

**APPROVED**

MINUTES OF OCTOBER 3, 2017 SPECIAL PROJECTS AND FACILITIES  
COMMITTEE MEETING  
GLENCOE PARK DISTRICT  
999 GREEN BAY ROAD, GLENCOE, ILLINOIS 60022

The meeting was called to order at 7:18pm and roll was called.

Committee Members present:

Lisa Brooks, Chair/Vice President  
Stefanie Boron, Commissioner  
Steve Gaines, Commissioner

Staff present:

Lisa Sheppard, Executive Director/Secretary  
Chris Leiner, Director of Parks/Maintenance  
Carol Mensinger, Director of Finance/HR  
Bobby Collins, Director of Recreation/Facilities  
Erin Maassen, Manager of Marketing/Comm.

Commissioners present:

Josh Lutton, Treasurer

Members of the Public in attendance who signed in or spoke: Dan Dorfman, John McManus, Brent Sumner, Ed Torrez

Introduction of Bluff Beach Evaluation Team and an Overview of Scope of Project: John McManus of Altamanu, Brent Sumner of Baird, and Ed Torrez of Bauer Latoza Studio gave the presentation attached to these minutes. Discussion ensued.

Chair Brooks took an informal vote and the Board decided to move the Bluff Beach Project forward for approval at the October Regular Board meeting.

Other Business: Executive Director Sheppard announced that Astor Park officially opened. West Park temporary lights were reviewed along with a shed for the football program. Play equipment concepts were discussed for Woodlawn, Jefferson and Vernon, and Old Elm parks.

Matters from the Public: There were no matters from the public.

Adjourn: Commissioner Gaines moved to adjourn the meeting at 8:45pm Commissioner Boron seconded the motion, which passed by unanimous voice vote.

Respectfully submitted,

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Lisa M. Sheppard  
Secretary



First a reminder

West Park in January 2017





West Park in September 2017











# Glencoe Beach and Bluff Stabilization

Presentation to the Finance Committee of the Whole  
Glencoe Park District  
October 3<sup>rd</sup> 2017

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# Project Rationale:

## Why it has to be done

## Existing Conditions



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STUDIO

# Lakefront Park January 2017: Storm Water & Drainage



Water Flows Across Paths in Park and Along Hazel Ave



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# Lakefront Park: Storm Water & Drainage



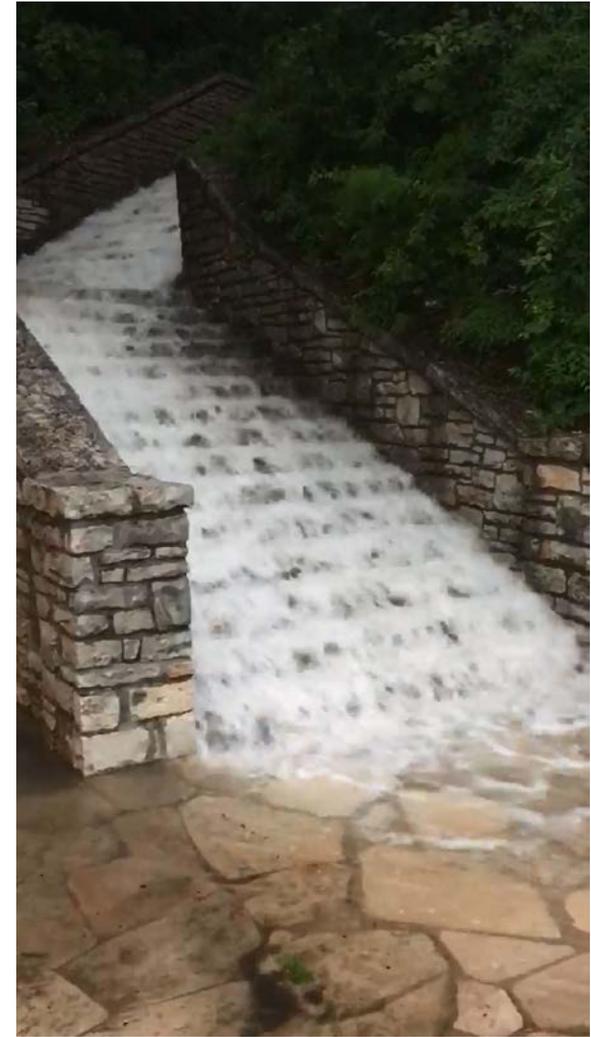
Water Flows Across Paths and Down Bluff



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# Lakefront Park: Storm Water & Drainage



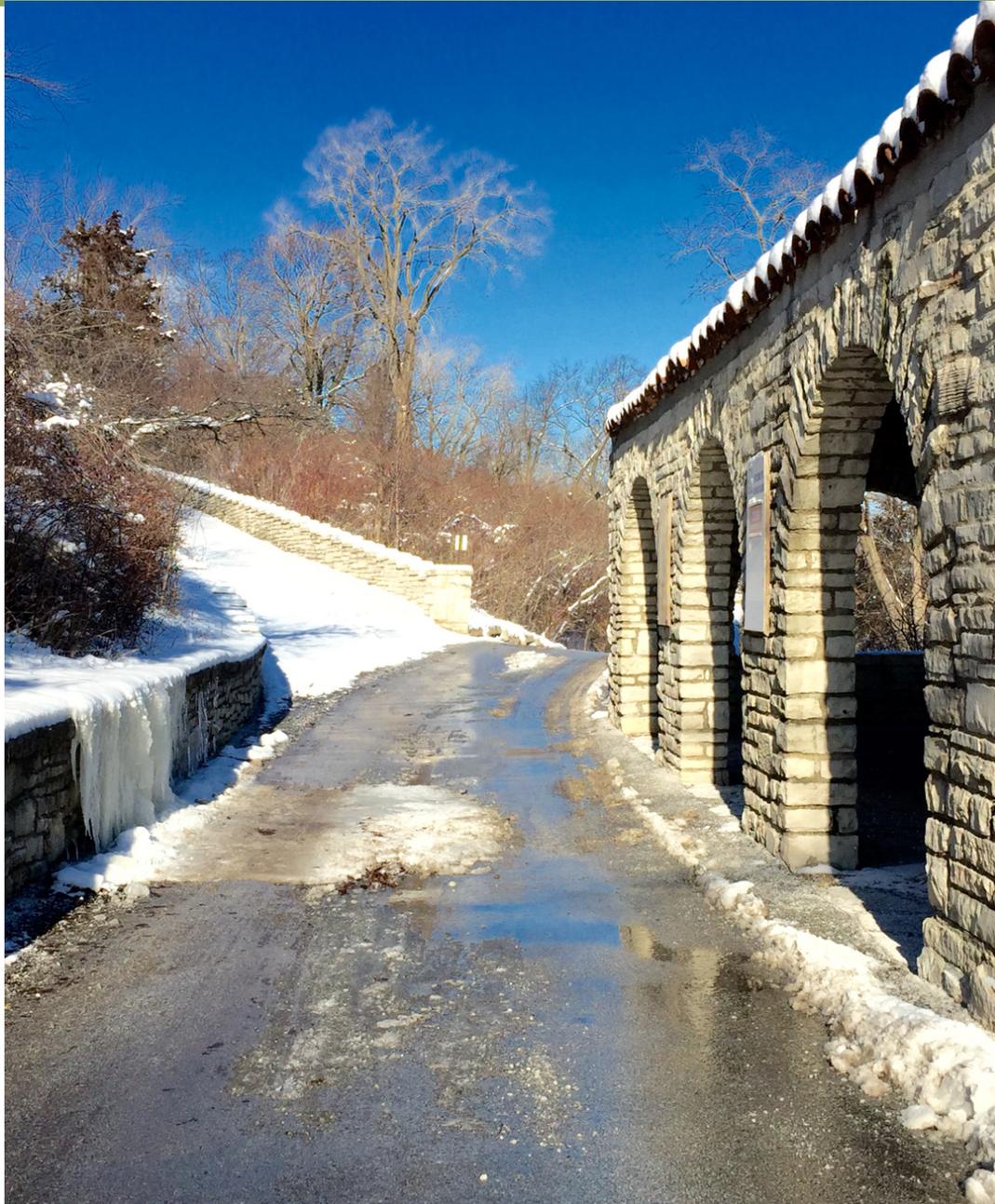
Stairs and Half Way House Inundated after rainfall



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# All Seasons: Storm Water & Drainage



# Movement in the Bluff and Structural Failure July 7<sup>th</sup> 2017



Movement in Roadway



Edging/retaining wall giving way



# Structural Failure July 7<sup>th</sup> 2017



Cribbing Failure – Bluff is pressing down on Beach House



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# Project Limits

## EXISTING CONDITIONS

- ① GLENCOE BOAT HOUSE (NOT IN SCOPE)
- ② NORTH BEACH
- ③ GLENCOE VILLAGE WATER PLANT (NOT IN SCOPE)
- ④ OVERLOOK
- ⑤ PRECAST CONCRETE CRIB RETAINING WALL
- ⑥ ROADWAY CURB
- ⑦ NORTH DRIVEWAY (WITH STONE RETAINING WALL)
- ⑧ HALFWAY HOUSE
- ⑨ SOUTH BEACH
- ⑩ LAKEFRONT PARK
- ⑪ STAIRWAY WITH STONE RETAINING WALL
- ⑫ SOUTH ROADWAY (WITH STONE RETAINING WALL)
- ⑬ BEACH HOUSE



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  - ⑬ BEACH HOUSE

Boat House →

Water Plant →



LAKE MICHIGAN

GLENCOE

Direction from Chris Leiner

“ Find the best, Glencoe deserves the best”



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”a global coastal engineering company that boasts offices in Canada, Chile, the United Arab Emirates, Barbados, and Australia.....Baird has now been in business for 25 years, but their work spans – and in a small but significant way, remakes – the globe”.

*In Business Magazine*

**Baird.**

Innovation Engineered.

**Lars Barber, P.L.A.**

Principal in charge and will be reviewing deliverables.

**Caleb Barth, P.E.** Marine Engineer

Project Manager, data acquisition and structural reviews.

**Richard Christensen, P.E., Ph.D.,**

Technical lead for bluff stability

**Mohammad Dibajnia, P.E., Ph.D.,**

Technical lead for coastal processes

(nearshore hydrodynamics, sediment transport, erosion control and beach protection.)

## **Brent T. Sumner, P.E.**

Senior Marine Engineer

Domestic and International Projects

Projects ranging in size from \$300,000 to \$350 Million

- Chicago Shoreline Diversey to Fullerton
- Port Hedland, Western Australia
- Oman
- Brazil
- Barbados
- Benin West Africa
- Ghana

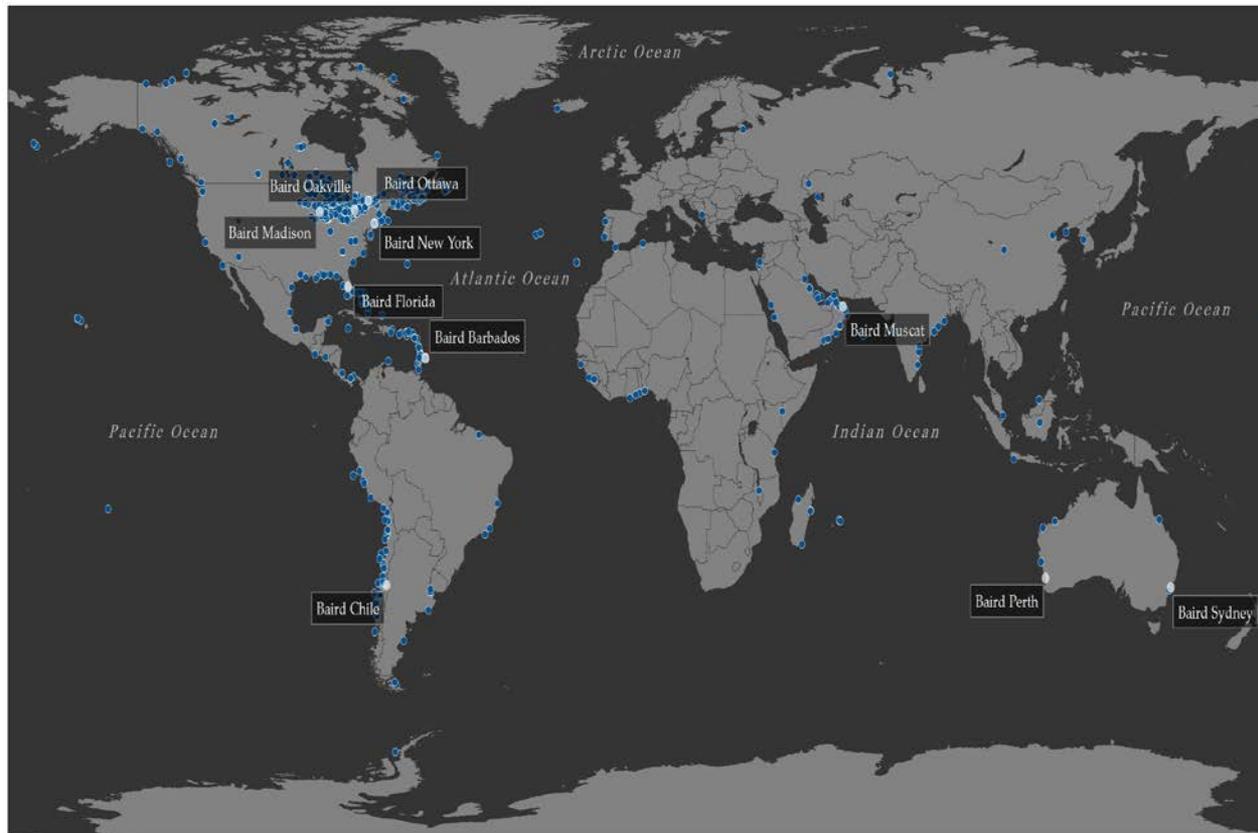
# Glencoe Beach and Bluff Restoration

Finance Committee of the Whole & Special Projects and Facilities Committee  
Glencoe Park District

October 3, 2017

# Baird Overview

- Employee owned Small Business
- Established in 1981
- Team of engineers, planners, scientists, and geomorphologists
- Specialists 100% dedicated to water related projects
- Thousands of marine projects and studies worldwide
- Approximately 74 employees



# Baird Capabilities



## Areas of Expertise

- Coastal Engineering
- Shore Protection Systems, Beaches & Lagoons
- Bluff Stability
- Waterfronts and Marinas
- Habitat Restoration & Development (Rivers, Wetlands & Islands)
- Ports and Marine Terminals

## Professional Skills & Services

- Site Analysis & Field Investigations
- Market Analysis
- Conceptual Design & Feasibility Studies
- Numerical & Physical Model Studies
- Regulatory Coordination
- Final Design
- Construction Related Services

# Baird Key Differentiators and Local Project History

## Key Differentiators

- Specialization has resulted in subject matter expertise
- Highly efficient, talented, and globally experienced staff
- Flexibility and responsiveness (small, efficient group – one team)
- Solving complex problems in the marine environment – globally
- Use of sophisticated tools and expertise to create safe, environmentally responsible, AND operationally optimized marine projects



Baird Project Locations: Southern Lake Michigan

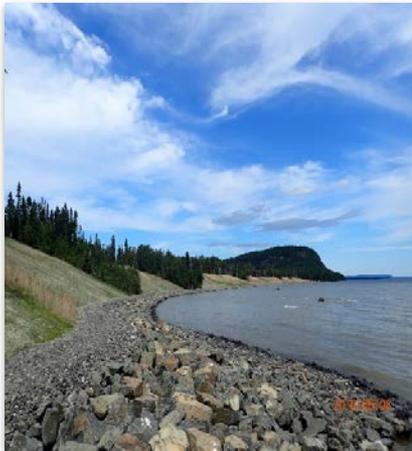
# Beach and Bluff Erosion Projects



Port Vincent Development  
Port Washington, WI,  
Lake Michigan



Rosewood Beach, Highland Park, IL, Lake Michigan



Whitesand First Nation  
Shoreline  
Stabilization  
Lake Nipigon, Ontario,  
Canada

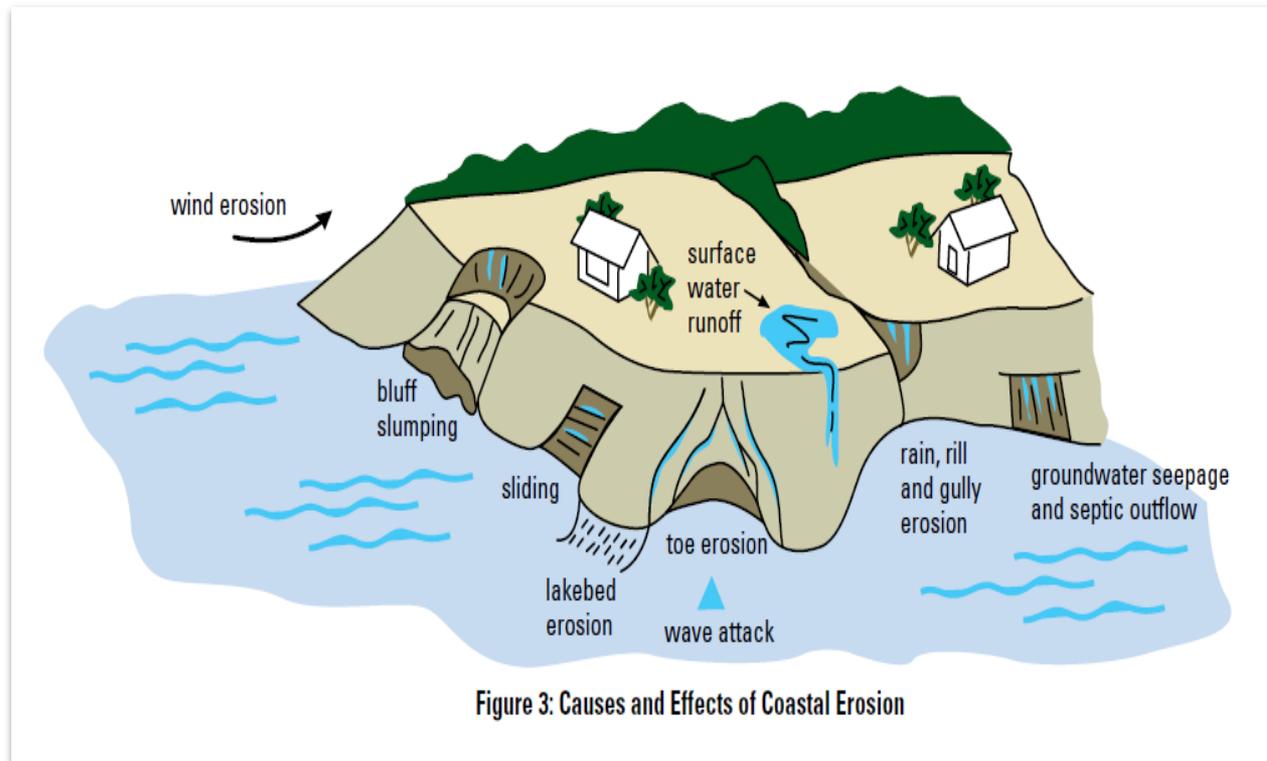


Forest Park Beach, Lake Forest, IL, Lake Michigan



Illinois Interim Shoreline  
Study, Northern Illinois,  
Lake Michigan

# Bluff Stability Projects - Key Factors



- Bluff slope stability and instability (soil type, soil properties, steepness of bluff, etc.)
- Surface water runoff
- Groundwater seepage through bluff core & face
- Proper toe protection (beach and structure stability, coastal analysis)

# Glencoe Project Site – Plan of Action

## 1. Investigate Site Conditions



## 2. Review and Analyze Data

- Global and local bluff stability evaluation
- Structural and Geotechnical review
  - Retaining Walls, Halfway House, Beach House Back Wall, Stone Steps, North Bluff Roadway
- Stormwater System review
- Coastal Structure and Beach review

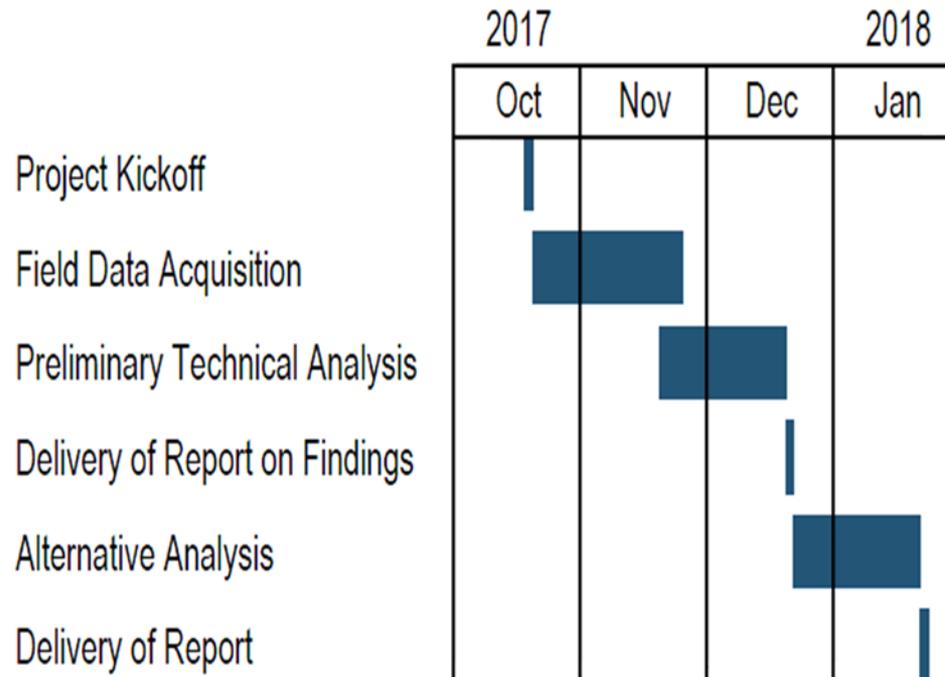
## 3. Alternative Analysis

# Next Steps

## Geotechnical Data Acquisition

### Accelerated Schedule

- Pending board approval



## Bauer Latoza Studio



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STUDIO

Architecture - Planning - Historic Preservation

Sustainable Design

Local, national, and international markets

more than 30 design awards

Federal, State, and Local Government

MBE and DBE

# Bauer Latoza Studio

- Founded in 1990
- Award-winning Preservation firm
- Architecture, Interiors, Planning, Restoration & Adaptive Reuse
- Masonry Repairs Experience
- Technically Skilled
- Strong Project Management
- Coordination with Stakeholders



*Columbus Monument, Chicago, IL Museum of Science & Industry, Chicago, IL*



*Grant Monument, Chicago, IL*



*Humboldt Park Boathouse, Chicago, IL*

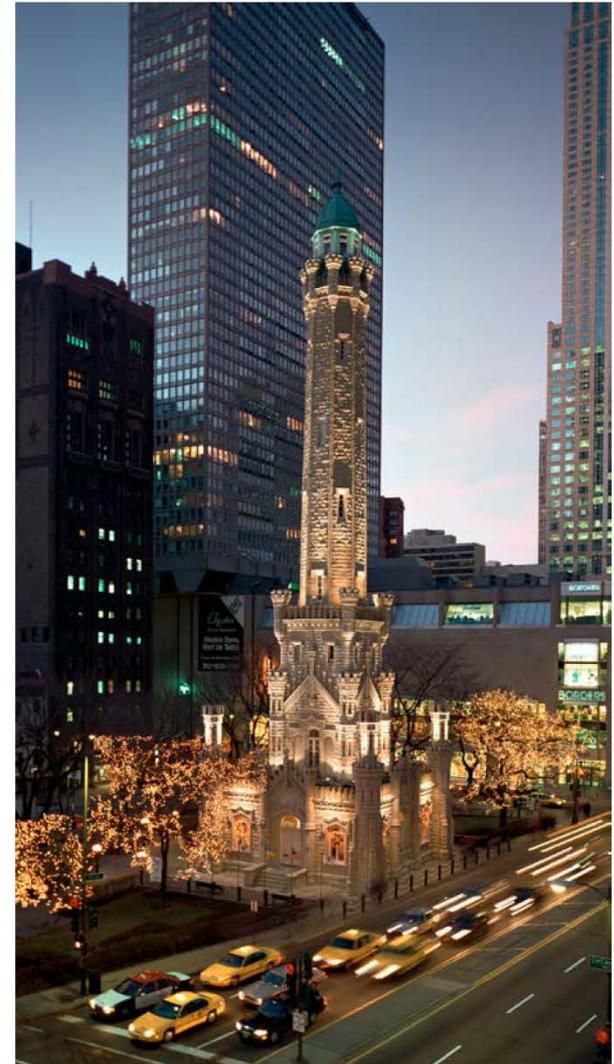
# Management of Project Progress & Quality

## Team Project Management

- Stakeholder Involvement
- Consultant Team Communication
- Thoroughness at every level is expected
- Coordination and communication are fundamental

## Team Quality Assurance Management

- Plan for adequate time and thorough quality control reviews
- QA/QC process will be required at all phases of the project





**Edward Torrez, AIA, LEED AP BD+C**

- 27 years experience in Architectural Historic Preservation. Serves as an Advisor to the National Trust of Historic Preservation and member of the Illinois Historic Sites Advisory Council.



**Andrea Terry, RA, LEED AP**

- related skills range from technical expertise with exterior envelopes, to research, interior renovation and preservation planning.



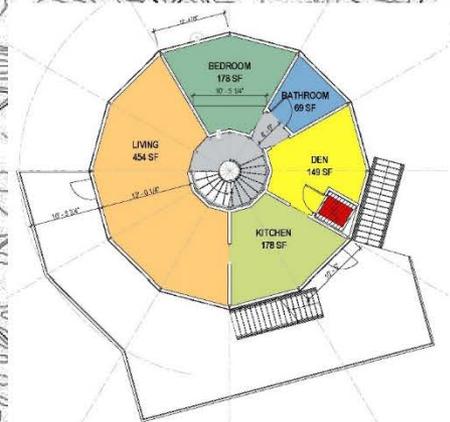
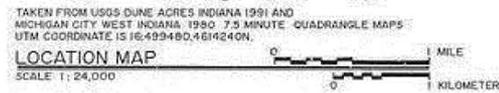
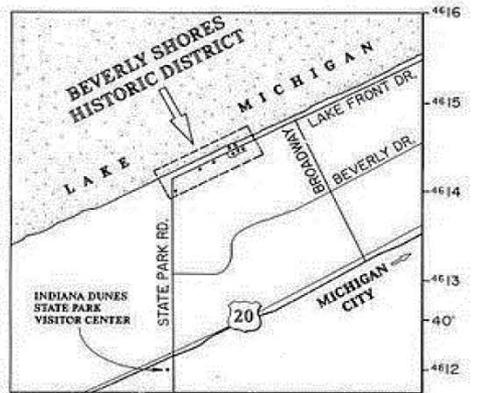
**Kirk Sippel, AIA, LEED AP**

- is responsible for the design and daily administration of BLS and has served as project architect on a number of award-winning projects

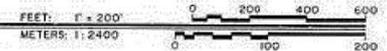
# Bathing Beach House



# Century of Progress District



BEVERLY SHORES - CENTURY OF PROGRESS ARCHITECTURAL DISTRICT



GLENCOE LAKEFRONT PROPERTIES

BauerLatoza  
STUDIO

# Glencoe Beach



# Glencoe Beach



# Glencoe Beach



# Glencoe Beach



A person is walking up a wide, stone staircase in a park. The person is wearing a dark jacket and shorts, and is carrying a bag. The staircase is made of large, light-colored stone blocks. The surrounding area is lush with green trees and foliage. The text "Thank You DISCUSSION" is overlaid in the center of the image.

Thank You  
DISCUSSION

## 1.1 Kickoff Meeting

Coordinate detailed scope, budget, schedule, and administrative requirements

PD records

Contact info Village representatives and Glencoe Historical Society.

\* Team assumes that coordination with the Village will be primarily the task of the PD

## 1.2 Historic Data Review

- Historical reports, drawings, other relevant information for the site and structures
- Storm water and other site utility reports and drawings and
- Landownership
- BLS will also carry out additional research into the history of the Architectural Structures. a

The available topographic data will only be applicable for the feasibility study level

Available Lidar data for the nearshore bathymetry should be adequate for the feasibility study.



## 1.3 Field Data Acquisition

On-site assessment observe the existing conditions.

A geotechnical program will provide:

- Data to analyze the stability of the bluff
- Groundwater seepage issues

4 to 5 soil borings and Test pits will be dug

### Test Pit Soils

- Visual assessment for characterizing and classifying soil
- Test in-place soil properties of soil
- Presence of ground water

### Concrete Foundation

- Concrete weakness - identify exposed rebar or spalled concrete
- Bond between concrete foundation and stacked stone wall
- Horizontal, vertical, or diagonal cracks and bulging or curvature of the walls
- Differential settlement

### Stacked Stone Walls and Columns

- Identify stair-step, horizontal, or vertical cracks (larger than hairline)
- Identify bulging walls



## 1.4 Preliminary Technical Analysis

A preliminary technical analysis will be performed to support the development of conceptual alternatives for areas requiring restoration.

## 1.5 Bluff Global Stability

The global stability of the bluff will be evaluated using the soil borings and a visual assessment of the bluff. The analysis will focus on identifying over-steepened sections of the bluff and/or potential groundwater seepage concerns.

Cross sections will be analyzed to estimate the existing factor of safety of the bluff.

## 1.6 Bluff/Structure Local Stability

The Team understands the Park District prefers a structural solution  
Team will provide a structural and geotechnical review of the structures  
Make recommendations for restoration



## 1.7 Storm Water Management

Team will review the existing conditions and general performance of storm water system. The analysis will look at the following components:

### Top of Bluff

Regrading or rerouting surface water in the park with an emphasis protect the mature trees

### Down Bluff

Collecting, conveying, and/or redirecting the surface water to existing storm water system, Propose new storm water infrastructure if required

### Outfall

Review the existing outfalls and proposal of new or updated outfalls if required

## 1.8 Coastal Review

PD is required to nourish/fill the beach with sand periodically to maintain the desired beach Baird will perform a cursory coastal review of the beach, groins, and jetty to provide the PD with preliminary concepts to improve the beach system.

The review will employ Baird's in- house data library of similar projects in the region.

## 1.9 Alternative Analysis

Baird will perform an alternative analysis for areas requiring restoration identified during the data acquisition and preliminary technical analysis phase.

- 2 alternatives will be developed and costed.  
Conceptual drawings, consisting of plans and sections.
- The alternative analysis will include a summary of benefits and challenges and recommendations for priority of implementation.

## 2.1 Preliminary Opinion of Construction Costs

A Preliminary Opinion of Construction Costs will be prepared for each of the conceptual design alternatives for engineering and architectural services.

## 2.2 Deliverable and Presentation to Staff

The results of the alternative analysis, conceptual drawings and opinion of probable costs will be submitted in a draft report.

The Team will present to PD staff and respond to the comments received during the presentation and incorporate revisions accordingly.

## 2.3 Final Deliverables and Presentation

The results of the study will be compiled into a brief report and a PowerPoint presentation. Altamanu will review the presentation and report with PD staff and make revisions according to their input.

The Team will make a final presentation to the Board of Commissioners.

The following schedule is for discussion purposes only.

<b><u>Table 3.1: Estimated Schedule for Professional Services</u></b>		<b>Task</b>	<b>Duration</b>
1 – Project Kickoff	TBD		
2 – Field Data Acquisition	6 weeks*		
3 – Preliminary Technical Analysis	4 weeks		
4 – Alternative Analysis	4 weeks		

\*Depending on geotechnical contractor's schedule, contract approval through the PD

