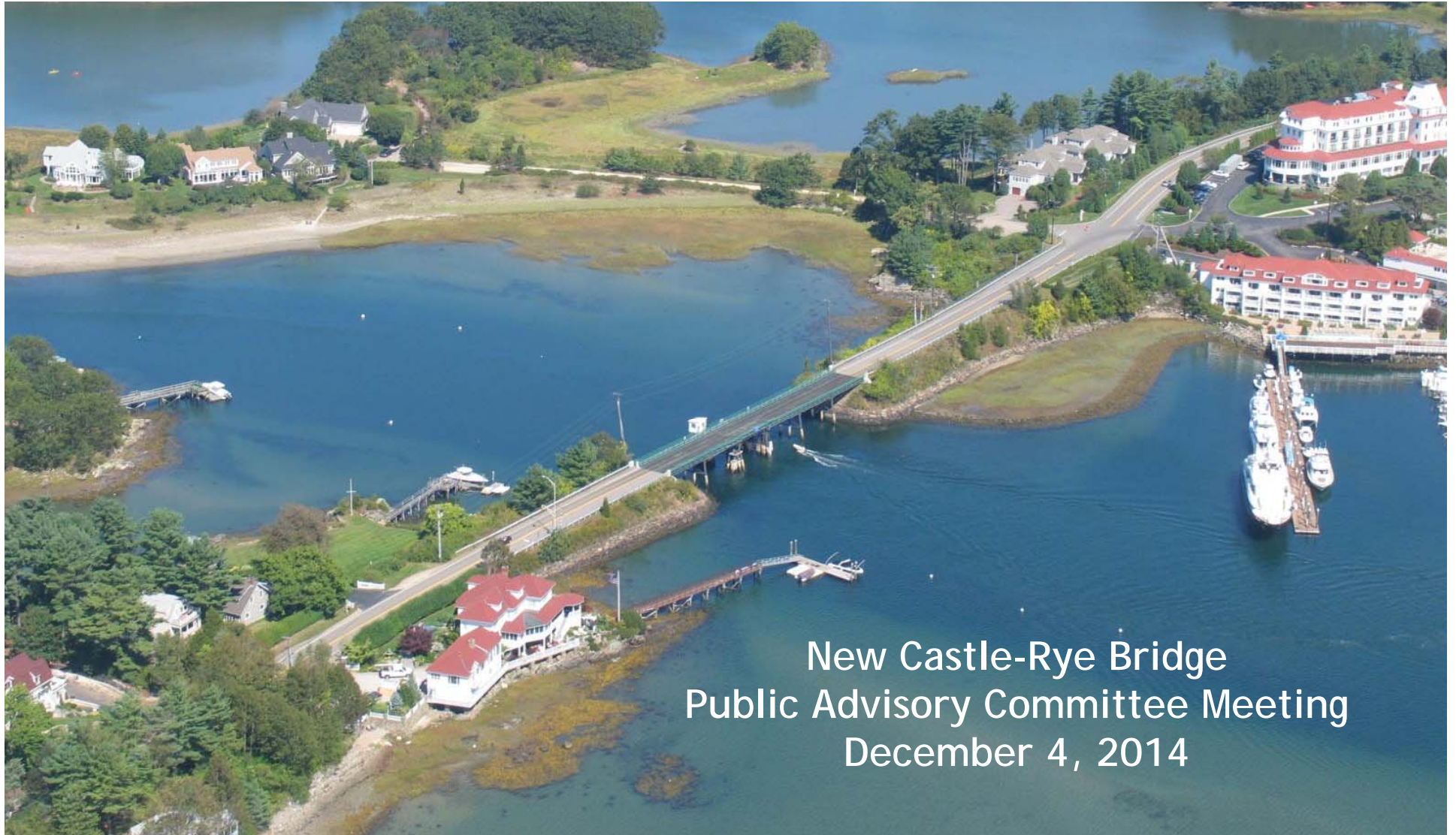


New Castle-Rye 16127 Preliminary Design



New Castle-Rye Bridge
Public Advisory Committee Meeting
December 4, 2014



Hoyle, Tanner
& Associates, Inc.

Meeting Agenda

- Welcome & introductions
- Today's presentation – Review of Alternatives and Benefit-Cost Analysis
 - Project Update
 - Benefit-Cost Analysis Overview
 - Review of Alternatives
 - Benefits Comparison
 - Cost Comparison
- Moving Forward

Project Update

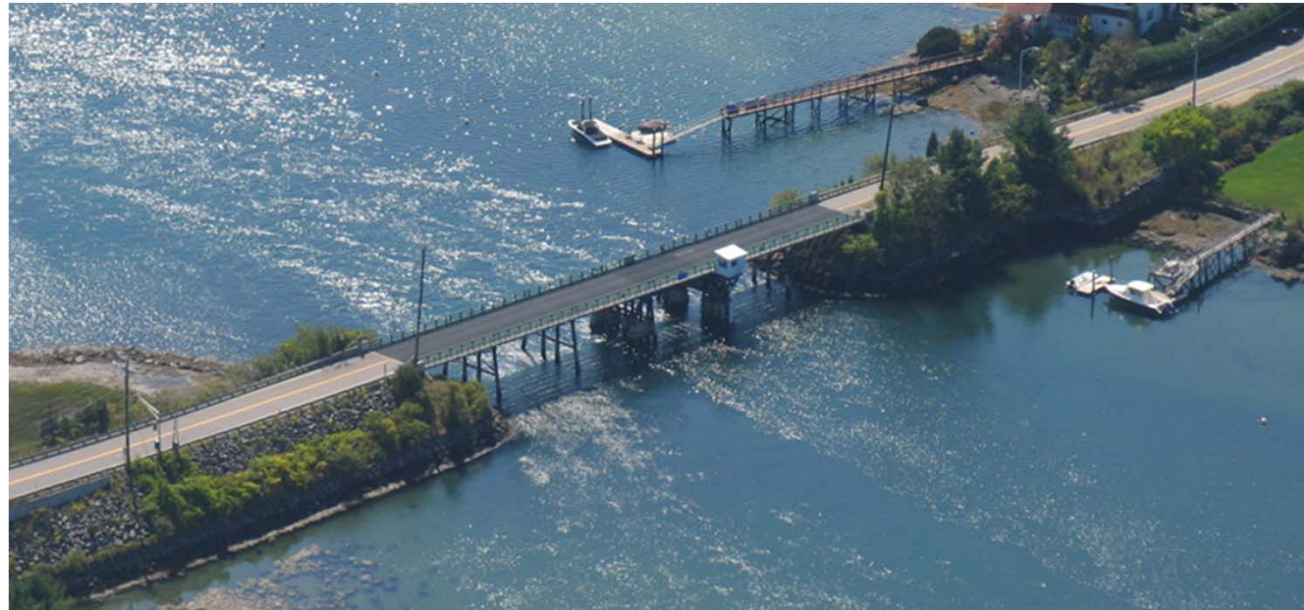
- Since our April 22 Meeting
 - Public Meeting May 28
 - Public Comment Period Spring 2014
 - Received 30 written comments at the public meeting, by letter and by email
 - Residents of New Castle, Rye, Portsmouth
 - Local Businesses and Commercial Associations
 - Mooring Owners
 - Historic Preservationists and Conservationists
 - Town of Rye Requested Benefit-Cost Analysis
 - Town of New Castle supports bascule bridge
 - Town of Portsmouth supports fixed bridge

Project Update

- Since our April 22 Meeting
 - Incorporated comments received into Benefit-Cost Analysis
 - Draft Benefit-Cost Analysis performed Summer/Fall 2014 and was recently completed

Benefit-Cost Analysis

- Studies and compares the costs and benefits of each alternative
 - Bascule
 - Fixed



Review of Bascule Bridge



Review of Bascule Bridge



Review of Fixed Bridge



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Review of Fixed Bridge



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Benefit-Cost Analysis

- BCA Study
 - Quantitative and Qualitative Benefits
 - Capital Costs and Life Cycle Cost Analysis
- Summary
 - Decision Matrix of Costs and Benefits
- Typical Decision Matrix Framework:

Costs	Capital Cost	Maintenance Cost	Total Cost
Alternative 1	\$X million	\$X million	\$X million
Alternative 2	\$X million	\$X million	\$X million

Benefit	Alternative 1	Alternative 2
Benefit X	✓	
Benefit Y		✓
Benefit Z	✓	

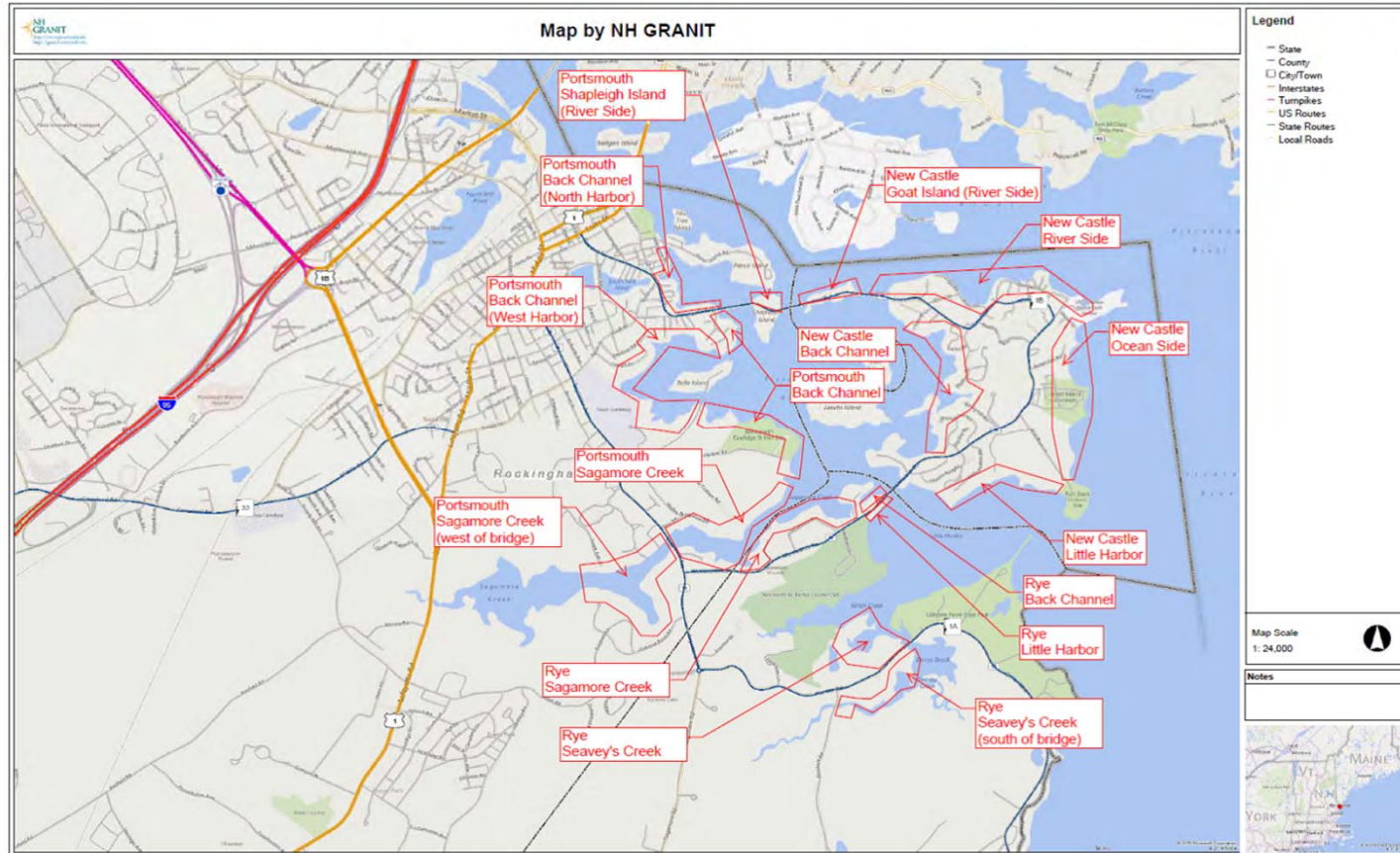
BCA - Quantifiable Benefits

- Dredging
 - \$750,000 estimate with existing bridge
 - Bascule slightly improves dredging access over fixed
- Vehicular delays
 - Lifts are currently so infrequent that costs associated with delaying vehicles are negligible
- Construction Duration
 - Both alternatives to have accelerated construction techniques
 - Time differential of a few weeks - negligible

BCA - Quantifiable Benefits

- Real Estate Values
 - Real estate value is a benefit allowed for by USDOT
 - Determined whether value of vessel access could be isolated
 - No study found setting this precedent
 - Studied what average value increase would be required to offset cost differential

BCA - Quantifiable Benefits



- Determined a 16.6% average increase per property required to offset costs of bascule vs. fixed alternative

BCA - Qualitative Benefits

- Primarily addresses marine benefits, as there is little difference in roadway service between alternatives
- Marine access related benefits assumes that
 - Dredging will occur
 - Notice time for lifts will be significantly shortened
- While both assumptions are planned, neither are currently funded

BCA - Qualitative Benefits

- Safe Harbor
 - Not recently used as safe harbor
 - Bascule continues to provide this potential benefit
- Commercial Fishing
 - Bascule allows for potential growth of industry
 - Fishing vessel and catch data available, cannot isolate back channel

BCA - Qualitative Benefits

- Tourist Revenue
 - Bascule does not restrict potential growth
 - Industry related to boat tours
- Livability Improvements
- Boat Related Economic Activity
 - Currently 13 vessels moored in Back Channel
 - Bascule would not restrict potential growth

BCA - Qualitative Benefits

- Climate Change Resiliency
- Noise
 - Both alternatives provide solid deck surface, eliminating noise of grid deck
 - Bascule will make some noise when lifting

BCA - Costs

Costs	Capital Cost (2014 dollars)	Maintenance Cost (2014 Dollars)	Total Cost (2014 Dollars)
Bascule	\$15.8 million	\$1.8 million	\$17.6 million
Fixed	\$7.0 million	\$0.7 million	\$7.7 million
Cost Differential	\$8.8 million	\$1.1 million	\$9.9 million

- Elements driving cost differential
 - Bascule pier and machinery construction
 - Lift operation costs
 - Maintenance of mechanical and electrical systems

BCA - Summary

Costs	Capital Cost (2014 dollars)	Maintenance Cost (2014 Dollars)	Total Cost (2014 Dollars)
Bascule	\$15.8 million	\$1.8 million	\$17.6 million
Fixed	\$7.0 million	\$0.7 million	\$7.7 million
Cost Differential	\$8.8 million	\$1.1 million	\$9.9 million

Benefits	Bascule	Fixed
Potential Increase in Property Value	✓	
Traffic Impacts		✓
Safe Harbor	✓	
Potential increase in Commercial Fishing	✓	
Potential Tourist Revenue	✓	
Boat Related Economic Impacts	✓	
Climate Change Resiliency	✓	
Dredging Costs	✓	
Noise		✓

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Questions or Comments?



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BCA - Summary



Moving Forward

- Next Steps
 - Finalize BCA with PAC input
 - NHDOT selects preferred alternative
 - Proceed with permit application
 - USCG approval needed, with concurrence from USACE
 - Review with SHPO January 2015
 - Project advertised in 2017

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Thank You



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