



PEACHTREE CITY
PLAN TO STAY™

City of Peachtree City


Lake Peachtree Spillway Replacement

City Council Update

September 15, 2016

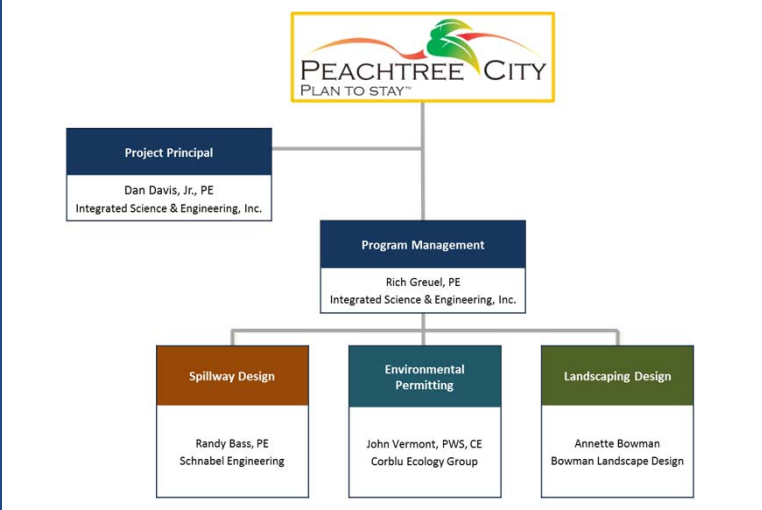


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Project Team



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Spillway Alternatives Analysis

Spillway Alternatives Evaluated

- Single Stage Labyrinth Weir
- Single Stage Labyrinth Weir with Gate
- Single Stage Piano Key Weir
- Two Stage Piano Key Weir
- Two Stage Piano Key Weir with Parapet Wall
- Single Stage Piano Key Weir with Gate and Parapet Wall
- Three Stage Piano Key Weir with Parapet Wall*

**Recommended Alternative*

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Spillway Alternatives Analysis

Three Stage Piano Key Weir with Parapet Wall

Advantages:

- Mimics Existing Discharge Rates of Existing Spillway
 - 100-Year Discharge 99.7% of Current Discharges Resulting in Minimal Increase in Threat to Downstream Properties
- Mimics Flood Elevation of Lake
 - 100-Year Flood Elevation within 0.03 feet (1/3-inch) of Current Flood Elevation Resulting in Minimal Increase in Threat to Upstream Properties as a Result of Spillway Replacement
- No Mechanical Devices to Maintain or Replace
 - Minimizes Long-Term Maintenance Costs
- Will Meet Current Georgia Safe Dams Category I Design Standards

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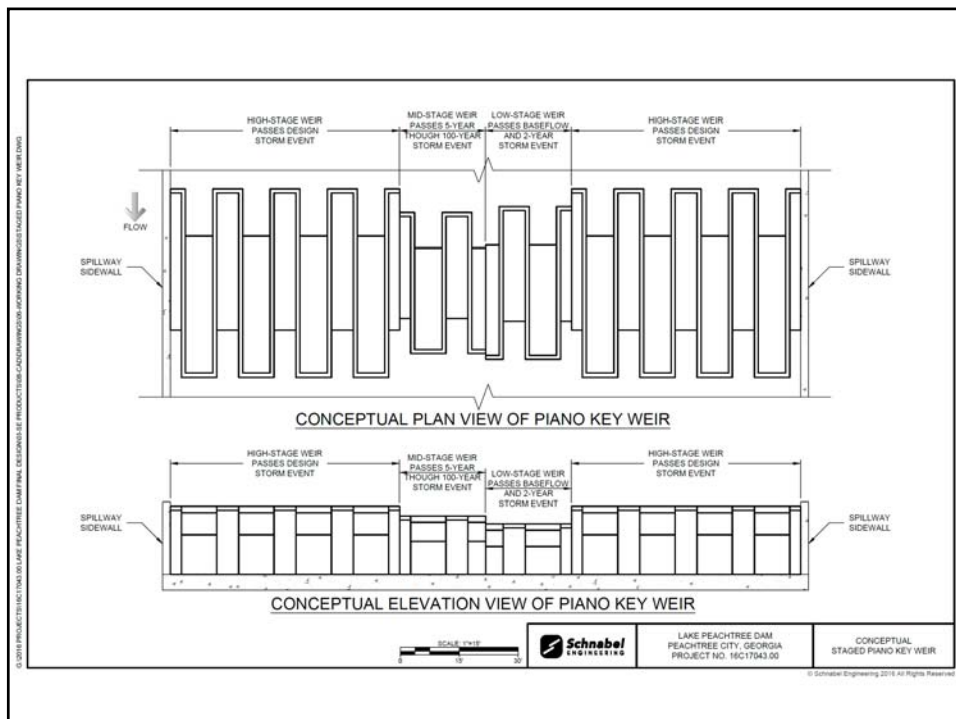
Spillway Alternatives Analysis

Three Stage Piano Key Weir with Parapet Wall

Key Design Features:

- 3-Stage Weir
 - Stage 1 – Controls Normal Pool & Smaller Storms (at Normal Pool)
 - Stage 2 – Controls 100-Year Flood (2 Feet above Normal Pool)
 - Stage 3 – Controls Extreme Flood Events (4.5 Feet above Normal Pool)
- Parapet Wall
 - Dam Height will be Increased by Approximately 1.4 feet via a Berm along Northern Face of the Dam
- Upstream Channel Improvements
 - Inflow Channel to Spillway will need to be improved to ensure Flows can reach Spillway without causing Upstream Flood Increases





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Lake Peachtree Rehabilitation Concept



Approximate Area to Be Removed for Inflow Channel Improvements

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Spillway Alternatives Analysis

Three Stage Piano Key Weir with Parapet Wall

Construction Considerations:

- Lake will need to be Lowered During Construction
- Cofferdam will need to be Constructed to Protect Work
- Entire Dam site will be closed for Duration of Construction
 - Kelly Drive / McIntosh Trail will Remain Open
 - Water System / Public Works Personnel will have Access

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Preliminary Cost Opinion

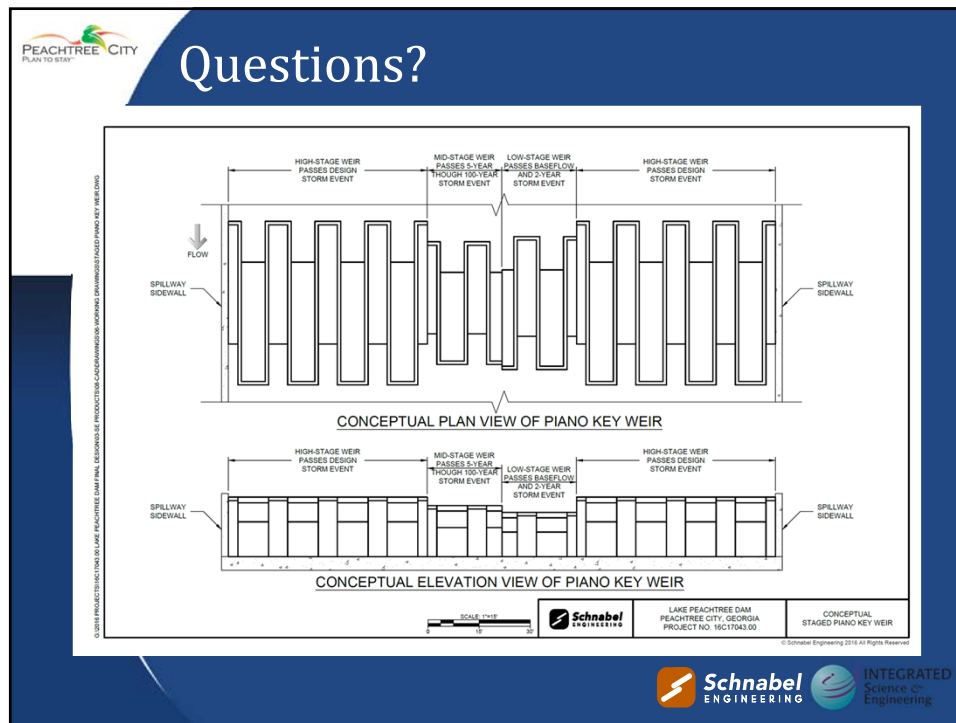
Anticipated Construction Cost of Spillway - Approx \$3.1 Mil
Recommended Contingency - 15% (\$465,000)



Schedule

- Phase 1 – Schematic Design (Apr – Aug 2016)
- Phase 2 – Public Meetings (Aug 2016 – Sep 2016)
- Phase 3 – Preliminary Design (Sep 2016 – Dec 2016)
- Phase 4 – Design Development (Dec 2016 – Apr 2017)
- Phase 5 – Final Design (Apr 2017 – May 2017)
- Phase 6 – Contract Documents (May 2017 – Jun 2017)
- Phase 7 – Bidding (Jun 2017 – Aug 2017)
- Phase 8 – Construction (Aug 2017 – Apr 2018)
- Phase 9 – Project Closeout (May 2018 – Jun 2018)





Multi-Use Trail Improvements

Multi-Use Path Considerations

- Existing System
 - Split Cart Path on Kelly Drive / McIntosh Trail Bridge
 - No Separation Between Vehicles and Golf Carts
 - Pedestrians Need to Step Into Traffic to Allow Carts to Pass
- Alternatives Considered
 - Re-Configure Existing Roadway Bridge
 - Re-Align Existing Path
 - Construct New Path to Alternate Infrastructure
- Recommended Alternative
 - Phase I - Construct New Cart Path to Existing Boxwood Court Bridge
 - Phase II - Construct New Cart Path Along Dam After Construction



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Multi-Use Trail Improvements



Existing Path to Boxwood Court Multi-Use Bridge



Boxwood Court Multi-Use Bridge

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Multi-Use Trail Improvements



Potential Path Adjacent to Community Garden

Potential Path Along Berm Adjacent to Flat Creek

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Piano Key Weir Concept



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Multi-Use Trail Improvements

Multi-Use Path Considerations

- Advantages
 - Phase I can be Implemented Prior to Construction of the Spillway by Public Works Crews
 - Significantly Reduces Potential for Accidents Between Golf Carts and Construction Vehicles During Construction at Entrance to Dam Site
 - Phase II Showcases New Dam Improvements and Adds Additional Useable Greenspace to Lake Perimeter Without Substantially Increasing Maintenance
- Anticipated Challenges
 - Initial Re-Configured Path Network will be Somewhat Confusing Initially (Requires Education Upfront and Initial Implementation)
 - Boxwood Court Bridge is a Single Lane Bridge (similar to Highway 54 & Battery Way Park Bridges)



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Preliminary Cost Opinion

Anticipated Construction Cost of Other Improvements -
Approx \$700,000
Recommended Contingency - 15% (\$105,000)

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Questions?

County Water Intake

Kelly Drive

Community Garden

Existing Golf Cart Bridge

Existing Golf Cart Path

McIntosh Trail

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