

Chaplain Schmitt Island Hwy 151 Bridge Placemaking Opportunities

November 8, 2017





Agenda

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1. Review Vision and Design Objectives
2. Review Design Experience With Respect To LED Lighting Technology
3. The Power of Placemaking Utilizing Dynamic LED Lighting
4. Review Relevant Case Study Images
5. Review proposed concepts
 1. Base (Ground) Mounted Fixtures - Both Static Color and Dynamic RGB
 2. Addressable Node Cable Strand Lighting – Dynamic RGB
6. Island Connection
7. DOT Feedback
8. Costs



Vision and Mission

Vision: Dubuque's Gateway to Entertainment and the Mississippi.

Mission: Create - Through Dynamic Lighting Design – The Point of Arrival to Dubuque's Unique Entertainment Destination.



Scope Review

- **Collect Background Materials**
 - The RDG team will pull together the existing bridge plans and elevations that were developed for the construction of the existing highway and bridge structure.
- **Case Study Overview**
 - The RDG team will prepare two - three case studies of relevant projects to understand the lighting program, application and construction costs.
- **Regulatory Review**
 - RDG will meet with representatives of the Iowa DOT to understand the parameters and any specifications that may impact the design or construction process.
- **Lighting Scenarios**
 - Using these themes identified within and during the existing placemaking plan, the RDG team will develop two potential lighting scenarios that includes the following:
 - Scenario One – The combination of static LED white light fixtures to highlight the bridge suspension cables and static LED color fixtures to accent the “bowstring” bridge steel structure.
 - Scenario Two – The use of dynamic, programable LED RGB color changing fixtures to accent both the suspension cables and accent the “bowstring” bridge steel structure.
 - Construction Costs. RDG will prepare an opinion of costs for both options.
- **Lighting Scenario Presentation**
 - RDG will present the scenarios to the Chaplain Schmitt Island Task Force to receive input and direction. Using this feedback, RDG will prepare a meeting summary and recommended scenario to advance into an illustration showing the lighting scenario.
- **Final Deliverables**
 - RDG will Prepare one illustration that shows the lighting concept for use in promotional materials and a summary memorandum.

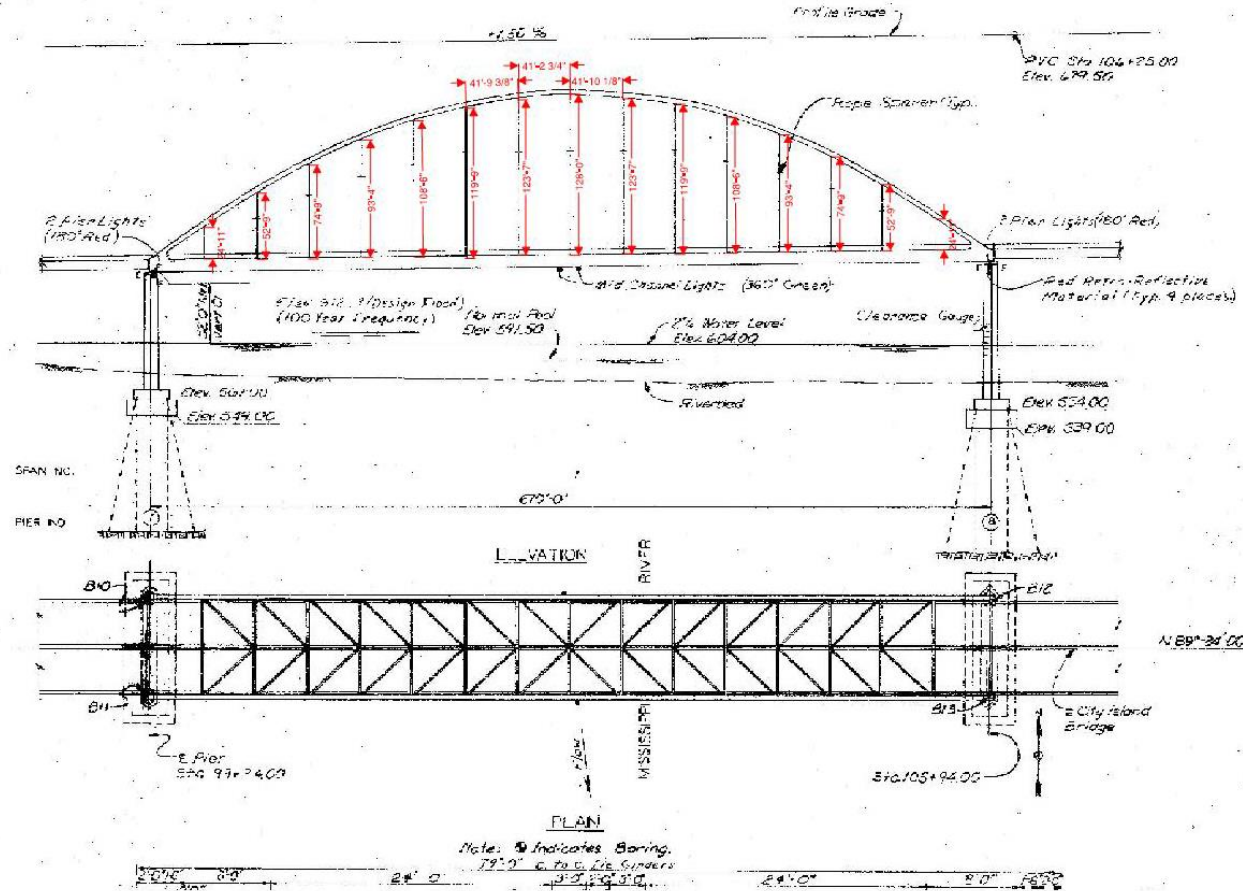


Context View

From Downtown Dubuque



(Existing Iowa DOT As-Built Drawings)



Aerial Context



The Power of Place

Dynamic Programmable LED Lighting



Image Concepts / Design Drivers

Bai-Chay Bridge – Cura Luc Bay, Viet Nam



Bai-Chay Bridge



Suramandu Bridge – Madura, Indonesia



Suramandu Bridge



Suramandu Bridge



Busan Harbor Bridge – South Korea



Busan Harbor Bridge



Busan Harbor Bridge



Bosphorus Bridge – Istanbul, Turkey



Bosphorus Bridge



Bosphorus Bridge



Oakland – San Francisco Bay Bridge



Oakland – San Francisco Bay Bridge



Oakland – San Francisco Bay Bridge



Oakland – San Francisco Bay Bridge





Preliminary Concepts

Bridge Cable Assembly RGB Programmable Uplighting



Bridge Cable Assembly RGB Programmable Uplighting



Bridge Cable Assembly RGB Programmable Uplighting



Bridge Cable Assembly RGB Programmable Stranded Nodal Lighting



Bridge Cable Assembly RGB Programmable Stranded Nodal Lighting



Bridge Cable Assembly RGB Programmable Stranded Nodal Lighting



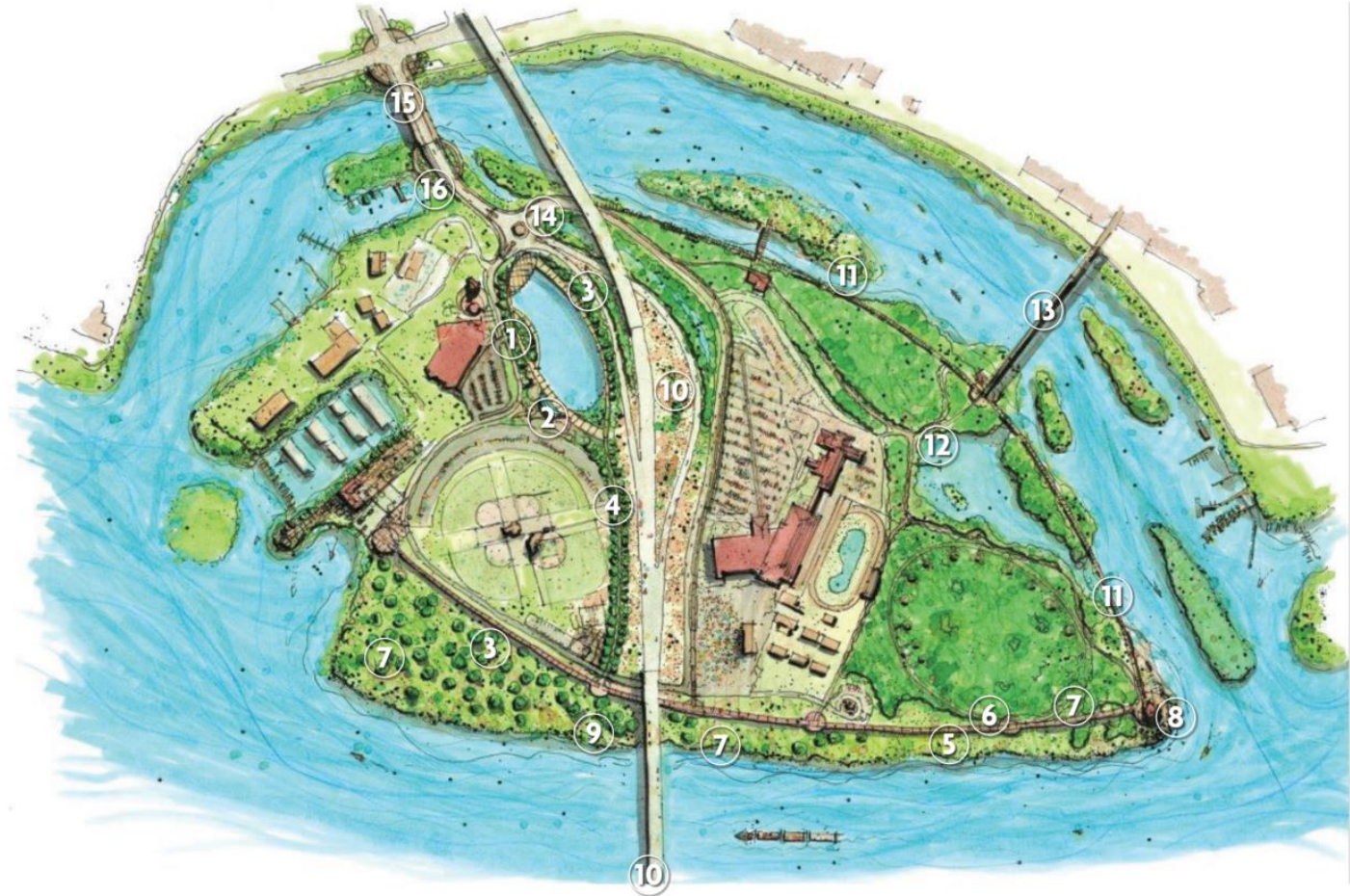


Island Connection

Island Connection



Island Connection



KEY

Veterans Pond

- 1. South Side Improvements
- 2. Fountain
- 3. Trail and Screening
- 4. Trail Connection

Eastern Gateway

- 5. Island Boardwalk
- 6. Wetlands
- 7. Ecological Restoration
- 8. Recreation Tower
- 9. Splash Pad
- 10. Highway 151 Bridge Lighting

Peosta Channel

- 11. Trail and Boardwalk
- 12. Recreation Improvements
- 13. Pedestrian Bridge

Western Gateway

- 14. Roundabout
- 15. 16th Street Bridge Improvements
- 16. Overall Island Improvements

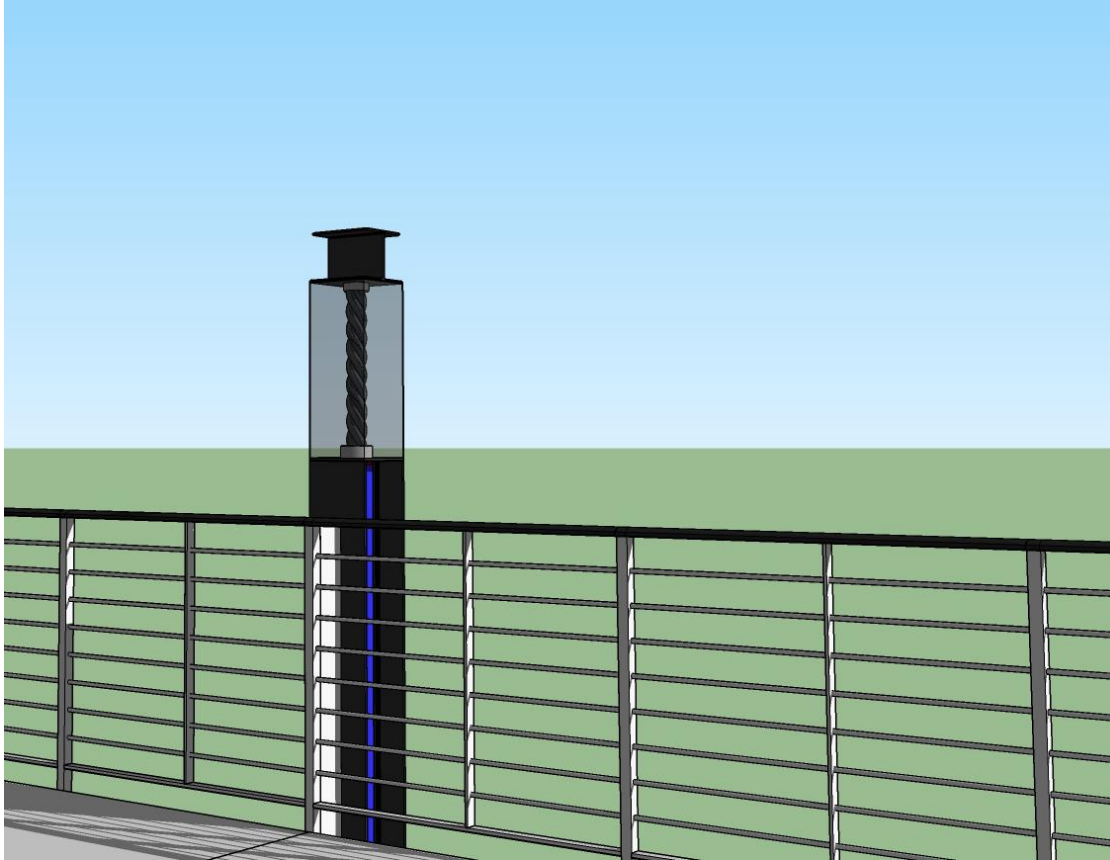
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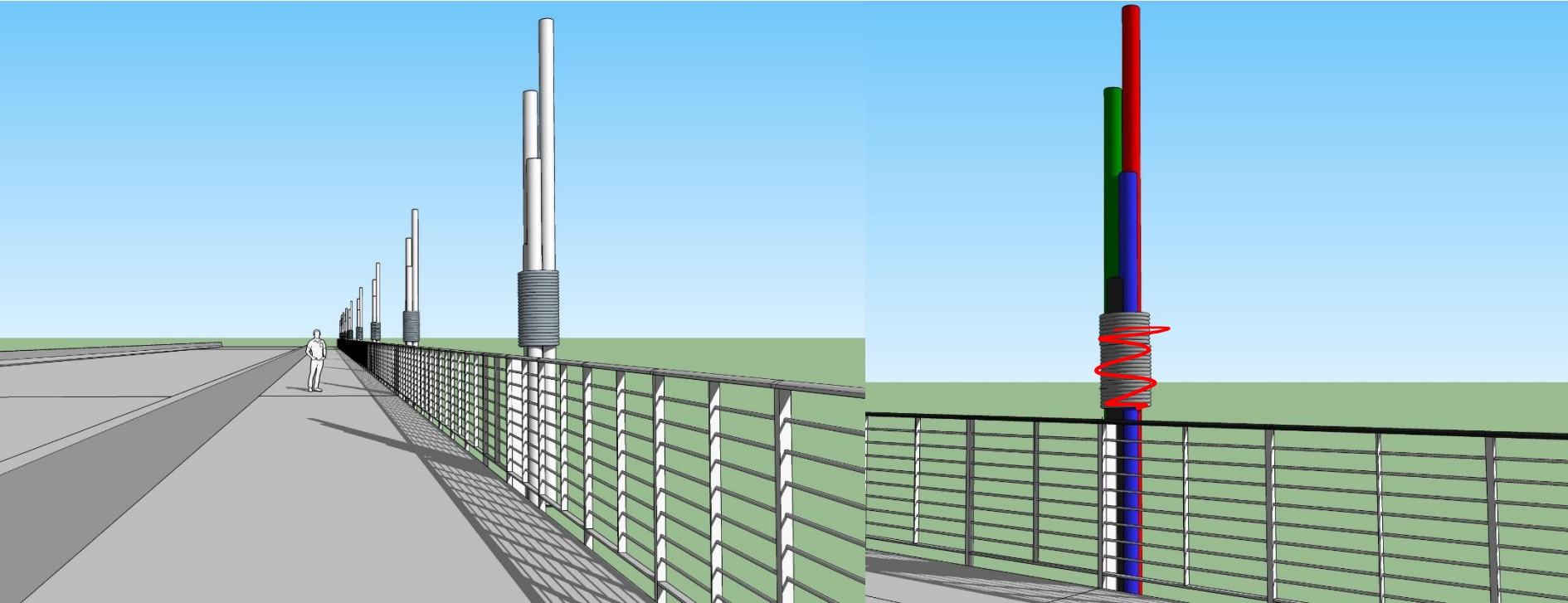
Island Connection



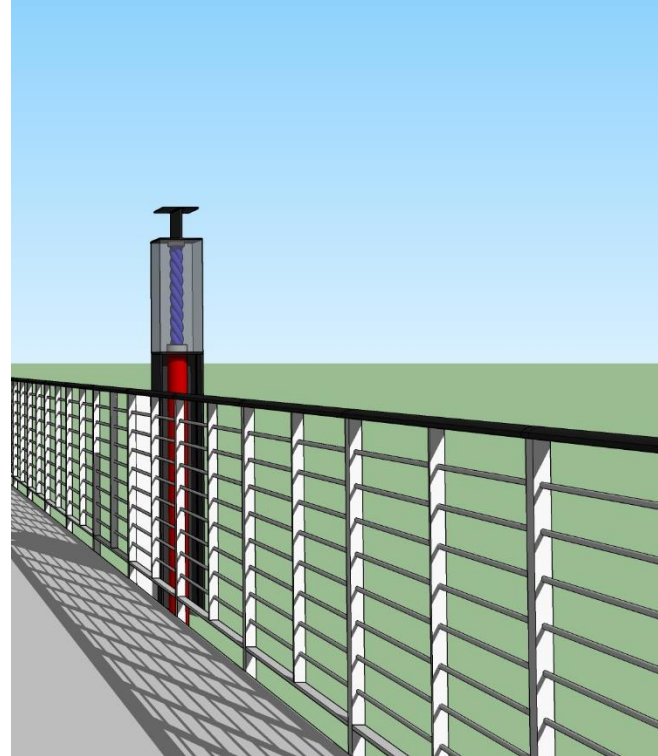
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Island Connection



Island Connection





Iowa DOT Feedback

Iowa DOT Feedback

- Discussed Improvements with Mike Todsen, Iowa DOT – Ames IA
- Iowa DOT has Jurisdiction on the Bridge, shared ownership with Wisconsin
- Iowa DOT worked on bridge lighting in Lansing and Muscatine
- Considerations:
 - Improvements must be owned by the City
 - Require an annual inspection for any connections
 - Cannot drill into structure
 - Require a simple permit (example from Muscatine is being sent).





Preliminary Costs

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1. Construction Cost Range \$2,100,000 – 2,125,000

Total Project Costs \$2,688,000 – \$2,720,000

(includes permitting, contingency, design and commissioning)





Next Steps

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- Review Concepts to Develop Preliminary Cost Estimate
- Seek Preliminary Schematic Design Review and Approval with Q-Casino Stakeholders & City of Dubuque
- Review Preliminary Design Impacts with Relevant Agency Stakeholders
- Develop Promotional materials



Create. Meaning. Together.

