(__________) PARK

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FIRST, THE LAND
Pre-Industrial
The mouth of the Calumet River at Lake Michigan was a changeable shoreline of shifting sediments at the confluence of a slow river and a dynamic lake.
ILLINOIS BEACH STATE PARK
where the Dead River slowly flows into Lake Michigan
most closely resembles the pre-Industrial Calumet River
Industrial development in the Calumet River area began around the 1870s, and by 1890 the western reach of the Grand Calumet River was heavily polluted with the waste of steel mills, foundries, a meat packing plant, and glue and cornstarch factories.
Calumet River, 1870s
1886
The Iroquios Iron Company is established on the south bank at the mouth of the Calumet River.
Industrial Growth
1913 Iroquois Steel
Calumet Park 1905
Cal-Sag Channel 1911-1922
Calumet River dredged 1912

Future CDF
Iroquois Steel was constructed in 1913 after the dredging of the Calumet River. While being constructed, they landfilled out into the lake to create the site for the factory. Once it was opened, the factory specialized in making pig iron, a material used in making steel. By 1950, Iroquois Steel had 3 blast furnaces and 70 coke ovens. The factory was dissolved when Iroquois Steel merged with LTV Steel in the 1970s.
1905 Calumet Park
The park was designed by the Olmsted Brothers, opened in 1905, the fieldhouse was constructed in 1924, and it continued to expand until the 1930s.
Sanborn Maps assembled
A series of Sanborn Maps providing more detailed information on buildings and rail lines are overlaid on a more generalized map of Iroquois Steel.
1994
Combined Disposal Facility begun 1982
Active Confined Disposal Facilities on the Great Lakes

Approximate # Years of Capacity Remaining:
- Red: Less than 5 years
- Yellow: 5-10 years
- Green: More than 10 years
North American Stevedoring Company’s (NASCO) facility was constructed in 1984 at the Iroquois Iron shipping port.
NASCO handles bulk solid materials such as salt, steel, lumber, blast furnace iron, and ferromanganese.

The facility had been contacted by the Chicago Department of Health for releasing toxic levels of ferromanganese alloy dust into the air.

It wasn’t until EPA investigated the facility in 2014 that they improved their output and ventilation within the buildings.
Evidence of significant expansion of shipping container storage since 2015 that encroaches into the former woodland.
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The potential area for the park is greatly diminished from the LAST FOUR MILES CONCEPT PLAN from July 4, 2009.
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CDF
this is the area of our study
Present Day

- Drying dredge pad (beneficial use)
- Drying dredge pad (confined disposal)
- Illinois-Indiana state boundary
- Dewatering pond
- Very narrow connection to Calumet Park
Present Day

CDF

 APPROX. 1,200 FEET

 APPROX. 2,800 FEET
ABOUT 1/2 MILE
10-15 MINUTE WALK ONE WAY
Chicago Vocational H.S.
Jesse Owens Park

Steelworkers Park

Calumet Park
Beach, Fieldhouse, Coast Guard

COMPARISON OF CDF AREA TO ADJACENT PARKS
Race and Ethnicity
- 82% Latino
- 13.7% White
- 3.7% Black
- 0.4% Asian
- 0.2% Other

Ages
- 20.2% 20 - 34
- 26.5% 5 - 19
- 18% 50 - 64
- 17.4% 35 - 49
- 6.7% 65 - 74
- 3.1% 75 - 84
- 6.9% Under 5
- 1.2% 85 and older
MATERIALS
Site Visit
Granitic pebbles and sand
Quagga and Zebra mussels
Industrial Slag

A mix of indigenous rocks, invasive lake species, and industrial waste.
Steel Slag

Fig. 1. Schematic illustration of basic oxygen furnace and electric arc furnace

Slag is the by product of converting iron to steel. In basic oxygen furnaces (BOF) use hot metal from blast furnaces and blasts a high pressure of oxygen to collect and remove impurities such as slag. Electric arc furnaces reheat only scrap material and is the more hazardous of the two. The chemical composition of slag depends on which furnace it was made in. Chromium and Vanadium are the two most toxic metals found in slag (if found in large quantities). Studies have shown that Vanadium is harder to remove.
PRECEDENTS

4 NATIVE ECOSYSTEM MODELS
4 NATURE-INTENSIVE PARKS
4 HUMAN-INTENSIVE PARKS
THREE SCENARIOS

Daniel Garczek
TOTAL PARK WALKING DISTANCE
= 1.5 mi
GRASSLAND - SECTIONS

WALKING PATH

SLEDDING HILL

WALK OVER WATER
ACTIVE EDGE-SITE PLAN
ACTIVE EDGE - SECTIONS

WALKING PATH

WALK OVER WATER
THREE SCENARIOS

Amanda Soto
Calumet Dunes
Perspective Progression of Design

First Iteration
Idea: A high density park with loose circulation so people could experience the park how they choose.

Current Design
Grove of Cottonwood that provides shade and marks the transition between the dune ecosystem to the prairie ecosystem.
Dune ecosystem maintains a loose circulation pattern.
Ecology within the Park

**Trees**
- Cottonwood
- Black Oak
- Jack Pine

**Grasses**
- Little Bluestem
- Marram Grass
- Woodland Sedge

**Shrubs**
- Viburnum

**Herbaceous Plants**
- Milkweed
- Wild Geraniums
- Asters
First Iteration
Idea: A winding path park that curved around native habitats of endangered species who have been on decline.

Current Design
A park that preserves the native habitat of shorebirds and pollinators. Maximizes the water’s edge so shorebirds have more space to nest. People can view from afar.
Eco-Lab Section

Ecology within the Park

Trees
- Cottonwood
- Swamp White Oak

Grasses
- Little Bluestem
- Prairie Dropseed
- Switch Grass

Shrubs
- Buttonbush
- Blueberry
- Raspberry

Herbaceous Plants
- Skunk Cabbage
- Blue Flag Iris
- Joe-pye-weed
Iroquois Bog
Perspective Progression of Design

First Iteration
Idea: An elevated boardwalk park that restricted the area where people could walk.

Current Design
A man made bog park that has stages to its development as the bog forms. Elevated walkway added after bog has settled.
Acidity Level Diagram
Slag found in the Chicago / Gary area neutralizes acidity. By placing slag around the perimeter of the bog, more common plants can inhabit this area while the center of the bog remains acidic.

Circulation Diagram
Walking path extended to the corner of the park and hugs the perimeter tightly to avoid disturbing the bog.

Iroquois Bog
20 Years
Iroquois Bog

100 Years

Acidity Level Diagram
High acidity levels continue to spread within the center of the bog creating the habitat for rare and endangered plants.

Circulation Diagram
As the bog starts to settle, a new boardwalk is added to allow access within the bog.

Stagnant Lake
Bog
Education Center
Overlook
Bridge Connection

Walking Path Addition
Ecology within the Park

**Trees**
- Tamarack
- Aspen

**Acidity 5**
- Sundews
- Sphagnum Moss
- Pitcher Plants

**Acidity 6**
- Blueberries
- Ferns
- Iris

**Acidity 5.5**
- Slipper Orchids
- Sedges
THANK YOU FOR INVITING IIT AND THE MASTER OF LANDSCAPE ARCHITECTURE + URBANISM PROGRAM TO JOIN YOUR COMMUNITY