THE NORTH COAST DESIGN COMPETITION

DESIGNING DREDGE

Re-Envisioning the Toledo Riverfront

Ideas Competition
ABOUT THE NCDC

The North Coast Design Competition strives to promote a mutualistic thriving of both human and natural systems within the Great Lakes Basin. By way of topical ideas competitions and subsequent publications, the NCDC places hope and optimism in the transformative power of design and design thinking in shaping the future of the region. Topics chosen are considered relevant and timely to the Great Lakes region and are meant to generate a series of robust and inspired design solutions that will draw attention to important issues while projecting future possibilities that are genuine to the North Coast.

THE CURRENT PROJECT

The city of Toledo is currently reconsidering a series of highly visible landscapes along its river waterfront. These sites are either undergoing construction due to the installation of large stormwater mitigation infrastructure or were small dredge storage facilities that have reached design capacity. In both cases, these landscapes have the potential to be repositioned as a series of unique and highly valuable sites along the Maumee River, amassing over 170 acres. The competition reaches out to designers and planners of all ages and abilities and calls for ideas that re-envision the role of the riverfront in Toledo and how this new role can embrace the realities of dredging while enhancing the overall quality of public space within the city.
BACKGROUND

Dredging
In order to maintain navigation channels in the Great Lakes / St. Lawrence system approximately 3 million cubic yards of material must be removed from the United States federal shipping channels each year. With increasing ship size, decreasing water levels and serious deficiencies in upland sediment management, this dredging operation is likely to continue indefinitely. Almost 1/3 of this dredged material from the Great Lakes Basin comes from the Maumee Bay, near the city of Toledo, Ohio. Situated on the shallow, western end of Lake Erie, historic Toledo was the product of large dredging and ditching operations in the 1800s to drain what was then the Black Swamp and allow development to occur. Today this process of sediment management is still essential in order to keep the valuable and growing Toledo port industry functioning properly. It is estimated that up to 1 million cubic yards of material must be removed from the federal shipping channel each year in the Toledo harbor / Maumee Bay. Currently a good deal of this material is deemed safe and acceptable for open-water placement back into the lake. Smaller percentages are placed in confined disposal facilities or beneficially re-used. The subject of open-water placement is contentious, with speculations of its contributions to phosphorus loading and algal blooms in Lake Erie. While the immense volume of material and limited containment areas in Toledo may require open-lake disposal to remain part of the solution, there is strong pressure to find ways of minimizing it.

Stormwater Infrastructure
The City of Toledo is also well underway in addressing the stormwater management concerns it and many other Great Lakes Cities face. Mandated to reduce Combined Sewer Overflow Events by the EPA, Toledo and many other cities have begun implementing large stormwater management projects. In Toledo, due to the early EPA mandate, most of these management projects come in the form of hard or “Grey” infrastructure as opposed to “Green” infrastructure. The process of installing these projects (large, underground stormwater storage pipes) will require the temporary excavation and partial demolition of two current park spaces within the city (Edison Park and International Park).

Riverfront Development
The City of Toledo is slowly redirecting itself back to the river. A collection of recent and proposed projects attempt to leverage the Maumee river as a resource. Some of these include the proposed Marina District development project, the Maumee Bike Trail, The National Museum of the Great Lakes, the Imagination Station, Renovations to Promenade Park the Marina District and the Middlegrounds Metropark. Projects of this type are indicative of the importance of the water’s edge in Toledo. These civic assets share this edge with considerable industrial property managed by the Lucas County Port Authority. The port of Toledo is ranked 7th in the Great Lakes in total tonnage and handles almost 11 million tons of cargo annually. It is estimated that the port generates over $500M dollars in personal income and supports 7,000 jobs. Finding ways to cohabit the riverfront with this essential regional industry is a necessary and ongoing challenge.

THE PROGRAM
The program of the competition should focus on the reconsideration of riverfront land in the city of Toledo. The design and programming of these new waterfront sites is quite open to the participants, however, the use of dredge material in some capacity is required. Projects could consider residential or commercial development, parks and recreational programs, water management, habitat creation, research, or all of the above. While it is assumed that these sites will remain “public”, the level and types of accessibility remain at the discretion of the design teams. Projects that explore new ways of managing or incorporating dredge material are highly encouraged. Regionally proposed and supported projects such as the Maumee River Bikeway could also be taken into consideration. It is not necessary for project teams to address all 5 sites, however, be reminded that a core agenda of the competition is the envisioning of a transformed riverfront.

The only piece of required program for the competition is the placement and design of a Dredge Research Site. This site will be the location of a series of ongoing research projects that explore the possibilities of dredge material and its uses. The type of research is open to speculation by the design teams, but de-watering experiments, plant growth studies and admixing operations would all be likely. The research site is intended to also serve as an education location where residents, contractors and other interested parties can learn about dredging, dredge material management, and beneficial reuse. The design of this area should prioritize the relationship between dredge material and the public. By default, the Dredge Research Site should be located at the Riverside site (see below), but other locations are possible should they align with a larger design agenda.
THE DETAILS

The Sites

Edison Park
24 acres
Former Soil Dump
Situated directly below the new bridge, and in very close proximity to the city center, Edison Park has a rich collection of possible futures. While its history as a dump site could provide structural challenges, it is one of the only sites in consideration that could logically support development in a traditional sense. The proposed stormwater infrastructure installation at Edison Park will govern where development (if desired) could occur. As a rule, no physical structures should be placed over this infrastructure.

International Park
25 acres
City Park
Once home to the James M Schoonmaker Museum Ship, International Park now sits relatively vacant. Like Edison Park, International Park could also conceptually hold traditional development.

Penn 7
60 acres (12 acres currently submerged)
Former CDF
Penn 8
28 acres
Former CDF
Riverside
36 acres
Former CDF
These three sites were once disposal areas of dredge material. This fact makes their development difficult as the soil there has very little bearing capacity. All three of these sites could however contain recreation, habitat, research and other light, less intense uses. Due to its current dredge re-use operation, possible future home for an organic waster recycling facility and adjacency to Riverside Park, the Riverside site is the most logical location for the Dredge Research Site.

The Dredge Material
The dredge material available for the sites will be transported from CDF Site #3 on the eastern edge of the river mouth by truck. This material will be considered de-watered and safe when it arrives on site. The amount available will be considered unlimited. In its raw state, slopes of 1:5 are considered maximum, but explorations in structure and reinforcement are encouraged. The dredge material pulled from the Maumee is also extremely high in silt, significantly impeding its drainage characteristics and bearing capacity. Recent beneficial re-use project have shown the material to be quite productive as a growing medium. Projects that consider the particular qualities of the sediment will be favored over those that simply treat it as ubiquitous soil.

DELIVERABLES

(3) 24x36 boards in landscape orientation saved as PDF files and submitted via wetransfer (50mb max file size)

SCHEDULE

December 15   Website Launch
February 1     Registration open
February 30    Early registration deadline
March 15       FAQ deadline
March 20       FAQ answers posted
March 30       Registration deadline
April 15       Submission due
May 1          Jury Review
June 15        Winners Announced

JURY (CONFIRMED)

Andrew Moddrell, Principle
PORT Architecture | Urbanism
Chicago, Illionis

Joe Cappel, Director
Cargo Development
Toledo Port Authority

Dennis Garvin, Commissioner
Parks, Recreation + Forestry
City of Toledo

AWARDS

First Prize   $2000
Finalists (2) $500 each
Honorable Mention (3)

REGISTRATION

$35 Early
$45 Standard

QUESTIONS

Sean Burkholder
Assistant Professor of Landscape and Urban Design
SUNY | University at Buffalo
School of Architecture and Planning
sean@northcoastdesigncompetition.com
University at Buffalo
School of Architecture and Planning

Penn State University
Stuckeman School of Architecture and Landscape Architecture