A PARK BELOW:
RE-ENVISIONING ALBANY’S UNDERPASS WATERFRONT GATEWAY

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A PARK BELOW: RE-ENVISIONING ALBANY’S WATERFRONT GATEWAY

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ABSTRACT

Metropolitan cities consist of extensive transportation infrastructure—the road, highway, and rail networks. This infrastructure improves the efficiency of mass transportation and helps guide people to their destination. However, they also bring dramatic change to urban physical landscapes, and impact the landuse of surrounding contexts.

This project studies an underpass under an Interstate Highway in the City of Albany, California. The underpass is the entry to Albany from the highway, and is also the gateway to the city’s waterfront. The goal of this project is to analyze the underpass for issues associated with highways such as urban disconnection, pedestrian safety, and stormwater, etc. In addition, this project will propose a master plan as a possible solution to the problem, as well as an example for other underpasses with similar conditions.
I would like to thank my family, for all the unconditional supports in the past years.

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TABLE OF CONTENT(S)

SECTIONS:

1 INTRODUCTION
2 BACKGROUND
3 CASE STUDIES
4 SITE ANALYSIS
5 DESIGN
1 INTRODUCTION
2........INTRODUCTION
3........ISSUES
4........THE PROJECT
5........THE GOAL

BACKGROUND
8........THE CITY
10......WATERFRONT
11......EAST SHORE STATE PARK
12......THE BULB
14......GOLDEN GATE FIELD
15......PIERCE STREET PARK
16......BICYCLE MASTER PLAN

CASE STUDIES
20......UNDERPASS PARK
22......GLASGOW LANDSCAPE LINK
24......JOSE MARTI PARK

SITE ANALYSIS
28......CONDITIONS
29......CIRCULATION & CONTEXTS
30......ANALYSIS
31......OPPORTUNITIES & CONSTRAINTS

DESIGN
35......MASTER PLAN
36..... FEATURES
36-38 SECTION
39......PERSPECTIVE

REFERENCE
LIST OF ILLUSTRATIONS

INTRODUCTION

Fig. 1.01  Intersection 105 & 110, Los Angeles, California by Edward Burtynsky, 2003
Fig. 1.03  Freeway Cutting Through Los Angeles Urban Sprawl by Stock Connection: worldofstock.com
Fig. 1.04  Houston highway underpass by Lee Comma Dennis, 2005
Fig. 1.05  The studied area and the City of Albany by Gary Ng

BACKGROUND

Fig. 2.01  Albany Hill by Kap Cris, 2007
Fig. 2.02  Solano Avenue, Albany, California: www.albanyca.org
Fig. 2.03  Albany shoreline panorama by Kap Cris 2005
Fig. 2.04  Albany Cinema at Albany, California: californiasecuritypro.com
Fig. 2.05  Albany Bulb by Saul Chaikin: www.baynature.org
Fig. 2.06  Tidal muflat near the underpass by Gary Ng
Fig. 2.07  Dogs playing at Albany Beach by Gary Ng
Fig. 2.08  Construction debris covered with grafitti by Gary Ng
Fig. 2.09  Concrete structure covered with grafitti by Gary Ng
Fig. 2.10  “Water Lady” sculpture at Albany Bulb, Albany by Ed Puskas, 2009
Fig. 2.11  Dragon sculpture from junks by Gary Ng
Fig. 2.12  The “Library” - a temporary structure built by landfill residents Gary Ng
Fig. 2.13  Golden Gate Fields: www.cmykcity.com
Fig. 2.14  Overview of Golden Gate Fields and surrounding Michael Layefsky, 2013
Fig. 2.15  “Albany City Bicycle Master Plan”
Fig. 2.16  Before/After rendering of Underpass Park, Toronto by Philips Farevaag Smallenberg

CASE STUDIES

Fig. 3.01  Climbing structure (1) at Underpass Park by Franco: francocignelli.com
Fig. 3.02  Underpass Park Lights Up at Night via Torontoist, 2012. Photo by Remii CaRReiRo
Fig. 3.03  Pedestrian/bike pathway with colored texture and terrace planters at Garscube Landscape Link, Glasgow, Scotland: Dave Morris Photography
Fig. 3.04  Phoenix Flowers at Garscube Landscape Link by Jason Brown, 2010
Fig. 3.05  Bike polo game at Jose Marti Park, Miami by Haley White, 2011
Fig. 3.06  Jose Marti Park at Miami River, Miami by Jarney Prezzi, 2006

SITE ANALYSIS

Fig. 4.01  Site condition basemap by Gary Ng
Fig. 4.02  Out-fall of culverted creek and sewage by Gary Ng
Fig. 4.03  Intersection of highway off-ramp, bike trail, and street cross by Gary Ng
Fig. 4.04  Highway on-ramp by Gary Ng
Fig. 4.05  Underpass streetscape by Gary Ng
Fig. 4.06  Underpass area fenced off from public by Gary Ng
Fig. 4.07  Creek channel along the highway on-ramp by Gary Ng
Fig. 4.08  Bike path runs under highway by Gary Ng
Fig. 4.09  Storm drain located between road and sidewalk by Gary Ng
Fig. 4.10  Large open space under highway by Gary Ng
Fig. 4.11  Sharp turn at the bike path by Gary Ng
Fig. 4.12  Broken fence often used as illegal railroad crossing by Gary Ng
Fig. 4.13  Crosswalk at highway entrance by Gary Ng
Fig. 4.14  Underpass under Buchanan Street by Gary Ng
Fig. 4.15  Future site of Pierce Street Park lockdown to the underpass by Gary Ng
Fig. 4.16  Near bustop by Gary Ng
Fig. 4.17  Circulation Diagram by Gary Ng
LIST OF ILLUSTRATIONS

Fig. 4.18  Context diagram by Gary Ng
Fig. 4.19  Site analysis diagram by Gary Ng
Fig. 4.20  Opportunities diagram by Gary Ng
Fig. 4.21  Constraints diagram by Gary Ng

DESIGN

Fig. 5.01  Master Plan by Gary Ng
Fig. 5.02  Feature diagram by Gary Ng
Fig. 5.03  Activities vs. texture by Gary Ng
Fig. 5.04  Climbing structure (2) at Underpass Park by Franco: francocignelli.com
Fig. 5.05  Yvonne Domenge’s Tabachin Ribbon and Wind Waves at Millennium Park by Abraham Ritchie, 2011
Fig. 5.06  Underpass Lights at San Antonio Riverwalk, San Antonio: www.visittheriverwalk.com
Fig. 5.07  Great use of urban underpass by Daniel Goncalves
Fig. 5.08  Stormwater planter, Downtown Portland, Oregon: theintertwine.org
Fig. 5.09  Street performer by Tarslie: http://blogs.oregonstate.edu/scholarships
Fig. 5.10  Vegetated swale at Mission Creek Park in San Francisco, CA by Live Soma, 2009
Fig. 5.11  Public restroom on the beach at Grand Haven by Jeff Alexander: Bridge Magazine
Fig. 5.12  Basketball courts and skaters at Underpass Park, Toronto by Craig White, 2012
Fig. 5.13  Brooklyn Bridge Park, New York by Urban Land Institute
Fig. 5.14  Gibbs Street Pedestrian Bridge, Portland, Oregon by Steve Moran, 2012
Fig. 5.15  Street piano by Street Pianos Team, 2012: streetpianos.com
Fig. 5.16  Section graphic by Gary Ng
Fig. 5.17  Site overview by Gary Ng
Fig. 5.18  Perspective by Gary Ng
INTRODUCTION

As a car oriented country, the US has massive interstate highway system spanning most cities of the nation. It provides a strong transportation network for the ease vehicle traveling. Indeed, it is also the back bone of the economic as it transports workers and goods to their destinations. However, these highway networks have dramatically altered the physical landscape and the relationships between communities.

Fig. 1.01 Intersection 105 & 110, Los Angeles, California
ISSUES

Linear and continuous Interstate highways have dissected and separated a cohesive city into different communities and neighborhoods. Consequently, they would form physical and visual barriers for local residents trying to travel to the other side of highway. The connectivity between the separated communities becomes weak. Lack of connectivity can bring major changes to the site use pattern. In some areas, the site condition on both sides of the highway can be very different. A landscape that has opportunities to be multifunctioned become uninviting, underused, and depreciated in land value.

In addition to bringing impacts to the local communities, the highway itself contain great landuse issues. Typically owned by public agency, the area under highway structure often left vacant, and with hard surface pavement or minimum vegetation. In fact, these underpass conditions appear under thousands of miles of highway in each state. Aesthetically, this creates a gap to a stretch of land that has unified theme and appearance. Ecologically, it also create water quality issues related to run-off.

From left to right: **Fig. 1.02** Freeway Cutting Through Los Angeles Urban Sprawl  
**Fig. 1.03** A Highway underpass covered by graffiti Sprawl  
**Fig. 1.04** Houston Highway Underpass
THE SITE

The studied area of this research project is located at the waterfront of the City of Albany, California. The focus area is a piece of vacant property owned the California Department of Transportation (Caltrans) and under the Interstate Highways 80 and 580 at Buchanan Street. The site contains problems pertaining to highway that are similar to other underpass throughout the country.

The site has complex conditions in terms of land use, circulation, connectivity and elevations of surrounding features. It is bounded by highway off ramps, regional bike trails, a major city street, a railroad track, and the shoreline of the San Francisco Bay. One of the city’s creeks is running in an underground culvert along the edge of the site, and outfalls to the adjacent shoreline. All these surrounding features have intersected and overlapped with each other at different elevation.

Fig. 1.05 The studied area and the City of Albany
THE PROJECT

\ TO ANALYZE THE THE STUDIED AREA FOR ISSUES PERTAINED TO HIGHWAY INFRASTRUCTURE

\ TO PROPOSE A DESIGN AS AN EXAMPLE SOLUTION TO OTHER LOCATIONS CONTAINING SIMILAR CONDITIONS.
SECTION BACKGROUND
City of Albany is a 1.7 mile city located on the eastern shore of San Francisco Bay. It is surrounded by the Bay to the west, the City of Berkeley to the East and South, and City of El Cerrito to the North. Albany is a small California city with a population less than 19,000 (2010). The City has preserved its small-town character with largely single family homes and small businesses.

Albany was first named as the City of Ocean View when it was established in 1908. The city’s name then changed to Albany in 1909, in honor of the

From left to right:
**Fig.2.01** Overview of Albany and Albany hill
**Fig.2.02** Solano Avenue in Albany, CA
The birthplace of the City’s first mayor, Mayor Frank Roberts. Albany has since become strongly independent and established its own school district, governance.

Albany provides a safe, community-oriented city to the local resident with high ranked school district and different programs for youth, adult and elderly. Located near a state park and the University of California Berkeley, Albany has offered many recreational and student housing opportunities. (albanyca.org, 2010).
WATERFRONT

The west of Albany dissected by highways is the city’s waterfront. It has a unique shoreline that extend out to the peninsula with a narrow strip of land. The waterfront provides a overview of the gateway to San Francisco Bay, City of San Francisco, Bay Bridge, Alcatraz, and Angel Island.

The waterfront has diverse conditions and usages. It is a product of many years of infill from 1930s to 1980s. The southern portion is the home to the Golden Gate Field horse racetrack. The northern is called “the Plateau”, with protected tidal marsh along the shoreline, providing habitats for different speceis. The “Plateau” features a small beach known to have dog owners let their dogs run unleashed. It is connected to the peninsula with a strip of land called “the neck”. At the west end of the “neck” lies the “Bulb”, a peninsula infilled from a former landfill site for construction debris in the 1960s.

Besides the Golden Gate Field and main roads, majority of the waterfront is now consisted in the East Shore State Park. Albany’s waterfront provide many opportunities for recreation and ecological conservation. (albanyca.org, 2010)
EAST SHORE STATE PARK

East Shore State Park stretches 8.5 mile long from Bay Bridge in Oakland to Richmond. It is a result of decades of local resident efforts to protect the San Francisco Bay as public open space. After recently acquisition of the “Bulb”, Albany’s portion of the state park consists of the entire shore line except the property of Godlen Gate Field. Located along a tidal marsh shoreline it provides mudflat habitat for different wildlife species. On the other side of the “Neck” feature a tidal beach--an informal dog park where people often run their dog off-leashed. The addition of the “Bulb” to the East Shore State Park property would vision increases of recreational, preservation, and conservation opportunities of in future. (East Bay Regional Park District)

From top to bottom

Fig.2.06 Tidal mudflat near the underpass
Fig.2.07 Dogs playing at Albany Beach
THE BULB

Fig. 2.08 Construction debris covered with graffiti
Fig. 2.09 Concrete structure covered with graffiti

Fig. 2.10 “Water Lady” sculpture made of junk from the landfill

THE “Bulb” is a peninsula with large open space infilled from a former landfill site, which mostly made from construction debris like concrete and rebar. The operation
of the landfill began in 1960s and halted by large group of conservationists in the 1980s. Since, the landfill became a large open space fused with different activities and changes. (albanyca.org, 2010)

Through times, the Bulb has developed its characteristic from different influences. It has been gradually taking back by nature with vegetation, and became an informal park. Also, the site is filled by many artworks with strong cultural and political influences, such as graffiti, sculptures, and even structures. Some of the famous pieces are the Water Lady sculpture by Osha Neumann and the Landfillian Library by Jimbow the Hobow.

In addition, the Bulb has been squatted with numerous homeless with extensive temporary structures. The city has long been in battle to evict the squatters. Besides the homeless issues, the Bulb is a popular place for hikers, dog owners, free-lance artists, and photographers. (Waters, 2013)

Accquired by the East Bay Regional Park recently, the Bulb will be incorporated in the existing East Shore State Park. If developed, many notable free-lance art works throught out the site would face threats of relocation or removal. There is opportunities to preserve or relocated some of the influential art pieces. (Karim, 2002)
GOLDEN GATE FIELD

Located diagonally across the stuided area at the Albany’s waterfront, the Golden Gate Fields is a major horse race track in the San Francisco Bay Area. It spans across the city limits of Albany and Berkeley. The tract is adjacents to the “Plateau” and the Albany Beach. The race track first opened right before the World War II, and became a naval landing base during the war. The Golden Gate Fields has produced many history marking races and famed winning horse. The race track has gone through several ownership and a bankruptcy. Acquired in 2011, the Golden Gate Field is now owned by the Stronach Group. (Golden Gate Fields, 2013)

Fig.2.13 Golden Gate Fields

Fig.2.14 Overview of Golden Gate Fields and “Plateau”
Pie roce Street park is a proposed recreational park located just on the side of the railroad track next to the studied area of this project. The 4.5 acre parcel will offer different recreational opportunities for the local resident. The site is several hundreds of feet away from the waterfront, but there is no visual or physical separation between the two features. (albanyca.org, 2012)

The City of Albany is envisioning improvements for 4.5 acres of land known as the Pierce Street Parcel. Proposed improvements will include a new Public Works facility, neighborhood park/open space, and a bicycle-pedestrian trail connecting from the Richmond border to the Bay Trail.

Help explore the opportunities and challenges for this project. We need your ideas and input!

**Site Walk and Community Meeting: Thursday July 12th**

Mark your calendars for the upcoming site walk and existing conditions exploration. We will meet at 6:00pm, after the walk, reconvene at 7:30pm at the Parks & Recreation Commission Meeting for a formal presentation and discussion of the community’s vision for the site.

**Site Walk Location:** 6:00pm, meet at the Corner of Cleveland and Washington

**Community Meeting** (Parks & Recreation Commission Meeting): 7:30 pm at City Hall, Council Chambers (1000 San Pablo Avenue)
In an effort to support City’s greenhouse emission reduction policy (March 2007), Albany implemented an Active Transportation Plan to update the existing Pedestrian and Bicycle Master Plan. Albany recognizes the importance of cycling and walking by making the city a better place for bike and pedestrian use. The City has proposed new bikeways to enhance the connectivity of existing bikeways. Under the plan, the city’s waterfront will be connected to the East Bay Trail, a regional bike trail that runs through multiple cities along the San Francisco East Bay. (albanypedbikeplan.fehrandpeers.net, 2013)
SECTION

CASE STUDIES
Underpass Park is a 2.5 acre urban park built mostly under series of overpasses in downtown Toronto, Canada. It is located under and around the Eastern Avenue and Richmond/Adelaide overpasses, between Cherry Street and Bayview Avenue. The park is designed by landscape architects Phillips Farevaag Smallenberg (PFS) with The Planning Partnership in 2010, and was opened in 2012.

Formerly, the site of the Underpass Park was inaccessible to public and surrounded by concrete walls. In times, all concrete walls were covered with graffiti. The elevated Eastern Avenue has become physical and visual obstacles to both neighborhoods of north side and south of the overpasses. At night, the dark underpass had insufficient lighting, which made the streetscape feel unsafe and not inviting to pedestrians. Through collaborative works, the design team has transformed the underused and derelict underpass into a welcoming community space. (WaterfrontToronto, 2013)

Fig. 3.01 Before/After rendering of Underpass Park
design features:
\ multifunctional **GATHERING SPACE**
\ **PLAYGROUND** w/ artistic climbing structures
\ covered area designated for **RECREATIONAL ACTIVITIES**
\ **LIGHT DECORATION** at bridge columns
\ open space defined by **VEGETATION**
\ interactive **CEILING DECORATION**

![Fig.3.02 Climbing structure](image1)

![Fig.3.03 Under[pass lights up at night](image2)
The Garscube landscape link is a joint intervention project located at Garscube Road in Glasgow, Scotland. It is below one of the major roadway of the city, and is a major underpass for pedestrians and bikes traveling between the city centre. Designed by 7N Architects and RankinFraser Landscape Architecture, the project costs £1.2 million and was completed in 2010. The Link is part of the City’s project to regenerate the Glasgow Canal by improving the connections between the city’s center and focused regeneration area. The existing condition of the site was poorly lit, unsafe, and lacks of maintenance. (Rankinfraser Landscape Architecture, 2010) The 7N Architects described this underpass as dark, noisy, and...
The Garscube landscape Link has provide a good example of transforming an unwelcoming underpass into an innovative and significant connection for the Glasgow’s city centre. However, the design has emphasis on human usage and overlooked the environmental needs. The design has increased impermeable surface for pedestrians, and incorporated terrace planters to slow down runoff. This might increase even more surface runoff compared to the existing condition.

**design features:**

- walkable surface **WIDENING** with **COLOR TEXTURED**
- Illuminated **SCULPTURE** along the pathway
- **TERRACE PLANTERS** to slow down runoff

*Fig.3.05* Art installations light up the pathway at night
JOSE MARTI PARK
MIAMI

Jose Marti Park is a riverfront park located at SW South River Drive and SW 4th Street by the Miami River Miami, Florida. The park features baseball field, basketball courts, swimming pool, playground, and racquetball courts. Portion of the park is covered by highways, but the area is well-lit at night for activities. (FilMiami.org, 2002)

design features (underpass):
\underpass  ILLUMINATION
\covered area designated for RECREATIONAL ACTIVITIES
\DECORATED bridge columns surface

Fig.3.06 Bike polo game at the underpass basketball court
Fig.3.07 Decorated highway bridge columns
SECTION
SITE ANALYSIS
Fig. 4.01

CONDITIONS
Out-fall of culverted creek and sewage

Underpass area fenced off from public

Storm drain located between road and sidewalk

Broken fence often used as illegal railroad crossing

Future site of Pierce Street Park

Creek channel along the highway on-ramp

Large open space under highway

Crosswalk at highway entrance

Near bustop

Fig. 4.02
Fig. 4.05
Fig. 4.08
Fig. 4.11
Fig. 4.14

Fig. 4.03
Fig. 4.06
Fig. 4.09
Fig. 4.12
Fig. 4.15

Fig. 4.04
Fig. 4.07
Fig. 4.10
Fig. 4.13
Fig. 4.16
CIRCULATION

CONTEXT

Fig. 4.17

Fig. 4.18
ANALYSIS

- OPEN SPACE
- MULTIPLE HIGHWAYS OVERLAPPING EACH OTHER ON TOP OF THE SITE
- LARGE SHADED AREA UNDER HIGHWAY
- HIGH ACCIDENT RISK BETWEEN CARS, BIKES, AND PEDESTRIAN
- NO ACCESS BY PEDESTRIAN OR BICYCLE
- LARGE SHADED UNDERPASS AREA WITH NO USAGE
- LONG LINEAR ROAD WITH TYPICAL STORM DRAINS
- FUTURE PARK AT HIGHER ELEVATION ON THE OTHER SIDE OF RAILROAD
- RAILROAD CREATES NOISE
- MULTIPLE HIGHWAY BRIDGE COLUMNS THROUGHOUT THE SITE
- FREQUENT ILLEGAL RAILROAD CROSSING
- NOISE FROM TRAFFIC
- DARK UNDERPASS, LACK OF PEDESTRIAN SAFETY
- LARGE UNDERUSED OPEN SPACE

Fig.4.19
OPPORTUNITIES

OPEN SPACE FOR SUN ACTIVITIES

SHADE ACTIVITIES, ART EXHIBITION & GATHERING SPACE

STORMWATER TREATMENT

IDENTITY ENHANCEMENT

STORMWATER TREATMENT

CONSTRAINTS

MULTIPLE HIGHWAY STRUCTURES RESTRICT PLANTING AND ACTIVITIES

HIGHWAY STRUCTURE COLUMNS AS OBSTACLE RESTRICTING ACTIVITIES AND MOVEMENTS

TRAFFICE LAYOUT PREVENTS PUBLIC ACCESS TO THE AREA

CONNECTION TO OTHER PIERCE STREET PARK AND WAYFINDING ART GALLERY

OPEN SPACE

UNDERPASS DECORATION

EXISTING BIKE RAMP CANNOT BE REMOVED

Fig. 4.20

Fig. 4.21
DESIGN STRATEGIES

The design strategies used in this project are:
\provide a design solution to the problem without impact the current use of the site
\take account of the constraints and many obstacles that would affect the functionally of the design
\take advantage of opportunities from surrounding context and incorporate them into the design
MASTER PLAN

1. GATHERING SPACE
   SUN ACTIVITIES

2. GATHERING SPACE
   CHILDREN PLAYGROUND
   SHADE ACTIVITIES
   ART GALLERY
   DECORATIVE ILLUMINATION
   COLORED, TEXTURED BRIDGE COLUMN
   STORMWATER TREATMENT FACILITIES

3. MULTIFUNCTIONAL SPORT COURT
   OPEN SPACE DEFINED BY VEGETATION
   PUBLIC RESTROOM

4. PEDESTRIAN/BIKE OVERPASS TO UPPER PUBLIC PARK
   ART INSTALLATION ALONG THE BRIDGE

5. GATHERING SPACE
   SUN ACTIVITIES

6. COLORED, TEXTURED CROSSING FOR PEDESTRIAN SAFETY ENHANCEMENT

7. DECORATIVE ILLUMINATION
   COLORED, TEXTURED ON BRIDGE COLUMN
   ART GALLERY

8. STORMWATER TREATMENT FACILITIES
Fig. 5.02

FEATURES

ART
INSTALLATION
RECREATION
CIRCULATION
STORMWATER TREATMENT
BOUNDARY
ACTIVITIES & TEXTURES

Fig.5.03
The diagram shows examples of activities at appropriate locations of the site.

Fig.5.04-5.15
Activities example
SECTION

A SECTION CUT OF THE SITE VIEWING FROM SOUTH TO NORTH

SECTION A-A
SCALE: 1” = 45’ - 0”

Fig.5.16
OVERVIEW
THANK YOU
REFERENCES

BACKGROUND


CASE STUDIES


