Learning Objectives

A. Learning Objective #1: Understand the technical challenges associated with building a park over an existing structure while still providing a high quality public realm experience.

B. Learning Objective #2: Examine the complexity of integrating a project’s programmatic elements with its required infrastructure.

C. Learning Objective #3: Learn about the technical process and complexities of material reuse in a large-scale public project.

D. Learning Objective #4: Hear from a general contractor’s view; the logistics and challenges of building a major new park on top of a parking structure and within a busy urban context.

Introduction

A. Overview of the project vision and site context.

B. Introduction to the topics that will be presented:
   • Technical challenges faced during the design process.
   • Program components.
   • The logistics of building a technically complex park.
Design Challenges

A. Garage deck weight limitations
   • Large scale use of lightweight fill.
   • Drainage strategy.
B. Accessibility
C. Existing infrastructure and edges.
D. Noise and wind reduction through landforming.
E. Project phasing and its coordination with new structural foundations.

F. Strategic placement of foundations as they relate to the garage superstructure.
G. Utility services systems.
H. Vertical relationships between the horizontal layers that build up the park.
I. Maximizing the reuse of existing materials
   • Upside down trees, benches, and planks.
   • Planting soils.
   • Geofoam.

J. Skating Ribbon
   • Program vision.
   • Defining its goals and expectations.
   • Thermal Chicago as the refrigeration source and the importance of studying alternate options.
   • Designing a sloping ice sheet surface.
   • Weight limitations and the value of lightweight fill.
Design Challenges

J. Skating Ribbon (cont.)
• Drainage strategy and its relationship with the overall park stormwater management.
• Refrigeration and ice melting systems.
• Spatial constraints for mechanical equipment due to building size and location.
• Coordination and integration of a highly complex scheme within the park’s utility infrastructure.

Construction Challenges

A. The importance of advance planning.
B. Creating a realistic sequencing and logistics plan.
C. Establishing a working relationship with the design team to ensure design intent.
D. Maximizing the use of a limited construction site.
E. The challenges of coordinating and installing lightweight fill at a large scale.

Construction Challenges

F. On-site soil blending and manufacturing of planting soils.
G. Placement of fill and planting soils over a structure with weight restrictions.
H. Coordination and assembly of intricate programmatic equipment.
I. Quality control at the source of production and follow through on site.
Contact Information

A. Martin Roura  
Michael Van Valkenburgh Associates, Inc. 
Mroura@mvvainc.com

B. Jim Maland  
Stantec  
Jim.Maland@stantec.com

C. Jeffery Rodgers  
Walsh Construction Company  
Jrogers@walshgroup.com