EXPANDING THE FIELD:
A NEW PROTOTYPE FOR STADIUM DESIGN

BY

JOSEPH JOHN BLECHA

THESIS
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Advisers:

Professor Gale Fulton
Professor Therese Tierney
Professor David Hays
Abstract

This thesis proposes an alternative development model and new landscape typology by synthesizing the forms and programs of a contemporary National Football League (NFL) stadium and a large park onto a single site. The resulting landscape is a public domain that is open year round and features a plethora of programmed and unprogrammed opportunities resulting in distributed utility across spatial and temporal scales. The added utility activation reflects today’s multifaceted societal challenges. The public demands spaces that accommodate a diverse range of leisure and commercial preferences while minimizing the economic and environmental costs. The destination for the hybrid park is a 320 acre site in Industry, California and a direct response to the growing interest to relocate an NFL team to the greater Los Angeles area and Majestic Realty’s 2009 stadium proposal.

The design strategy samples scholar Julia Czerniak’s large park resiliency and legibility concepts, generalist design tactics, and total design theory. These, along with site context, existing topography, and current NFL stadium and large park landscape land typology quantities, formulate the park’s ultimate form and program. The resulting design is a single site that translates multi-modal transportation solutions through vast restored natural plant communities to a stadium structure respectful of built and naturalistic context.

The implications of this work are its strategic process and experimental products. The process of optimizing utility by synthesizing different programs is applicable to any space making project. The product of a stadium and a large park on the Industry site creates a new utilitarian landscape category and a precedent for future developers in Los Angeles and beyond.
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Part I - Introduction

“The stadium will become the most important building any community can own, and if it is used wisely, it will be the most useful urban planning tool a city can possess.”

– Rod Sheard

The Stadium: Architecture for the New Global Culture
Introduction

In Los Angeles, the saying is that residents are an hour freeway ride away from everything they could possibly need from beautiful natural preservations, international dining flavor, world-class entertainment, or premier cultural spots. The reality is that the automobile infrastructure exists for such a sixty minute radius, but contemporary financial and environmental truths restrain the assumption. Time wasted in traffic, $4.00 per gallon gasoline, and cyclical economic slowdowns impede the enjoyment of the ultimate destination. But what if the destination could be within reach without crippling personal budgets at the gas pump or hours idling on California freeways? Taking the question further, what if the destinations could be located within a single, diverse site? This thesis work suggests it is possible through the creation of Generation Park. Named for its ability to fashion experiences as diverse as the population it serves and for its ecological longevity, Generation Park features Frontier Field, a new prototype for a multi-purpose National Football League (NFL) stadium. With Frontier Field, Los Angeles can attract an NFL franchise and give local fans a stake in America’s most popular sport (Corso 2011). By featuring a large-scale stadium within public large park setting, spatial and programmatic utility is optimized on a site accessible via public and private transportation options.

The thesis project integrates the two programs, each with their distinctive characteristics and forms, as Generation Park in Industry, California, about twenty-five miles east of downtown Los Angeles. The new park is a unique regional attraction for Southern California. Set within sprawling suburbia and commercial zones, Generation Park synthesizes public domain types and addresses their absence on the single 600 acre site. The park features Frontier Field nestled within the site’s topography and built environment, promotes automobile transportation
alternatives, and re-establishes native Southern California plant communities. By developing only the southern-most 320 acres, Generation Park leaves land available to accommodate needs of the future, such as buildings, transportation infrastructure, expansion of plant habitats, or other unforeseen programs.

Both the stadium and the large park typologies are functional, public landscapes. However, their differences dwarf their similarities as each exists to support a specific utility model. The NFL stadium is based on consumption of resources. Complicated networks of electricity, water, sewage, food, and logistics interweave throughout a few hundred accommodating acres across structural, transportation, and open space typologies. Those infrastructures culminate at the stadium structure, an epicenter of steel, concrete, PVC conduit, and copper wires. The built environment functions to support the basic temporary needs of tens of thousands of people for those prime football events each year. While the stadium does not exclusively host football, the number of major events is relatively low compared to the amount of deserted, idle time.

The contemporary large park, as defined by Ryerson University (Toronto) Urban and Regional Planning professor Nina-Marie Lister, exceeds 500 acres and demands special attention and analysis compared to local or community parks (Lister 2007, 35). Its model directly opposes the NFL stadium in that it intends to produce natural or new landscapes. This generative model restores or maintains vegetative and animal habitats and offers flexible programs for social gatherings and interactions. While still a complex web of intertwined infrastructures, the networks include both constructed and natural elements. Those spaces include transportation, programmed and unprogrammed space, and naturalized areas. In addition, the boundary condition between site and surrounding context has numerous variables
and interfaces, more so than a smaller neighborhood park. According to Julia Czerniak, editor of *Large Parks*, the definitive resource for contemporary large park theories, one of the key elements to contemporary large parks is resiliency, the “ability of a system to adjust in the face of challenging conditions” (Czerniak 2007, 216). The legibility of the landscape, the ability for the user to ascertain the meaning of place and design causality, is the second primary goal. Those elements come together to shape the experience of the park as a seemingly natural setting with flexible program to accommodate the needs of its public audience.

**Thesis statement**

The process begins by analyzing contemporary NFL stadium and large park landscapes to formulate programmatic strategies. The final product combines those strategies with site contextual constraints and a generalist design approach through total design theory. The added utility activation reflects today’s multifaceted societal challenges. The public demands spaces that accommodate a diverse range of leisure and commercial preferences while minimizing the economic and environmental costs. Generation Park meets those expectations and establishes a new landscape category. By integrating the complex landscape types of the NFL stadium and the large park, the thesis research, strategies, and design of Generation Park offers a tangible model for what landscape urbanist Pierre Belanger calls “the new paradigm of longevity and performance” (Belanger 2009, 92).
Part II - Interpretations

“Research allows the architectural object to escape the bounds of an autonomous formalism, redefining space as an intelligent landscape.”

– Helen Furjan
“Design/Research: Notes on a Manifesto”
Los Angeles Football Stadium Proposal

The selection of Los Angeles as the destination for this project stems from the fact that the greater Los Angeles region has not had a football team since after the 1994 season. As the second-largest media and population center in the United States, this market anomaly is ripe for developers and the NFL to make huge profits and satisfy potential fans with a team in the most popular sport in America. Developer Ed Roski and Majestic Realty have attempted to do just that with a proposed football stadium for the Industry site which they hope will attract an NFL team back to Los Angeles and capture all the associated profits.

After the 1994 football season, both of Los Angeles’ NFL teams relocated to new cities; the Raiders returned to Oakland, where they had previously played from 1960 to 1981, and the Rams headed east to St. Louis. Since 1994 several attempts have been made to attract an NFL football team back to Los Angeles and to build a new stadium (Markazi 2011). For example in 1999, the NFL approved an expansion franchise to Los Angeles, but specific agreements were never reached and the team landed in Houston. Various other ventures have since fallen through, but a promising new proposal surfaced in September 2009 when developer Edward Roski and his company, Majestic Realty, proposed a football stadium east of Los Angeles, California. In October 2009, Governor Arnold Schwarzenegger passed a bill that approved the site for construction and by December of that year, Majestic representative Jon Semcken III assured that his company would lure an existing NFL team to Los Angeles by the 2011 season (Archibald 2009). Upon that agreement, Majestic would then have the green light to build their proposed $800 million privately-funded stadium. This brash statement made headlines as did the proposal, published at http://www.losangelesfootballstadium.com.
Roski employed the talents of international architects Aedas Sport to envision his prototype (Figure 2.1). The design calls for the stadium in Industry, California, centrally located twenty minutes east of Los Angeles’ city center, fifteen minutes north of Anaheim, and within an hour of almost sixteen million people (Location 2010). The 600 acre site is nestled north of California Highways 57 and 60 and is void of any previous structural development (Figure 2.2). At present, the site has unkempt vegetation and stages materials for nearby commercial and industrial businesses.

Majestic Realty calls for a stadium shell largely built below existing grade into earthen berms to save construction material costs. Two Environmental Impact Reports have been approved for the site in 2004 and 2008. In addition, LEED certification is a priority, a first for a National Football League stadium (Environment 2010). Those responses are good public relations in the contemporary economic climate as well as being both pragmatic and innovative.
The design calls for economic promotions and growth through new retail, restaurant, and entertainment establishments surrounding the structure. The pleasant, year-round weather of Los Angeles will draw people to such a suburban destination, in addition to the ample public space and attractions. The site has accommodations for 25,000 personal vehicles and the Industry Metro stop is a short walk away (Location 2010). As for the stadium itself, two concentric pedestrian paths circulate around the 75,000 total seats, 12,500 club seats, and 176 private suites (Stadium 2010). Large banks of grassland and vegetation weave between the concrete infrastructures. For football, soccer, and large concert events, the proposal boasts of better views for all fans regardless of location (Figure 2.3).
Roski also touts the positive economic impact the massive development will bring. He estimates the creation of over 18,000 jobs will result in over $762 million generated for the surrounding region. This increase over the current idle land parcel will produce $21.2 million in new state and local tax revenue (Economic Impact 2010). In attempting to create a new stadium model for Los Angeles and the NFL, Roski’s project is flashy and attractive, but a critical analysis of the images and lack of transparency reveals entry points for improvement.

First, the site glitters with professionally doctored renderings that illustrate a utopia of mass consumption and excess masked under titles such as “Environment” and “Reignite the Passion” (Los Angeles Football Stadium 2010). The claims of environmental sustainability are simply headlines with little published research or methods to support its achievement. For instance, while enveloping the entire bowl stadium within the existing rocky topography may save on steel, glass, and concrete costs, what is the added cost of excavation? The renderings depict a vast green community rich with palms, evergreens, and sprawling turf sections, but Southern California has been facing water shortages for years and palm trees are not drought tolerant (Stockdale et al 2010).
It is difficult to compare aerial photographs of the current site conditions to the interventions proposed and see how the project can call itself “green” except as the color of the plants upon installation. True “green” projects would emphasize more sustainable techniques, such as planting native vegetation acclimated to the seasonal drought conditions. Those types of plants do not require additional water sources and thrive in high relief topography. Also featured prominently in some of the gallery images are impeccable views of the seemingly nearby downtown Los Angeles skyline and crystal-clear, snowcapped mountain ranges (Image & Video Showcase 2010). The truth is that Southern California smog does not allow for such breathtaking views offsite and the downtown skyline is twenty-five miles away (Figures 2.4 and 2.5).

Figure 2.4 - Unrealistic View of Downtown Los Angeles

Figure 2.5 - Creation of Paradise Setting at Stadium
The immediate context is also misrepresented, as images show nothing but rolling green plains outside the site where mixed residential, light industrial, and commercial zones are intact in a semi-arid climate (Figures 2.6 and 2.7). In addition, the job creation that Roski claims are largely temporary construction jobs, not the type of sustainable or far-reaching growth desired with such a large financial investment. In addition, a majority of the permanent jobs are for concession workers, maintenance staff, and cleaning crews. “None of them are jobs that the mayor hugs his kids and says, ‘I hope you can get one of those jobs someday,’” says Cleveland union activist John Ryan, who worked with Cleveland organizers while the NFL’s Browns built their new stadium in 1997 (deMause et al 2008, 36).

Culturally, the proposal adds little to a Los Angeles landscape already full of largely commercial destinations, such as Disneyland and Hollywood. Corporate sponsorships and advertisements glow in numerous renderings and the fictional users are flooded with contrived
SITE ANALYSIS: IMMEDIATE CONTEXT

Figure 2.7 - Site Analysis - Immediate Context
sensory stimulants. The site model is rooted in personal transportation as the sole means of travel. While the personal automobile remains deeply embedded in the American and Southern California way of life, alternative transportation solutions already exist nearby but not developed further. The Industry Metro Station is less than a mile away, but there is no new effort to bring the established rail system within the site bounds. In fact the stadium’s proposal advertises 25,000 parking spots as if they are a strong selling point and a means to legitimize the proposal (Stadium 2010).

The proposal also makes light of attracting an existing NFL team to Los Angeles. As numerous league officials have stated, the NFL is not interested in adding expansion teams (Markazi 2011), so Roski will have to move a team from a struggling market, such as Minneapolis or Jacksonville. Over the course of the project, begun in 2009, press releases and interviews with Roski and other high-ranking Majesty employees have simply stated or assumed that moving a team to Los Angeles would be easy. The nation’s second largest media and population center has been without a professional team since 1994, and the demand for professional football’s return is high (Wagner 2009). Those superficial statements have not been supported by particular details or proposals to any individual NFL team. With missed deadlines mounting and no agreements on the horizon over two years after Semcken’s prediction, drawing a team to Los Angeles is a taller order than originally perceived.

In the end, the images are purely positive marketing postulations. The representations are attractive and entertaining but misleading. In spite of the proposal’s highest intentions to produce a great new experience and revenue generator for both Majesty Realty and the Southern California region, a critical reading of the information makes plain the many inherent flaws. As a new stadium and park typology, Generation Park also promises the same economic
opportunity, but also offers a variety of ecological functions and attractions. The model suggests alternatives to the seas of parking lots and the isolated stadium structure to create a new regional, environmental, and cultural destination in Southern California.

Industry, CA Site Analysis

The Los Angeles Metropolitan area spreads across 4,850 square miles and contains an estimated 17.6 million people (Population Estimates 2007). In an area rich with regional and national attractions such as the Pacific Ocean beachfront and Disneyland, Generation Park adds new elements to the Los Angeles landscape. The central location draws fans waiting for over fifteen years to watch professional football in Los Angeles (Figure 2.8). Frontier Field can host other large events such as concerts, festivals, and theater events that appeal to thousands of people. In addition to any large-scale event, the naturalized park setting appeals to urban dwellers searching for an active outdoor experience year-round. Those experiences offer a unique attraction that Disneyland and Downtown Los Angeles cannot match.

Personal automobile is currently the most convenient means of arriving to the site. Connecting the citizens from Malibu to the north, Long Beach to the south, and San Bernardino to the east is an expansive network of state and federal freeways that stretch more than 6,000 linear miles (Highways in Urban California, 2000 2001). The Generation Park site lies immediately north of the intersection of California Highways 57 and 60 (Figures 2.9 and 2.10). The convergence of the two creates a massive corridor of up to ten lanes of vehicular traffic. The Grand Avenue exit is the primary access point from the highways. While the highways connect the various regional nodes, the traffic stress is worse in Los Angeles than any other metro area in the country (Urban Mobility Report, 2010). Within a mile of the site, the Metro
Figure 2.8 - Site Analysis - Regional Context
Figure 2.9 - Site Analysis - Imagery + Map
Figure 2.10 - Site Analysis - Imagery
Purple / Riverside Line stops at the Industry station (Figure 2.11). With room for 1000 cars in the attached parking lot, the Industry station is one of seven Riverside Line stops west bound towards Union Station in downtown Los Angeles. Current operation is limited to weekdays only with an average of 5,000 daily riders (Metrolink Trains 2010).

Figure 2.11 - Existing Los Angeles Metro Infrastructure
The topographic relief is over 600 feet on site (Figures 2.12 and 2.13).

The lowest areas are along the southern edge of the site where a channelized branch of the Los Angeles River borders Highways 57 and 60. The existing conditions are rolling hills void of formal development. Low-growing sage scrub and isolated trees are the only vegetation of note. The Los Angeles County Fire Department deems the site, even with limited plant life, a high risk zone for wildfires (FHSZ Maps 2007). Wildfires are a constant burden to the outlying areas of the semi-arid Southern California region. Winds can gust up to 70 miles per hour and long periods of drought create the perfect conditions for drought. Los Angeles County receives on average only 15 inches of rain per year, with most occurring during the winter months. The area surrounding Generation Park is mostly suburban, but other high relief areas without development are also classified as high or very high risk for wildfires (Figure 2.14).
Measures to reduce fire risks across landscapes include fuel breaks, inclusion of emergency access roads, proper vegetation selection, and clear navigational signage (California Department of Forestry and Fire Protection 1993). Fuel breaks are areas of cleared land with no or limited vegetation. The recommended widths span up to 300 feet for high and very high risk areas (California Department of Forestry and Fire Protection 1993). While most native plants are well suited to the site’s drought and soil conditions, manmade and natural wildfires occur regardless of their proximity to large population centers, such as the 2003 fires around San Diego and the 2007 fires in Santa Barbara. As much a part as propagation, wildfire disturbances are essential to the development of the plant diversity on site (Rundel et al 2005, 7). However, wildfires are an imminent threat to urban development and human safety.

Los Angeles County alone represents the twelfth-largest economy in the world (Rundel
et al 2005, 283). This tremendous development has had a devastating effect on the native vegetation. Where coastal dunes, sage scrub, chaparral, grasslands, and woodlands once mixed according to soil and topographic conditions, single family homes, highways, and strip malls have risen. Approximately 25% of the more than 2,000 native plant species are deemed rare, endangered, or restricted (Rundel et al 2005, 276). Although efforts have been taken to maintain state-protected lands, such as the nearby Angeles National Forest, an important balance must be struck between conservation and economic development.
Part III - Framework

“design [is] believed to be the element that unifie[s] the departments of architecture, landscape architecture, and urbanism”

– Mark Wigley

“Whatever Happened to Total Design?”
NFL Stadium Landscapes

The NFL stadium landscape falls woefully short of a balance between conservation and economic development. This consumptive landscape type begins with a tremendous upfront capital requirement. For example, at a cost of $455 million in 2006, the University of Phoenix Stadium requires no further argument for maximizing utility and accommodations of the space. This huge investment attracts vast attention and demands widespread returns in the form of large events and high number of occupancy days. While it is impractical to set a single target number of events or occupancy days per year for all stadiums, design development considers alternatives beyond the NFL team’s ten home games per year. If exclusively formulated for NFL games, football-only structures are vacant more times than not.

Economic factors, such as the project’s budget and existing transportation systems, can place constraints on the structure’s capacity to hold events. Natural issues, such as precipitation and seasonal weather patterns, also require adaptation. Even cultural factors like population and local interests limit the types of events a multi-use structure hosts. However, contemporary stadiums deliver value for such expensive economical investments beyond NFL football dates. In times of economic downturn and an increasing call for fiscal responsibility, developers are finding additional events to host throughout the year. The process of multiple event hosting is now commonplace in stadium planning (Sheard 2001, 37). Events such as large banquets, corporate meetings, other professional games, minor league or college sporting contests, trade shows, and concerts and performances increase the facility’s usage. Those require additional spaces that may not be planned for a football-only facility. Independent catering kitchens, storage space for tables and chairs, alternative field arrangements, and audio-video equipment are examples of such infrastructures. Complementary services, such as a hotel, commercial
outlets, offices, and year-round restaurants, can also increase the stadium’s occupancy days (John et al 2007, 102).

At the University of Phoenix Stadium (no programmatic affiliation with the online University of Phoenix beyond the title sponsorship) different seating configurations are available for football, basketball, soccer, concerts, marching band competitions, trade shows, rodeos, high school graduations, motorsport rallies, and corporate events. As a result, the stadium hosted 91 events in the first 110 days after opening (University of Phoenix Stadium 2010). Those primary and secondary events generate revenue for the stadium, provide work for the over 3,000 support staff and participants, market the structure’s accommodations for future occasions, and, most importantly, justify the millions of dollars spent on construction and maintenance of the facility and surrounding campus.

While the initial high rate of occupancy has since decreased, Eisenman Architects designed the University of Phoenix Stadium as a facilitator for as many events and experiences as possible. Hosting business conferences, trade shows, and monster truck rallies further justifies the stadium as a setting for more than just football contests. The resulting direct and indirect economic growth helps to justify the $455 million construction investment, as well as parallel the large park resiliency criteria. However, the legibility as a singular landscape falls considerably short. The stadium structure, although inspired by a native Arizona barrel cactus, is a metallic island trapped in a desert field. The surrounding asphalt parking lots immediately isolates the building further. The University of Phoenix Stadium, despite its vast programs, is foreign to its landscape and natural context.
Large Parks Landscapes

In contrast to NFL stadium landscapes, today’s ecological and generative large park landscapes display both resiliency and legibility. As an established park style, the large park nevertheless has traditional and contemporary forms. In contrast to long established urban landmarks like Forest Park in St. Louis or Central Park in New York, ecological and functional aesthetics govern today’s large parks, such as the designs of Fresh Kills in Staten Island and Downsview Park in Toronto. Olmsted’s extensive site grading and program placements in Central Park created the desired scenery. Although achieved through networks of trees, rock outcroppings, and rolling terrain, three elements associated as natural, Central Park’s aesthetic embraces the resource consumption and artificial scenery model that is typical of contemporary NFL stadiums. The importance of Central Park is not in question, as Olmsted strived for an “unconscious or indirect recreation” in which individuals could enjoy the unscripted outdoors and scheduled activities (Beveridge et al 1995, 35). This functional duality is the link between the eighteenth and nineteenth-century urban park and the contemporary ecological large park. Recently park designs, like Fresh Kills and Downsview Park, have sparked new thoughts in the urban design community. By satisfying the demands of an urban population today, supporting the ecological interventions on site, and being able to fulfill the needs of the future, those parks demonstrate their essential roles through legibility and resilience (Czerniak 2007, 215).

Legibility is interpreted in the sense that the users and community at-large must be able to identify the value in the park and its program, thereby justifying its costs. Increased public communication, often through open design charrettes, satisfies the demand for transparency. The challenge for the designer is balancing human opinions and requirements while
acknowledging the inherent natural processes and capacities on site (McHarg 1992, 79). Such processes shape the park’s form and program; however legibility requires completion before the dozer levels the slope, concrete is poured, or the first native tree is replanted.

Resilience also addresses economic value, but over a longer time period. Plant communities and animal habitats cannot simply restore or establish themselves over the course of the construction process. The park’s ability to adapt and grow into a natural environment creates an additional layer of longevity to the design. Resiliency also addressed the call for large parks to adapt to changing social and cultural norms as well. This type of program is not simply placed on site, but rather cultivated, rooted, and adjusted to its reception and usage. Resilient design is formatted through an understanding and adoption of existing networks and infrastructures.

An example of formal legibility and resilience is the 2006 plan proposed for Fresh Kills Park in Staten Island, New York. The Fresh Kills plan, called ‘Lifescape’ by designer James Corner/Field Operations, exposes numerous functions and connections of a quintessential urban large park. As the master plan begins, “Lifescape is both a place and a process.” (Field Operations 2006, 6) At the end of the project’s construction, estimated to stretch across several decades, Fresh Kills will have transformed what was the nation’s largest landfill as well as the impromptu rubble from the September 11th, 2001 terrorist attacks into an ecological landmark for the greater region of metropolitan New York City. Prescribed program blends with open space across the 2300 acres to create landscapes of recreation, relaxation, and socialization, similar to Central Park. However, the underlying topography is shaped by decades of human refuse and the recent deposit of debris from the World Trade Centers. The inclusion of the unfortunate and unexpected tons of steel and concrete from lower Manhattan illustrates the
park’s mission as a dynamic working system that is able to accommodate unforeseen demands.

**Design Process Precedents**

The logic of resilience and legibility suggests a design strategy that relates natural and constructed infrastructures on a systems scale. Such systems included in a large park, like natural habitat ranges or highway grids, extend beyond a site’s spatial limitations. Under that framework the designer understands the regional or national networks and applies them through the site as form and program. The ability to think in broad terms is a worthy exercise for improving the design and functionality of complex landscapes like Generation Park. Mark Wigley, dean of Columbia University’s Graduate School of Architecture, Planning, and Preservation, discusses a total design model that considers far reaching project scope with a single, focused concept on site. The two thoughts concern different scales, but Wigley argues that “at the nexus of the explosion of architecture is an implosion in which every detail of a domestic space is supposedly governed by a single idea” (Wigley 1998, 2). The governing idea, therefore, informs each design decision and results in a product that is of greater value than the sum of its parts. The cohesion across design scales leads to a unified concept, program, and functionality, which parallels the same argument for resilience and legibility in large parks.

This strategic envisioning requires a generalist rather than a specialist perspective (Figure 3.1). With an outward focus and systematic scale, the generalist design approach synthesizes the major concepts of total design theory and large park legibility and resiliency definitions. An exemplary result from generalist thoughts is exploring consequences and developing new solutions, as exemplified by the turfgrass installation at Eisenman Architect’s University of Phoenix Stadium in Glendale, Arizona (Gannon 2008, 103). Through the design
process, the Arizona Cardinals expressed their preference for a natural playing surface, but also desired shade protection for their fans and players from the harsh desert sun. Eisenman’s solution was to install the turf on a motorized three-foot tall tray allowing for movement indoors to outdoors so the grass can receive maximum sunlight on non-event days (Figure 3.2).
On game days, the tray is slid into the enclosed stadium that shelters attendees from harsh climatic elements. This final product is more than just a solution that fills the client’s demands; it also creates an innovative precedent. The sliding turf shelf’s merit is greater than the sum of its components. It creates variable experiences, adjusts to dynamic demands, and speaks to the value of intelligent design practices.

Eisenman’s collaboration with the Glendale City Council, Arizona Cardinals organization, structural engineers, and horticulturalists illustrates how communication with a single vocabulary can lead to an innovative result. Working laterally across professional boundaries manifest benefits not only in the final product, but also in an altered design process and a shift in design values. Design formulation and production may no longer be grounded in accepted constraints or ideas, but rather in a projective response to existing conditions. Michael Speaks, dean of the College of Design at the University of Kentucky, argues that, “the most innovative of these new practices are thus more concerned with the ‘plausible truths’ generated through prototyping than with the received ‘truths’ of theory or philosophy” (Speaks 2007, 214). Those new “truths” are leveraged to develop a landscape, building, or any other designed object or space that furthers the innovation that designers seek with each new project. If not, as Speaks concludes, “design is simply a matter of completing a problem without adding anything new” (Speaks 2007, 216).

The projects in noted architect and critic Aaron Betsky’s book, Landscrapers, transcend architectural, engineering, and landscape architectural bounds thereby illustrating Speaks’ statements. The book opens with the statement that “Buildings replace the land. That is architecture’s original sin” (Betsky 2002, 5). In the featured projects’ response, designers venture into spatial realms that blur the structure with the land. For example, Renzo Piano set
the Punta Nave Building into a steep cliff shadowing the Mediterranean Sea in Italy (Betsky 2002, 55). The series of enclosed tiers use existing landscape features for interior walls and supports (Figure 3.3).

Mecanoo’s Central Library for Delft Technical University in the Netherlands incorporates vast grass planes that smoothly rise and form a green roof variation over the library beneath (Betsky 2002, 109). The difference between this green roof and a contemporary urban green roof is that the roof is fully visible to the public and the sprawling lawn and walkway invites people to use it for unprogrammed activities (Figure 3.4).

Those exemplary projects represent a shift in process, aesthetic, and final product towards a transdisciplinary approach that adds value or appeal to projects. The Punta Nave Building and Central Library confirm Jon Kolko’s argument that “synthesis reveals a cohesion and sense of continuity; synthesis indicates a push towards organization, reduction, and clarity” (Kolko 2009, 15).
According to Kolko, executive director of design strategy at Thinkiv and founder of the Austin Center for Design, the readily apparent synthesis of ecological and human program in those instances helps to make sense of the design, echoing Wigley’s total design message. Such measures across the built environment are also in greatest demand today according to Daniel Pink, New York Times best-selling author on the evolving work world. “The big picture and, crossing boundaries, being able to combine disparate pieces into an interesting new whole” is the core of design intelligence and transdisciplinary thought (Pink 2006, 66).
“Through efforts of data manipulation, organization, pruning, and filtering, designers produce information and knowledge.”

– Jon Kolko

“Abductive Thinking and Sensemaking: The Drivers of Design Synthesis”
The Generation Park design applies resiliency and legibility concepts, total design theory, generalist design tactics, and experimental design solutions to combine the consumptive NFL stadium and generative large park landscapes. Overlapping architectural, landscape, and restorative ecology ideals, the method and products aim to establish new knowledge that cannot be labeled as a disciplinary design. Through such transdisciplinary projects, architects, landscape architects, engineers, and other professions create works that advance the utility of the built environment.

**NFL Stadium + Large Park Landscape Analysis**

From a survey of seven current NFL stadium and large park sites, architectural, transportation, open, and naturalistic space typologies connect the generative and consumptive landscape classifications (Figures 4.1 and 4.2). Built structures and traditional networks, such as drainage pipes and impervious surfaces, that furnish explicit programs and destinations describe the architectural space typology. Transportation space includes pathways, parking lots, and mass transit elements that connect destinations and provide a means to move throughout the site. Open space allows for indeterminate program and configuration as well as an inherent level of social gathering, both scheduled and impromptu. The naturalistic space typology provides for the existing and reestablished natural environment. People experience those areas passively as observers (Figure 4.3). The seven sites for each diagram are selected to form a representative cross-section of NFL stadium and large park landscapes. Location, acreage, urban or rural context, climate, and date completed are the primary selection factors. The totals are then added and averaged to reach the totals describing the state of the NFL stadium or large park, respectively, and applied to the Generation Park site.
Figure 4.1 - Strategies - NFL Stadium Survey
STRATEGIES:
LARGE PARK SURVEY

Figure 4.2 - Strategies - Large Parks Survey
**Generative - (Adj) -**
growing or producing natural or new landscapes

**Consumptive - (Adj) -**
using or absorbing the landscape for a specific program

**Naturalistic Space -**
where the natural environment thrives and the experience focuses on observation

**Open Space -**
where flexible program grants numerous options for gathering and socialization

**Transportation Space -**
where pathways, parking lots, and mass transit connect destinations and provide recreational trails

**Architectural Space -**
where built structures furnish program and destination

**NFL Stadium Landscape Survey:**
- 53% Generative
- 35% Open Space
- 12% Transportation Space

**Large Parks Landscape Survey:**
- 46% Naturalistic
- 29% Open Space
- 21% Transportation Space
- 4% Architectural Space

Figure 4.3 - Generative - Consumptive Landscape Typologies
Research Strategies

The research continues into developing strategies toward the blending of consumptive and generative landscapes. Initial simple iterations of the four spatial typologies explore and extract conclusions and guidelines that ultimately inform the design (Figure 4.4). Ultimately, one plan combines the efforts into a model that best reflects the final design conclusions (Figure 4.5). This site plan abstraction, in conjunction with the surrounding City of Industry land use, serves as the tool for redistributing the structural, transportation, open, and naturalistic

DESIGN STRATEGIES: ITERATIONS + EXPLORATIONS

Figure 4.4 - Strategies - Iterations + Explorations
DESIGN STRATEGIES:
CONCLUSIONS + GUIDELINES

- generative - consumptive contrast
  - naturalistic | architectural space - juxtapose opposites of space typology spectrum
  - transportation | open space - two typologies are interchangeable in crowded events for parking and pedestrian movement;
    open space program is more flexible for non-event settings

- optimize spatial utility
  - transportation space | connectivity - roads, rails, + pathways serve to efficiently move traffic through and throughout site
  - promenade | gathering space - public area that serves as the nexus of leisure, commercial, + hospitality space year-round
  - stadium | public transit - architectural space serves as a regional hub for light rail transportation

- relationships to site context
  - blend any existing boundary conditions into the park design; account for the immediate established economy and landscape
  - southern california | wildfire risks - open + transportation spaces networked to double as a fire break
  - access | options - disperse site traffic to reduce congestion in any singular area

- ecological design principles
  - establish native plant communities that can thrive for generations with minimal maintenance requirements + water consumptions
  - create different seasonal interest areas to provide year-round attraction

- structure - topography
  - balance architectural elements within existing topography to create unique forms + reduce construction grading
  - avoid steep slopes for the transportation pathways + networks

- master plan - space typologies
  - develop layout plan in conjunction with spatial typology acreages from overlay of NFL stadium landscape survey + large park landscape survey
  - organize relationships through the above conclusions + guidelines

DESIGN STRATEGIES SOLUTION

Figure 4.5 - Strategies - Conclusions + Guidelines
**DESIGN STRATEGIES:**

**DESIGN FORMATION**

- **design strategies solution**
  - result of design iterations + conclusions; a starting point for master plan layout

- **organizational grid**
  - 100 LF x 100 LF squares visualize the 320 acre site into quantifiable divisions of space

- **site context**
  - reflects the surrounding land uses and adds further guidelines for spatial typology distribution

- **topographical map**
  - displays the site relief in 20 LF intervals for proper distribution of spatial typologies according to design strategies

- **roadway + open space**
  - light industrial + commercial
  - residential
  - highway

*Figure 4.6 - Strategies - Design Formation*
DESIGN STRATEGIES:
SPATIAL TYPOLOGY DISTRIBUTION

large park survey
- 46% naturalistic space
- 29% open space
- 21% transportation space
- 4% architectural space

distribution

layered abstraction
- topography, contextual, nfl stadium survey, +
  large park survey combined
- overlap results in eight new spatial topographies
- acreage analyzed + aligned according to
  strategy conclusions + guidelines to
  form final typology distribution

nation football league stadium survey
- 53% open space
- 35% transportation space
- 12% architectural space

distribution

final typology distribution
- 141 acres of naturalistic + open space
- 33 acres of naturalistic + transportation space
- 11 acres of naturalistic + architectural space
- 56 acres of open space
- 26 acres of open + transportation space
- 20 acres of transportation space
- 13 acres of transportation + architectural space
- 20 acres of architectural space

Figure 4.7 - Strategies - Spatial Typology Distribution
A direct overlay of the new NFL stadium and large park diagrams completes the synthesis process. The hybridization results in eight typologies instead of four, thereby describing unique programmatic and formal opportunities (Figure 4.8).

Figure 4.8 - Strategies - Summary
This plan is the basis for site design through which specific program and form respond to the eight types of spaces and their established quantities. The eight typologies form structure, path, and space systems that are interwoven through the site (Figure 4.9). In the structural classification, naturalistic + architectural space is 3% of the total area with forms like outdoor performance space and park maintenance buildings. Transportation + architectural space is 4% with train stations, central transportation hub, and the commercial promenade. Architectural space is 6% with the stadium and related facilities. The paths group includes naturalistic + transportation with 10% of the total. This group includes park trails, hiking trails, and drainage lines. Open + transportation space comprises 8% with wide game day paths and firebreaks and permanent open-air parking. Transportation is the final path typology, with 6% including roadways, railways, and right-of-ways. Spaces is the final group, composed of naturalistic + open space, 44% of the total, where the restored native plant communities will be established. Finally, open space is 18% with game and event parking and flexible unprogrammed areas. The eight new spatial typologies mix throughout Generation Park and allow for an eclectic variety of experiences.
SITE DESIGN:
SPATIAL TYPOLOGIES

STRUCTURES

naturalistic + architectural

transportation + architectural

ARCHITECTURAL

PATHS

naturalistic + transportation

open + transportation

transportation

SPACES

naturalistic + open

open

Figure 4.9 - Strategies - Spatial Typologies
Part V - Products

“Design – that is, utility enhanced by significance”

– Daniel Pink

A Whole New Mind
Site Plan

The master rendering and sections manifest each of the eight spatial typologies and show how disbursed the different programs are on a site and immediate scale (Figures 5.1 and 5.2). The fusion of the NFL stadium and large park programs includes numerous year-round events and experiences (Figures 5.3 to 5.11). Through those events, as simple as a walk through restored chaparral or as intensive as a professional football game, the site exemplifies its value as a year-round asset. The program of the park is large enough that an vast amount of different scenarios can play out at the any time (Figures 5.12 and 5.13).

For example in Figure 5.13, in the fall football season, a typical day includes numerous experiences and events. At 9am, during the week or weekend, people commute to their ultimate locations, perhaps to the tailgate lots. At 12noon, tailgating commences while a family can watch a performance in the outdoor theatre. At 3pm, most of the spatial utility focuses about Frontier Field and the football game. At 6pm, the crowd disperses via the highways or railways, but fans can still linger to socialize or dine. At 9pm, the bar scene at the promenade prepares for the upcoming late night business.

For a utility comparison in the winter season, still blessed with pleasant weather, Generation Park still thrives with visitors and activities. At 9am, local joggers get their morning exercise with the unique ability to see native sage scrub, grasslands, or dunes on a single trail. At 12noon, businessmen gather at a conference at the promenade’s hospitality facilities. At 3pm, an after-school conservation club meets on the south end of the park while a high school track team uses the expansive paths at the north. At 6pm, the seasonal tailgate lots host a local farmer’s market. To finish the day, at 9pm a couple celebrates an anniversary or group of friends gather to reunite at one of the many restaurant options.
Figure 5.2 - Typology Sections
Figure 5.3 - Master Site Rendering Typology Index
Figure 5.4 - Spatial Typology - Naturalistic + Open
Spatial Typology: Naturalistic + Transportation

Figure 5.5 - Spatial Typology - Naturalistic + Transportation
SPATIAL TYPOLOGY:
NATURALISTIC + ARCHITECTURAL

Figure 5.6 - Spatial Typology - Naturalistic + Architectural
SPATIAL TYPOLOGY: OPEN

Figure 5.7 - Spatial Typology - Open
Figure 5.8 - Spatial Typology - Open + Transportation
Figure 5.9 - Spatial Typology - Transportation
Figure 5.10 - Spatial Typology - Transportation + Architectural
Figure 5.11 - Spatial Typology - Architectural
Figure 5.12 - Seasonal Utility - Spring + Summer
Figure 5.13 - Seasonal Utility - Fall + Winter
**Stadium Structure**

Frontier Field reduces construction and excavation expenses by responding to the existing conditions of the site (Figure 5.14). By using higher topographic conditions to the north and east, those respective built faces are low and unassuming. A large public pavilion encompasses the northeastern exterior corner, open for both game day and non-game day congregating. While the north and east stadium sections conform to their topographical context, the south and west portion of the structures rises abruptly from the landscape according to the surrounding built context. Three-story rectilinear factories delineate the site’s boundary to the immediate west of the stadium. The rectilinear structure is repeated in the form of the central transportation hub (Figure 5.15). Personal vehicles, buses, and trains, both moving and stationary, converge at the hub, which provides one destination for intermodal transfers and transportation options (Figures 5.16 and 5.17).
Figure 5.14 - Stadium Typology Sections A-A' and B-B'

STADIUM DESIGN:
SECTION

1 vertical = 1 horizontal

0 50 100 200 300
LINEAR FEET

naturalistic + architectural
naturalistic + open
open + transportation
transportation + architectural
architectural
Figure 5.15 - Exaggerated Stadium Typology Section C-C’
A large four story parking garage provides room for large event traffic and day-to-day commuters. Two Metro lines cross at the hub and free transfers bring people into the site even when the home team is not playing. Pedestrian walkways deliver the necessary infrastructure for people to get off the train and easily walk into the Field. To the south, the large commercial promenade terminates as the multi-use building provides a backdrop for the open south endzone (Figure 5.18). The Frontier Field experience aims for the landscape seemingly to move through the exterior bounds of the structure. The flowing curves of the exterior and roofing elements mimic the high relief topography the user experiences when approaching the field from the north and east. The terraced platforms at the southern endzone represent the steep bluffs and look out points in the nearby ranges in the Angeles National Forest.
STADIUM DESIGN: TRANSPORTATION HUB

parking structure

metro platform

stadium entrance

stadium entrance

Figure 5.17 - Stadium Rendering - Transportation Hub
Figure 5.18 - Stadium Rendering - Interior South
They also provide an unobstructed elevated view of the field and the rest of the stadium’s interior (Figure 5.19). The linear cuts of grass platforms through the east stands provide an informal approach to stadium seating (Figure 5.20). This general admission area evokes the relaxation of a picnic with the companionship of family and close friends. The addition of a football game as entertainment is a new twist on this common gathering. To provide sufficient access, sweeping ramps replace stairs. The open air seating is also partially covered by large cantilevered steel shading canopies that block glare and direct sunlight for patrons. Those organic forms rise from the land, much like the field’s core design concept.

Frontier Field accommodates the executives and celebrities of Los Angeles. Three-tiered levels of luxury and private suites line the west stadium edge to allow for ultimate entertainment. As a new place to be seen in Tinseltown, the lower rows of the east stands sit at field level and are connected to private indoor viewing areas. An additional three rows of suites are located mere feet from the north endzone. Those single-game event boxes include an outdoor platform that brings the action on the field as close to the fans as possible.

Frontier Field also caters to the everyday citizens of Los Angeles with reserved group seating at south endzone field-level. Those seats, to be given away to charities and goodwill causes, offer intimate proximity to the field for people who might not otherwise get the opportunity to enjoy their hometown Los Angeles team live at the stadium. With such a wide variety of seating options to satisfy the diverse cultural and economic population of the Greater Los Angeles Region, Frontier Field establishes a new paradigm in stadium structure and seating (Figure 5.21).
Figure 5.19 - Stadium Rendering - Interior North

- Video board
- Shading canopies
- Endzone suites
- Viewing platforms
STADIUM DESIGN: INTERIOR EAST STADIUM

- Grass seating
- General admission seating
- Private suites
- On-field seating
- Video/ad board

Figure 5.20 - Stadium Rendering - Interior East
**Stadium Design:**

**Structure + Seating**

**Shade + Lights**
- shade canopy
- lighting
- primary scoreboard

**Suites**
- metro station suites
- field suites
- press box

**Platforms**
- public exterior platform
- tiered endzone platforms
- access ramps

**Seating**
- season / single game
- on-field
- general admission
- group

**Grass**
- playing surface
- picnic and seating

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Figure 5.21 - Stadium Structure + Seating
Transportation Infrastructures

As a centralized location set within the Los Angeles metropolis, total disregard of the automobile is practically unachievable. However, with the addition of two new Metro lines and reduction in total parking spots available for game day and large events, citizens are encouraged to travel by train to site. The transportation hub includes four elevated tracks and multiple navigation paths to quick transfers into Frontier Field, connecting bus platforms, and personal automobile parking. Based on the NFL stadium landscape survey, the average NFL stadium includes 15,000 parking spots. Generation Park allows for only 10,000. This top-down approach causes a forced change in behavior, but not without suitable alternatives.

The primary nodes of access to Generation Park for vehicular traffic are along Grand Avenue to the east and a new highway off-ramp to the south. Accessible from numerous entry points along Grand Avenue, the open space lots northeast on site provide the majority of the self-parking options. An additional four lane roadway bisects the park and connects to both the commercial promenade and open space parking. During game days, the highway off-ramp shifts to one way traffic north, collecting numerous cars from Highways 57 and 60. Two exits from the off-ramp yield direct access to Frontier Field and the adjacent parking structure (Figure 5.22).

The two additional Metro rail lines enter Generation Park to the north and west of Frontier Field and meet at the transportation hub. The proposed north-south route begins at the Sierra Madre Villa stop along the Gold Metro line and connects through to the Artesia Transit Center bus station at the eastern termination of the Silver line. The new east-west route continues where the Green line ends at Norwalk and continues through Generation Park to the end of the San Bernardino / Red Line in San Bernardino (Figure 5.23). Those rail connections decentralize the existing rail and bus routes in Los Angeles County by creating a transit loop instead of linear
SITE DESIGN: TRANSPORTATION ANALYSIS

- Automobile Traffic
- Metrorail Track
- Pedestrian Paths
- Fire Break Paths
- Automobile Parking
- Metrorail Station

Figure 5.22 - Site Transportation Analysis
Figure 5.23 - LA Metro Infrastructure Map Revisited
lines. This also allows more convenient public transportation access to the site.

Once on site, the transportation emphasis shifts to light rail and foot traffic. A small rail station shuttles people from their cars to Frontier Field along the new east-west line. A gravel topped fire break pathway also leads pedestrians on the half-mile walk to the Field. Shuttle buses run back and forth on the same route, to and from the primary parking lot on large event days (Figure 5.24). The stadium’s numerous entry points and circular navigation paths cut through the naturalistic-open restored vegetation areas. Those rail routes grant the passenger a unique view to enter into the transportation hub and Frontier Field area.

**Restored Native Plant Communities**

The restored native plant communities, primarily on the naturalistic-open spaces, afford year-round active recreation and regeneration. The element of seasonal variation of the plant life also offers a unique component to Generation Park. Establishing new preserves provide further educational opportunities symbiotically with the new habitats for native plant species.

Given the widely dynamic topographic conditions, Generation Park hosts eight diverse regions of plants. Lowland types are seasonal wetlands, woodlands, and grasslands. Highland types that can thrive on steep slopes (greater than 20%) are sage scrub, chaparral, mixed chaparral, dunes, and terraces. After establishment, the native species associated with each region require minimal ornamental care while providing visitors with a new connection to the natural environment firmly within suburban Los Angeles (Figure 5.25). To control wildfires on-site, always a relevant threat whether artificial or natural due to the risk of extended droughts, Generation Park contains numerous pedestrian paths that are over 50 feet wide to double as fire breaks and vehicle access roads (Figure 5.26).
Figure 5.24 - Stadium Transportation + Circulation

Stadium Design:
Transportation + Circulation

- Automobile Traffic
- Metro Rail Track
- Pedestrian Entry Paths
- Rail Passenger Entry Paths
- Internal Access Paths
**Site Design:**

**Native Plant Communities**

- **Plant Communities Established Based on Slope + Elevation:**
  - **Topography:**
    - **Terraced:** mock heather + quail bush + watson’s saltbush
    - **Dune:** verbena spp. + beach bur + dune bush lupine
    - **Mixed Chaparral:** scrub oaks + bigpod ceanothus + foothill penstemon
    - **Chaparral:** chamise spp. + redshank + chaparral yucca
    - **Sage Scrub:** california sagebrush + sage spp. + brittlebush
    - **Grassland:** giant stipa + purpleneedle grass + california poppy
    - **Woodland:** mexican elderberry + engelmann oak + golden currant
    - **Seasonal Wetland:** orcutt grass + quillworts + native mint spp.

- **Plant Communities:**
  - **Terraced:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Dune:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Mixed Chaparral:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Chaparral:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Sage Scrub:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Grassland:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Woodland:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low
  - **Seasonal Wetland:**
    - **Pollution:** low
    - **Fire:** low
    - **Soil:** low
    - **Maintenance:** low

- **Figure 5.25 - Native Plant Communities**
**SITE DESIGN:**

**FIRE BREAKS PLAN**

- Primary fire breaks double as primary large event pedestrian paths.
- Secondary breaks close to residential area.
- Intersection of primary breaks act as staging areas in emergency situations.

**Figure 5.26 - Fire Breaks Plan**
Part VI - Implications

“Our designs for large parks must reflect both ecological design and designer ecology, engaged in a relationship of complexity and diversity, and confident in their inevitable uncertainty.”

– Nina-Marie Lister

“Sustainable Large Parks: Ecological Design or Designer Ecology?”
Contributions

Generation Park provides an alternative solution to the existing profit-driven proposal. In using half as much space, leaving room for future needs as economic or public demands dictate, the park includes all the attractions and accommodations that an NFL stadium requires in addition to large park infrastructures. Mixed within retail spaces, luxury suites, and private parking lots are the explorative elements of winding pathways through natural vegetation across existing slopes. The duality, especially in the year-round Los Angeles sunshine, is a much more sustainable model under any sort of economic and natural resource realities.

Beyond the physical site, the implications of this work are its strategic process and experimental products. The layering of two different spatial landscapes literally synthesizes the two programs. This overlay and the inclusion of regional context activate the site with additional unified program beyond either individual landscape. This total design approach results in strategies that can be applied to create any new hybrid space or object. The process aims to justify its realization through heightened utility, whether for human, plant, or animal populations across design disciplinary fields such as landscape architecture, architecture, and engineering.

For the Generation Park project, the application media are the professional outdoor stadium and large park categories. No longer is the often vacant NFL stadium campus empty in the off-season, as residents can jog through the numerous trails year-round or visitors can take the train from downtown Los Angeles into the park to enjoy a show. The large park model also has a new patron group with the thousands of football fans and event-goers that move through the restored native plant communities to reach Frontier Field. The consumptive landscape of the NFL stadium and the generative model of large parks thrive together in a symbiotic
relationship to produce new experiences and spatial utility. Generation Park is a regional and national destination for local residents, tourists, visiting football fans, and businessmen alike.

The biophilic, circulation, and structural design principles of Generation Park are a model for future transdisciplinary projects. The result is a new spatial category: the functioning ecological stadium typology. As the American population continues to migrate to urban and suburban lifestyles, the importance of the urban public realm will only increase. In Los Angeles, a city founded on cheap personal transportation options and excessive resource consumption, accessible natural environments are buried beneath built development and financial profits. The blending of the two landscape types on a single site satisfies both ecological and economic demands and provides a new precedent for utilitarian landscapes.

**Future Considerations**

As a generalist strategy for an NFL stadium and ecological park onto a single site, this broad and complex project has limitations that could not be addressed in the thesis process. The largest is the issue of construction, maintenance, and funding structures for the proposed venture. With so many stakeholders, from Los Angeles County, to the City of Industry, to local residents, and to the NFL, collaboration is essential for financial planning. The revenues generated from Generation Park are not guaranteed and the initial investment is high-risk, high-reward. Structural and ecological construction-phasing diagrams, set across a few decades, would help to conceptualize the proposal. Such phases, both short-term within a few months, to long-term over multiple decades, are useful to extrapolate the native plant establishment, track the targeted commercial development, and evaluate the needs of the Frontier Field structure. Those illustrations would also assist in maintenance and daily operation practices.
With a primary focus on the native plant communities, Frontier Field, and Generation Park as a whole system, the commercial promenade’s specific program and form along the south and east of the Field did not develop within this project. The promenade is a central element for Generation Park but not imperative to the central explorations of this project. Specific details for the stadium, guest accommodations, and rail expansion are also left for future work. Again, phasing diagrams and final renderings are the best visual approaches to represent and evaluate those interventions. The true test of the Park’s success occurs in the lifetime of the structure and landscape. It is imperative that daily and seasonal operations are properly funded and implemented. The inclusion of expansive plant habitat into 320 acres already layered with numerous programs increases both man-power and coordination efforts. Applying calculated best management practices are imperative to assure the design functions as intended.

As a final consideration, an investigation into other destinations for a similar hybrid landscape in Los Angeles would be a useful exercise. This thesis responds to the proposal of one developer. Since that formulation, a Majestic Realty competitor has proposed an alternative site for an NFL stadium in downtown Los Angeles. The scheme, by AEG, nestles the structure between the Staples Center and the Los Angeles Convention Center. Gaining traction amongst Los Angeles stadium proponents over the Industry site, the urban setting has an aggressive construction timeline similar to Roski’s (Markazi 2010). While the smaller land parcel cannot support a unity of stadium and large park, the proposal suggests that there could be a more beneficial destination for a future Los Angeles professional football team. With such different context, any number of landscape types is possible.
Part VII - Conclusions

“There’s no longer sufficient to create a product, a service, an experience, or a lifestyle that’s merely functional. Today it’s economically crucial and personally rewarding to create something that is also beautiful, whimsical, or emotionally engaging.”

— Daniel Pink

A Whole New Mind
Through the synthesis of research, total design strategies, and projective deliverables, this thesis shows that the consumptive NFL stadium landscape can move beyond its current paradigm by incorporating large park characteristics of resiliency and legibility. Realized on an actual site in Industry, California, twenty-five miles east of downtown Los Angeles, Generation Park is a feasible and innovative landscape product. The design approach to the Park is not limited to this single project, as the process is applicable to the creation of any hybridized space or object focused on increased utility. The effects on design fields, such as landscape architecture, architecture, or engineering, encourage collaboration and transdisciplinary communication aimed at generating a truly unique final product.

The end result of this thesis establishes a unique landscape typology with a functioning ecological retreat and professional stadium attraction within a sprawling suburban context. Generation Park considers the individual structural, transportation, open, and naturalistic spaces as part of a singular landscape while engaging a diverse number of interests and people throughout the calendar year. This unification of stadium, large park, and context produces a highly functional and legible landscape that responds to the complexity of Los Angeles population and society. As a whole, the site also aligns with regional logistical and ecological networks that translate into responsible resource and financial expenditures. Set within contemporary constraints and goals of optimal utility, Generation Park and Frontier Field establish a spatial precedent for designers to expand the fields of landscape and architecture in shaping the future constructed environment.
References


