surge proposal is Field Operations' Fresh Kills Lifescape proposal. The Fresh Kills competition was held in 2001 to create a new park on the site of a former land fill site in New York city. The site is 995 acres (402 hectares) and is composed of six landfill mounds, which range in height from 90 feet to 225 feet. Most of the site, an area nearly equal to Central Park, has never been filled with garbage or was filled more than twenty years ago. These flatter areas and open waterways host many things from precisely engineered infrastructure to intact wetland and wildlife habitats.

Field Operations' master plan is called "Lifescape" and is composed of three layers: program, habitat and circulation. These themes act as guides to structure a diversity of cultural, athletic and educational programs interspersed with an extensive ecological restoration that is linked with a series of pedestrian, bicycle and equestrian paths.

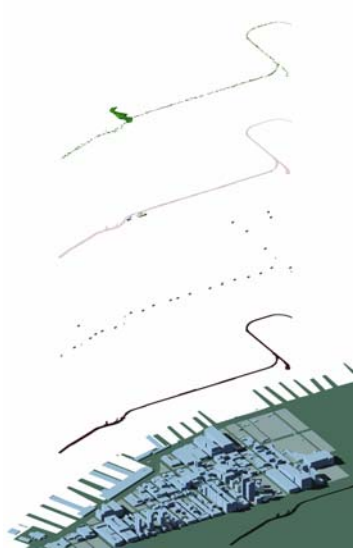
The central concept for Lifescape is based on an evolving landscape that cannot be pre-designed. The vision for the park is that it would be not be constructed but rather "grown", as in seeding, cultivating, propagating and evolving. There is no final design plan but a design of a process of transformation.

There are three basic structuring elements to the transformation process. Strip Cropping, Habitat Making, and Earthworks. The evolution begins with making soils with strip cropping. Using agricultural practice the landfills are planted in alternating strips that follow the contours of the site. The strips are are tilled over



FOA: Yokohama Terminal

Field Operations': Lifescape



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every year which helps control erosion and increases the organic content and water retention of the soils. [3]

Once soils are improved the Habitat Making stage can begin. Habitats are created by seeding native plant communities along the same strips as the cropping. Building on the range of moisture conditions created by the strips, slope angles and landfill infrastructure constraints, a variety of native woodland communities are banded up the slopes.

The final element to the evolution process is the Earthwork and Landform buildings. The design program is accommodated in earthwork buildings that are as much as possible contiguous with the landscape. The earthworks are created from materials and process that make use landform technologies such as bulkheads, berms, swales, gabion, rip rap, erosion fabrics and marine fences.[4]

The Surge proposal for the High Line draws heavily on the Lifescape scheme in its ecosystem design and process. The existing ecosystem on the High Line is a new and emerging ecosystem. As it is elevated, disconnected from other ecosystems and in an urban environment the High Line will never have a self-sustaining ecosystem. The Surge scheme establishes artificial ecosystems that are sustained by low-tech hydrology and allowed to evolve over time. Whereas the Lifescape project uses strip cropping as its structural planting system, Surge uses a patch and corridor scheme. The patch and corridor scheme allows for islands of mini-ecosystems that are connected along the linear length of the High Line under the new deck.

Field Operations': Lifescape

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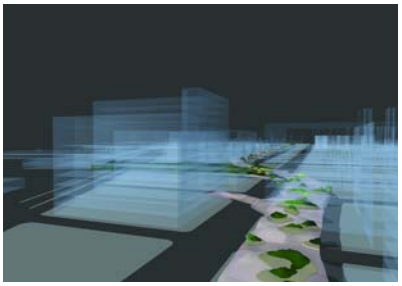

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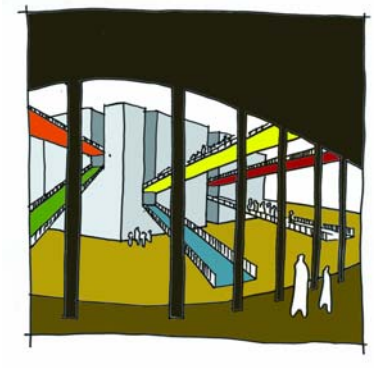
Similar to Lifescape, Surge proposes a program on the High Line that intersperses nature, culture, recreation, and public spaces. The program in both schemes results in a synthetic, integrative, artificial nature, emergent and engineered.

A third precedent for Surge is MVRDV's Dutch Pavilion for Expo 2000 in Hanover. The Dutch Pavillion is the first built example of a stacked open space system. Predicated by MVRDV's studies on density and urbanization in the Netherlands, the Dutch Pavilion questioned what role nature will have in a denser future. Contemporary thinkers like Bill McKibbon and Alex Mclean have called for the end of nature by pointing out that our human effect such as global warming, pollution, and other large scale effects have changed even seemingly pristine natural places in unnatural ways.

By stacking nature on many levels the pavilion exposes our artificial nature in an unmistakable way and demonstrates how technology can support and sustain nature in new ways. At the same time the building functions as a multi-level park creating more open space within its site area. Even within the relatively small pavilion MVRDV have created a small model of an ecosystem. The water system is exposed on all levels as it makes its way through different landscapes only to be recycled and pumped up at the bottom by the windmills on the roof.[5]

Whereas MVRDV's pavilion standing isolated in the middle of an exposition has the feeling of something kitschy, literal and unnerving, the High Line is an existing and integral piece of urban elevation. The pre-existing infrastructure of the railway



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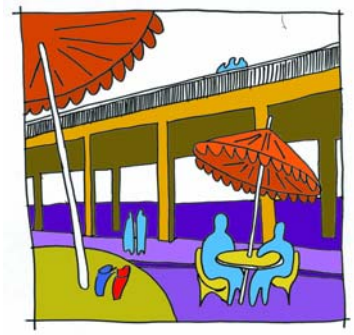
MVRDV. Dutch Pavillion.



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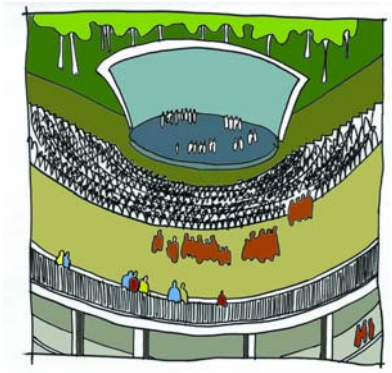
bed combined with the direct adjacency of a dense urban fabric allow for the creation of real connections which could make the elevated park function within an urban context.

Surge takes the precedents of MVRDV's stacked landscapes, Field Operations ecological design and Foreign Office's undulating connective topology combined with the High Line's existing industrial urban structure to create a new kind of linear park for a dense urbanity.

MVRDV. Dutch Pavillion.



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[1] Foreign Office Architects. **Phylogenesis foa's ark: foreign office architects**

[2] De Landa , Manuel. **Verb: Architecture Boogazine**

[3] Corner , James. “Lifescape – Fresh Kills Parkland”.

[4] **New York’s New Parkland Fresh Kills Factsheet**.

[5] **MVRDV 1991-2002**. El Croquis 86+111. El Croquis. 2003.

[6] Toyo Ito, "Yokohama International Port Terminal, Architecture without Exteriors,"