Welcome

Netsch Lecture
Summer 2022 Series Re:design
Netsch Lecture: CDF Park Designs Showcase

Hosted by: Friends of the Parks

Presenters:
Ron Henderson, Amanda Soto, and Daniel Garczyk from the Illinois Institute of Technology

July 20, 2022
Welcome!

· Tonight’s Agenda
  · Welcome and Introductions
  · Presentation and Design Scenarios
  · Open and Lively Discussion

Housekeeping:

· Please message Julie Malnak for any technology needs

· We will be recording the session. If you object to use sharing the dialogue portion please message Julie during the event or email - rachelbr@fotp.org
Questions and Discussions
Announcements

- Recording and materials can be found at https://www.fotp.org/2022-netsch-lectures.html

- Netsch Lecture: “DEPAVE CHICAGO”: a design approach and program to renature paved ground in communities
  - August 9, 12:00 pm to 1:30 pm - https://tinyurl.com/NetschlectureDepave

- Wellness Fair at Schafer Park
  - August 6 - In person

- DuSable Park Commemoration and Anniversary Event
  - August 20 at 10:30 am- 2:00 pm - In-person and online

- Netsch Lecture: Rivers Edge
  - September 1, 12:00 pm to 1:30 pm - Virtual - https://tinyurl.com/NetschRiversedge

- Netsch Lecture: Foster Beach Rock Drawings
  - September 24 - In person
FOTP Survey

- The Chicago Park District set a goal to reach 2020 acres of natural areas by 2020 (at 1890 as 2019) and to equitably invest in communities of color. Friends of the Parks is surveying the community to increase community engagement and to learn about park usage and investment priorities for parks in Chicago’s SouthEast side.
- We would love to hear your input and opinions about how you use parks!
- Scan the QR code with your phone camera (hover the camera over the QR code until the link pops up and then tap the link)
- Or click the link in the chat
If you’d like to continue the conversation or talk more with our policy team, please contact us!

- **Rachel Birkhahn-Rommelfanger** (Director of Policy and Advocacy):
  - Email: rachelbr@fotp.org
- **Julie Malnak** (Policy and Communications Associate):
  - Email: malnakj@fotp.org
- [FOTP Website](https://www.fotp.org/)
PARK

Landscape Architecture + Urbanism Program
Illinois Institute of Technology

Amanda Soto and Daniel Garczek
Professor Ron Henderson
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
Wet Prairies

Wetlands
- Bog
- Panne
- Fens
- Marsh

Dunes
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.

1870  (Chicago Fire was 1871)
Calumet River, 1870s
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
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 and opened in 1905. The fieldhouse was constructed in 1924, and the park continued to expand until the 1930s.
1994
Combined Disposal Facility begun 1982
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.

https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/PetCoke_Public_Comments/PubCom NRDCSETFComonNAStevedoringVarReq922014.pdf
https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/CDPHResp_NASCOReq_Reconsideration_7 182018.pdf
https://www.epa.gov/1f/north-american-stevedoring-compan
Evidence of significant expansion of shipping container storage since 2015 that encroaches into the former woodland.
We will vision, dream, and create plans for this promised park!

Next to Calumet Park sits a Confined Disposal Facility (CDF) that stores the toxic sediment dredged from the Calumet River. This dump, at the point where river and lake meet, has been promised to be transformed into a park.

Evidence of significant expansion of shipping container storage since 2015 that encroaches into the former woodland.

The potential area for the park is greatly diminished from the LAST FOUR MILES CONCEPT PLAN from July 4, 2009.
Drying dredge pad (beneficial use)

Drying dredge pad (confined disposal)

Illinois-Indiana state boundary

Dewatering pond

Very narrow connection to Calumet Park
LAKE MICHIGAN SHORELINE
APPROXIMATELY 2,800 FEET
ABOUT 1/2 MILE
ABOUT A 10-15 MINUTE WALK ONE WAY

CALUMET RIVER SHORELINE
APPROXIMATELY 1,200 FEET
COMPARISON OF CDF AREA TO ADJACENT PARKS

Steelworkers Park

CDF

Calumet Park
Beach, Fieldhouse, Coast Guard

Chicago Vocational H.S.
Jesse Owens Park
Bike Route
Metra
Bus Route
POOR PUBLIC TRANSPORTATION ACCESS
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

Slag is the byproduct 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.
PRECEDEENTS

4 NATIVE ECOSYSTEM MODELS
4 NATURE-INTENSIVE PARKS
4 HUMAN-INTENSIVE PARKS
AND
PROMONTORY POINT PARK
PROMONTORY POINT PARK

cul-de-sac, 12 acres vs. CDF 42 acres
ASSUMPTIONS
ASSUME NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
EXISTING ACCESS VIA EWING AVENUE BRIDGE
ADAPTIVE RE-USE OF RAILROAD LIFT BRIDGE (KREITER AVENUE ACCESS THROUGH PORT)
NEW CALUMET RIVER PEDESTRIAN AND CYCLIST BRIDGE
ACCESS FROM CALUMET PARK
BETWEEN RIP RAP SHORE OF LAKE MICHIGAN AND
PRECAST CONCRETE OF CONFINED DISPOSAL FACILITY CDF

PRIMARY CONNECTION WILL BE FROM CALUMET PARK
SHOWN HERE LOOKING NORTH FROM CALUMET PARK
ASSUMPTIONS

1. NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
2. PRIMARY CONNECTION WILL BE TO CALUMET PARK
ASSUMPTIONS

1. NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
2. PRIMARY CONNECTION WILL BE TO CALUMET PARK
3. NO STRUCTURE TO BE BUILT ON THE SITE
ASSUMPTIONS

1. NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
2. PRIMARY CONNECTION WILL BE TO CALUMET PARK
3. NO STRUCTURE TO BE BUILT ON THE SITE
4. NO HIGH INTENSITY PROGRAMMING OR USES (E.G. CONCERTS)
ASSUMPTIONS

1. NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
2. PRIMARY CONNECTION WILL BE TO CALUMET PARK
3. NO STRUCTURE TO BE BUILT ON THE SITE
4. NO HIGH INTENSITY PROGRAMMING OR USES (E.G. CONCERTS)
5. SITE WILL BE CAPPED AT CURRENT DREDGE CAPACITY. NEW CLEAN FILL AND SOIL WILL BE ADDED TO SHAPE THE TOPOGRAPHY ONLY.
ASSUMPTIONS

1. NO NEW BRIDGE CONNECTION TO STEELWORKERS PARK
2. PRIMARY CONNECTION WILL BE TO CALUMET PARK
3. NO STRUCTURE TO BE BUILT ON THE SITE
4. NO HIGH INTENSITY PROGRAMMING OR USES (E.G. CONCERTS)
5. SITE WILL BE CAPPED AT CURRENT DREDGE CAPACITY. NEW CLEAN FILL AND SOIL WILL BE ADDED TO SHAPE THE TOPOGRAPHY ONLY.
6. THE SITE IS LIMITED TO THE CURRENT CDF BOUNDARY.
THREE SCENARIOS

Daniel Garczek
Eco-Loops Park creates the most diverse ecosystem. The four loops create pedestrian paths totalling 1.5 miles on which visitors experience changing environments through the thicket, prairie, grass field and shallow marsh wetland.
Eco-Loops Park

Sections

Prairie

Thicket

Wetland

Grass Field
Eco-Loops Park

Perspective

Thicket

Amphitheater

Accessible Path

Prairie

Grass Field
Grassland Park constructs an experientially-rich ADA accessible trail that meanders and gently slopes over hills and valleys leading to a lookout summit, sledding and kite hill, trail bridge and a gathering space overlooking the lake’s edge.
Grasslands Park

Aerial View

- Lookout Summit
- Sled / Kite Hill
- Trail Bridge
- Gathering Space
- De-watering Pond with Boardwalk
- Helicopter Viewing
Successional Woodland Park will gather the efforts of the community through the planting of diverse species of trees that will grow into a biodiverse thicket over time.
Successional Woodland Park

Stage 1: Perennial grasses and wildflowers
0-12 years

Stage 2: Shrub & seeding brush
10-18 years

Stage 3: Sapling & Pole
15-25 years

Stage 4: Mature Woodland
25-50 years

Stage 5: Dynamic disturbance
50+ years
Successional Woodland Park
NS & EW Sections

Lake Michigan
De-watering Pond
Successional Woodland Park
Aerial View

- Thicket
- Observation Ring
- Shallow Marsh Wetland
- De-watering Pond and Boardwalk
Successional Woodland Park
Perspective of Boardwalk looking East to Lake Michigan

De-watering Pond becomes bio-habitat
THREE SCENARIOS

Amanda Soto
Eco-Lab

Eco-Lab is a conservation landscape that constructs habitat for threatened bird species and native pollinators.
Eco-Lab
Landscape Plan + Diagrams

Seed Distribution
The Pollinator Prairie has shallow channels that stay damp. Seed distributor stations located along the west side of the site let seeds disperse in the wind across the site.

Circulation Diagram
Bike paths loop around the perimeter of the park. More intimate walking paths meander through the center of the park. Program heavy boardwalk on along the East side boarder.

Features:
- Shoebird Swamp
- Sculpture Garden
- Channels
- Pollinator Prairie
- Exploration Area
- Picnic Seating
Eco-Lab
Perspective inside the grassland furrows
Eco-Lab
Sections
Iroquois Bog is a constructed native ecosystem that will mature over the span of 100 years to create a park for rare and threatened plant species to thrive.
Iroquois Bog
Landscape Plan + Diagrams
When Planted

Pinhook Bog Size Comparison
Located in La Porte, IN is part of the Indiana Dunes National Park.
Pinhook Bog is a bit larger than the CDF site and has an East West orientation.

Stagnant Lake
Bog
Dock
Iroquois Bog
Iroquois Bog
Landscape Plan + Diagrams
20 Years

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
Landscape Plan + Diagrams
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
Overlook

Acidity 5.5
Acidity 5
Acidity 6
Iroquois Bog

Sections
Iroquois Bog

Ecology

Trees
- Tamarack
- Aspen

Acidity 5.5 - rare
- Slipper Orchids
- Sedges

Acidity 6
- Blueberries
- Ferns
- Iris

Acidity 5 - most rare
- Sundews
- Sphagnum Moss
- Pitcher Plants
Iroquois Bog
Perspective at 100 years with bog overlook
Calumet Tree Farm
Perspectives

Calumet Tree Farm is a green industry park that grows trees for reforesting existing parks and parkways within the community and create a managed forest for people to explore.
Calumet Tree Farm
Landscape Plan + Diagrams

Circulation Diagram
Main walking paths at the perimeter that branch out to multiple council rings within the forest.

10 Year Old Trees = 99 tons of CO2 collected
OR
675,000 Barbeques

Tree Farm
Council Ring
Farmers Market
Calumet Tree Farm
Perspective along Lake Michigan shoreline
access from Calumet Park
Eco-Lab

Iroquois Bog

Calumet Tree Farm
THANK YOU FOR INVITING IIT AND THE MASTER OF LANDSCAPE ARCHITECTURE + URBANISM PROGRAM TO JOIN YOUR COMMUNITY
ALL 6 SCENARIOS

Daniel

Amanda