The Bridgeport Dam: A South Branch Community
Elevator Statement

Case Statement
This project will explore the potential to change a deteriorating Chicago industrial neighborhood into a mixed-use residential, community center and open space focal point for the adjacent neighborhoods of Pilsen and Bridgeport. Emphasis will be given to inner city ecosystem services, environmental awareness, adaptive reuse and responsible new development.

The industrial corridor between Bridgeport and Pilsen, minutes from the Chicago loop, has been a blight on the neighborhoods almost since its development in the early 20th century. While the area was once a center for barge-powered industries in the area, that usage has become almost entirely defunct - barges currently account for less than 5% of shipped goods into the entire city, and a much more viable port exists further south at Lake Calumet. The remaining barge traffic at this site is focused entirely around a Clean Air Act breaking coal-fired power plant, one that belches smoke into the nearby residential neighborhoods and the adjacent public high school. This obdurate industrial zone is indicative of some of the larger scale ecological quandaries caused by Chicago’s working-class industrial history, and is related to its worst: the reversal of the Chicago river to compensate for the barge-fueled dirty industries of the early 20th century. As a result of Chicago’s inability to treat, store, or handle its stormwater and sewage, this 100 year old solution has left all our wastewater untreated and heading south to the Gulf of Mexico.

This project will attempt to address these issues at several scales. First, it will solve part of the overall watershed problem by reinventing the site as a place that will help to retain and clean stormwater and remediate currently contaminated sites. Secondly it will propose a masterplan to adapt and reuse the existing industrial site as mixed-use residential community and clean industrial space, giving the land back to the community to use, learn from, and enjoy. Thirdly it will develop a new system of housing within the typical Chicago block system that will help this new development bridge the gap between the Bridgeport and Pilsen neighborhoods created by the existing barren industrial landscape. This system will diminish resource use, increase energy efficiency and create a softer urban landscape that will allow more water infiltration and create more community space at a scale and price range accessible to the surrounding community.
Project Goals

Guiding Principles
1- Environmental Cleanup - This project will focus much attention on cleaning up the South Branch Chicago River water as well as adjacent brownfield sites near the South Fork Turning Basin. Emphasis on living systems and ecological solutions for cleanup.

2- Social Connection - Project will serve as an attractor to both the Bridgeport and Pilsen communities. Emphasis will be placed on creating both a destination for visitors as well as a new part of the regular neighborhood fabric.

3- Environmental Education - Focus will be given to make environmental features of the project salient and inspire interest. Classrooms as well as tours and community programs will help educate Bridgeport and Pilsen residents about the value of the lake and its surrounding watershed, hopefully raising ecological consciousness in the area.

4- Green Jobs - Integration of some existing industry as well as development and encouragement of new ecological services. Creation of jobs rather than elimination of jobs will be a necessity to make this project beneficial to adjacent communities.

5- Responsible Development- The project will include the invention of a modular building system that is congruous with the existing neighborhood needs and context and is both resource efficient and economically feasible. This system will serve as building blocks for the mixed use residential section of the development area and help to insure high enough densities to support other project programs.

1- Return life to a dying area in the South Loop.
2- Restore health to a part of the Great Lakes Watershed in Chicago’s urban ecosystem.
3- Reestablish vitality in a blighted, leftover early 20th century industrial corridor.
Stakeholder Chart

development sector program

direct stakeholders
indirect stakeholders
general stakeholders
Urban Context
Local Context
Context Analysis
Historical Maps
River History Analysis

1833

1929
Historical Density Comparison

1929 figure ground diagram

2009 figure ground diagram
overlay of 2009 figure ground over 1929 density showing reduction in industrial density
Space Program

infrastructure
mixed-use residential
adaptive reuse/recreation

MIXED USE DEVELOPMENT
commercial @ ground floor ± 500,000 sq.ft
residential flats/condos ± 1.8 million sq.ft

GREEN INFRASTRUCTURE
wind farm/wetland/cycling park - 1.6 million sq.ft

INDUSTRIAL PARK REUSE
gallery/reception/exhibition hall - 71,000 sq.ft
Columbia College satellite art school - 42,500 sq.ft
adapted industrial infrastructure recreation area - 500,000 sq.ft
sports fields - 200,000 sq.ft

NEW CONSTRUCTION - DETACHED
marina - 60,000 sq.ft
shopping area - 40,000 sq.ft
recycling/transfer station - 11,250 sq.ft
kayak center - 10,000 sq.ft
skate park - 8,000 sq.ft

EXISTING
indoor sports facility - 200,000 sq.ft
Case Studies: Adaptive Reuse

Duisburg-Nord Landschaftspark, Duisburg, Germany

- adapted smelting plant
- mountain biking
- rock climbing
- creative lighting
- public events
- gardens
extensive programming on site: red numbers indicate art installations, small numbers indicate reprogrammed elements such as blast furnace, wilderness, sinter plant, train tracks, blower hall. graphic symbols indicate visitor amenities.
Case Studies: Adaptive Reuse

Gas Works Park, Seattle, WA

park overview

gas plant as sculptural element

cultural events at site
Ballast Point Park, Sydney, Australia

park overview

detail of reused oil platforms

creative reuse
elevational height

park map

site plantings
Case Studies: Redevelopment

Governors Island Park Competition, New York City, NY

WRI proposal

Hargreaves proposal

REX proposal

West 8 proposal
existing figure/ground

existing island condition

demolished buildings in winning proposal (West 8)

proposed use of demolition rubble to create landscape
Stearns Quarry Park, Bridgeport, Chicago

- Quarry pool and walkway
- Detail of wetland system
- View from hilltop
- Cascading wetlands
- View of wetland from hill
- Reuse of landfill rubble
quarry pool (25’ depth)

manufactured hill from landfill rubble taken from previously filled quarry pool (55’ height)

terraced wetland living machine for water purification

water source - conveyed here from rest of site
Case Studies: Prefab Housing

Habitat ‘67, Montreal, Quebec

stacking diagram

building massing

detail of assembly

detail of assembly
unit assembly diagram

building section

sample unit plans

sample unit plans
Case Studies: Mixed Use

Borneo Sporenburg, Amsterdam, The Netherlands

building typologies

canal bridges

the ‘high bridge’

view from ‘high bridge’
program diagram

typologies by designer

area map showing canal systems

figure ground diagram
Case Studies: Mixed Use

Hafencity Hamburg, Hamburg, Germany

- Prefab buildings
- Varying typologies
- Marco Polo terrace
- Iconic buildings
- Observation tower
- Unique structures
massing in context

development map

development model
Schematic Design
schematic section
Schematic Design

midterm model

(plugin of final review scheme)
final models
Schematic Design renderings
Bibliography


Gosz, James. ‘Ecotone Heirarchies.’ Ecological Applications 3.3 (1993) 370-376


