



# PEORIA LAKE ISLAND CONSTRUCTION

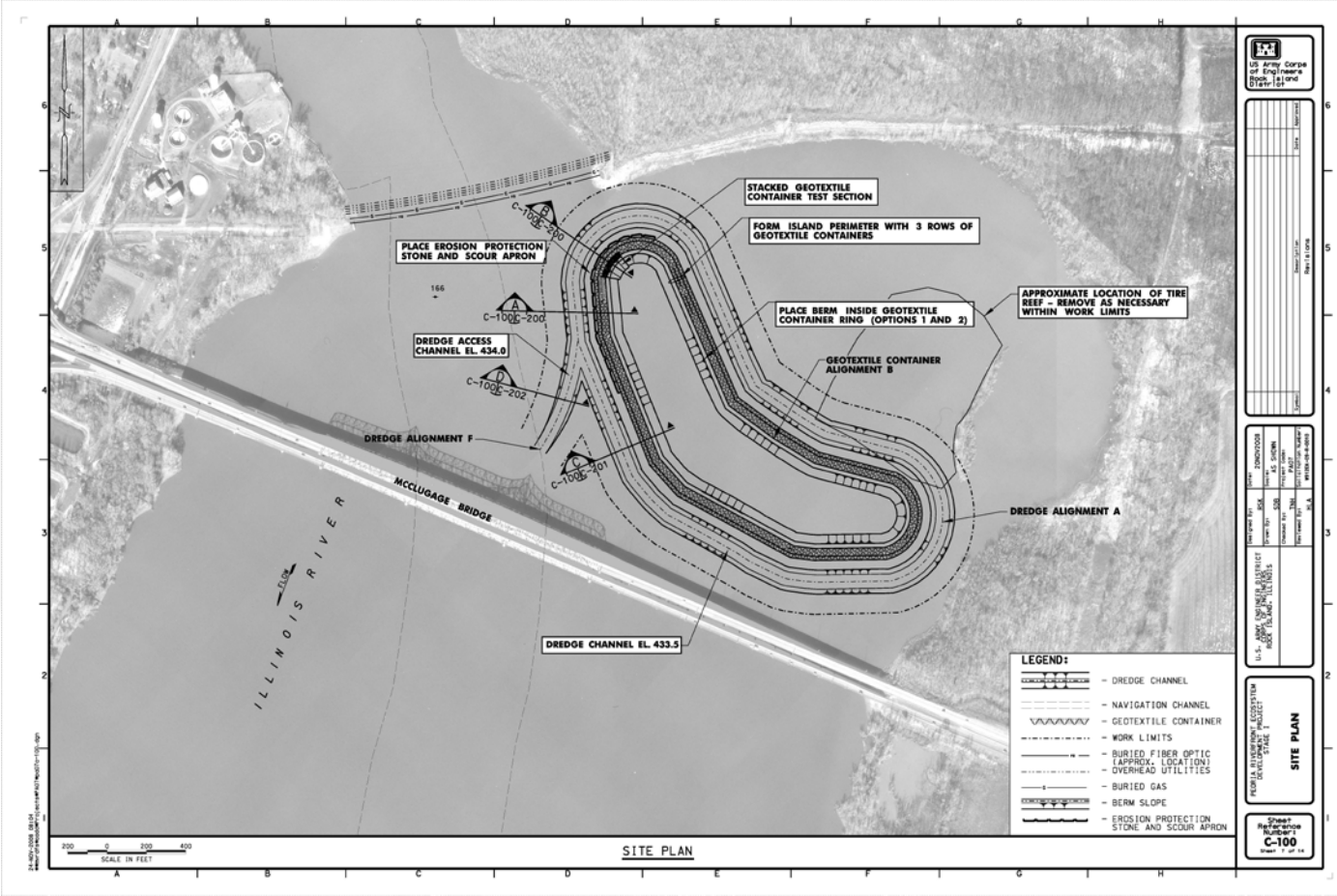
Lessons learned

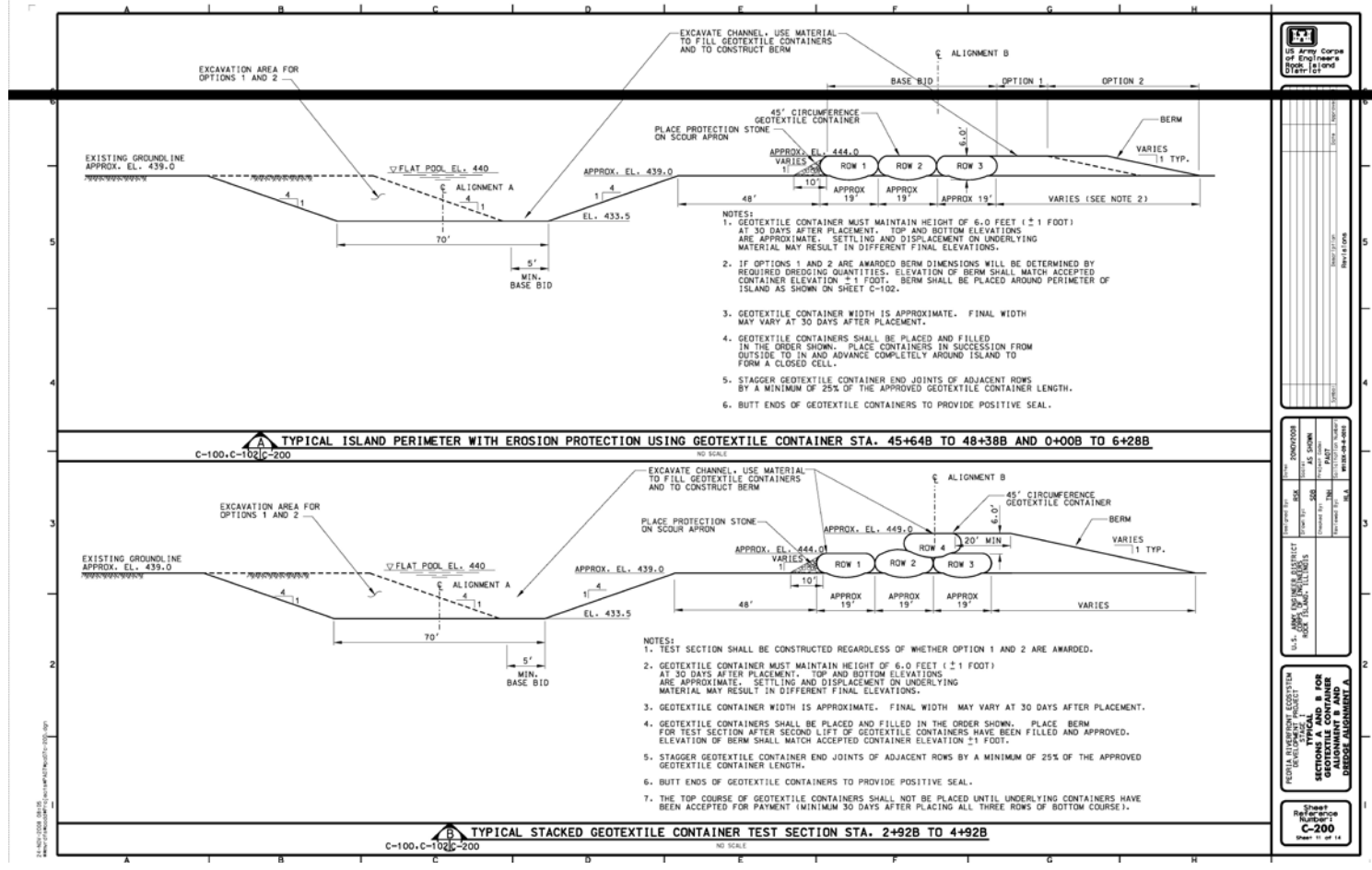
# MIDWEST FOUNDATION 2009-2012

UNITED STATES ARMY CORPS OF ENGINEERS



# Fish Habitat and Island Creation





- NOTES:
1. GEOTEXTILE CONTAINER MUST MAINTAIN HEIGHT OF 6.0 FEET ( $\pm 1$  FOOT) AT 30 DAYS AFTER PLACEMENT. TOP AND BOTTOM ELEVATIONS ARE APPROXIMATE. SETTling AND DISPLACEMENT ON UNDERLYING MATERIAL MAY RESULT IN DIFFERENT FINAL ELEVATIONS.
  2. IF OPTIONS 1 AND 2 ARE AWARDED BERM DIMENSIONS WILL BE DETERMINED BY REQUIRED ORDERING QUANTITIES. ELEVATION OF BERM SHALL MATCH ACCEPTED CONTAINER ELEVATION  $\pm 1$  FOOT. BERM SHALL BE PLACED AROUND PERIMETER OF ISLAND AS SHOWN ON SHEET C-100.
  3. GEOTEXTILE CONTAINER WIDTH IS APPROXIMATE. FINAL WIDTH MAY VARY AT 30 DAYS AFTER PLACEMENT.
  4. GEOTEXTILE CONTAINERS SHALL BE PLACED AND FILLED IN THE ORDER SHOWN. PLACE CONTAINERS IN SUCCESSION FROM OUTSIDE TO IN AND ADVANCE COMPLETELY AROUND ISLAND TO FORM A CLOSED CELL.
  5. STAGGER GEOTEXTILE CONTAINER END JOINTS OF ADJACENT ROWS BY A MINIMUM OF 25% OF THE APPROVED GEOTEXTILE CONTAINER LENGTH.
  6. BUTT ENDS OF GEOTEXTILE CONTAINERS TO PROVIDE POSITIVE SEAL.

- NOTES:
1. TEST SECTION SHALL BE CONSTRUCTED REGARDLESS OF WHETHER OPTION 1 AND 2 ARE AWARDED.
  2. GEOTEXTILE CONTAINER MUST MAINTAIN HEIGHT OF 6.0 FEET ( $\pm 1$  FOOT) AT 30 DAYS AFTER PLACEMENT. TOP AND BOTTOM ELEVATIONS ARE APPROXIMATE. SETTling AND DISPLACEMENT ON UNDERLYING MATERIAL MAY RESULT IN DIFFERENT FINAL ELEVATIONS.
  3. GEOTEXTILE CONTAINER WIDTH IS APPROXIMATE. FINAL WIDTH MAY VARY AT 30 DAYS AFTER PLACEMENT.
  4. GEOTEXTILE CONTAINERS SHALL BE PLACED AND FILLED IN THE ORDER SHOWN. PLACE BERM FOR TEST SECTION AFTER SECOND LEFT OF GEOTEXTILE CONTAINERS HAVE BEEN FILLED AND APPROVED. ELEVATION OF BERM SHALL MATCH ACCEPTED CONTAINER ELEVATION  $\pm 1$  FOOT.
  5. STAGGER GEOTEXTILE CONTAINER END JOINTS OF ADJACENT ROWS BY A MINIMUM OF 25% OF THE APPROVED GEOTEXTILE CONTAINER LENGTH.
  6. BUTT ENDS OF GEOTEXTILE CONTAINERS TO PROVIDE POSITIVE SEAL.
  7. THE TOP COURSE OF GEOTEXTILE CONTAINERS SHALL NOT BE PLACED UNTIL UNDERLYING CONTAINERS HAVE BEEN ACCEPTED FOR PAYMENT (MINIMUM 30 DAYS AFTER PLACING ALL THREE ROWS OF BOTTOM COURSE).

US Army Corps of Engineers  
 Hydrologic Engineering Center  
 Station 125

DESIGNED BY: JONATHAN...  
 DRAWN BY: ...  
 CHECKED BY: ...  
 APPROVED BY: ...

FEDERAL BUREAU OF SURVEY  
 SECTION A AND B FOR  
 CALCULATION OF  
 BRIDGE ALIGNMENT A

Sheet Reference  
 C-200  
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# Operational Methodology



3900 Crane Dredging and loading Hopper

Concrete pump transporting slurry to Geotubes

# Operational Challenges



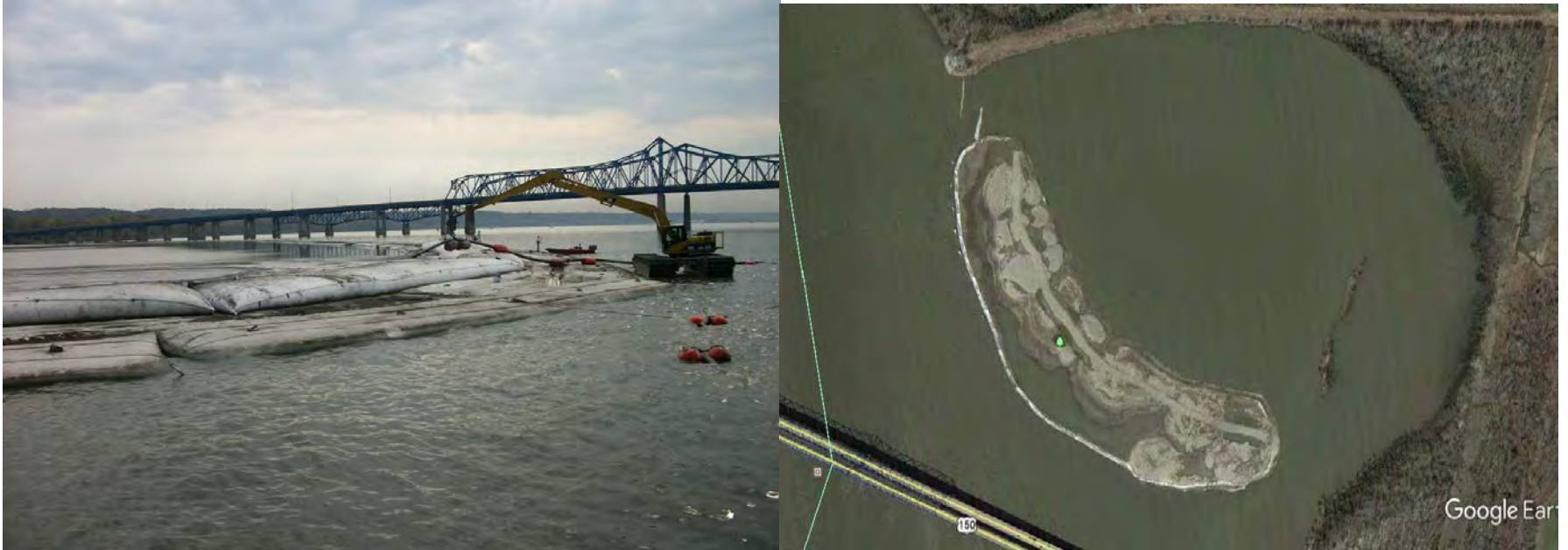
No Problems Right?  
Limited Pumping Distance  
Cut and Fill Calculations  
Trash, Tires, Debris  
Different Types of Material

# More Challenges



High Water and More High Water  
Clay Material – Equipment Change  
Change in Methods for Phase II

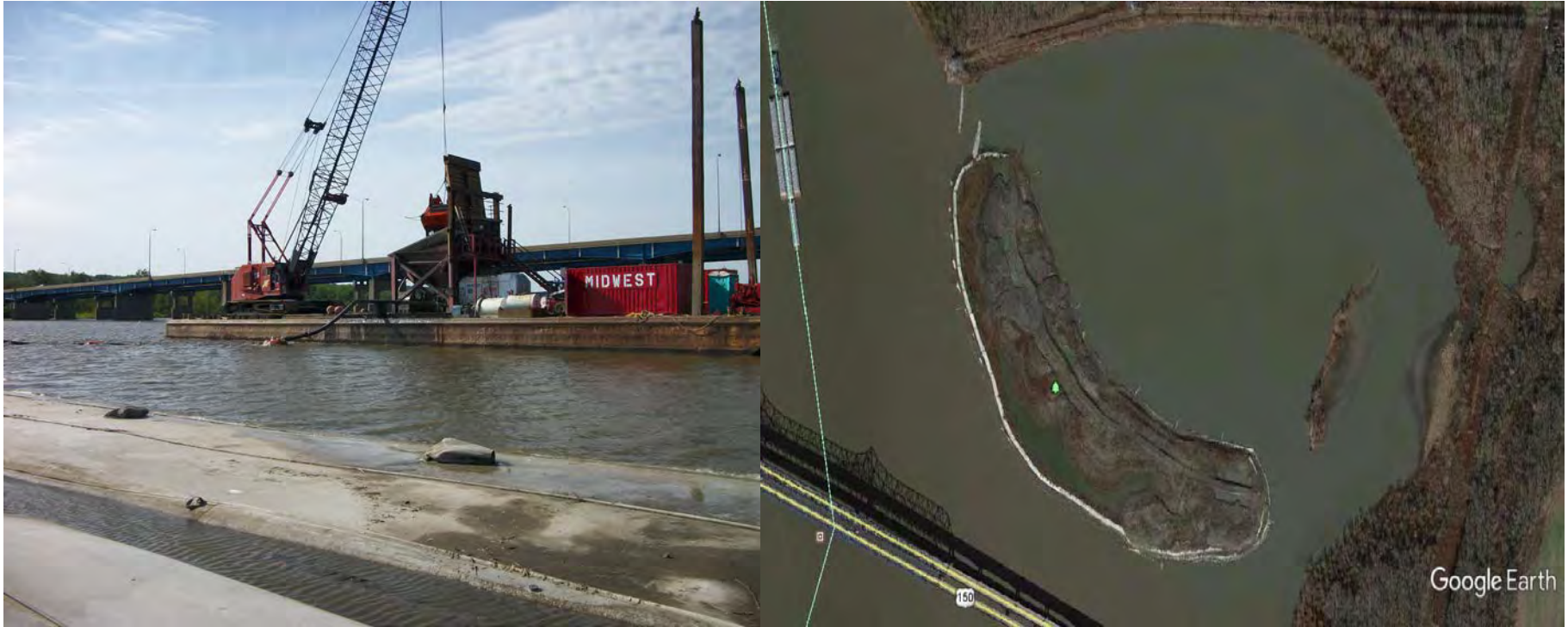
# Project Team Challenges



Budget  
Bag Settlement  
Illinois DNR  
Schedule



# Lessons Learned



- Geotube settlement time
- Fish Habitat is doing fine
- Material type is important
- Engineering is important and difficult

# Today



More Islands Planned

Is this really the most cost efficient method of Construction

Changes in technology