

CAPE COD CANAL BRIDGES

MAJOR REHABILITATION EVALUATION REPORT

MASSDOT

Working Group Meeting

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1 February 2018

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PRESENTATION OUTLINE

- Cape Cod Canal Federal Navigation Project Authorization
- Major Rehabilitation Evaluation of Cape Cod Canal Highway Bridges
- Status of CCC Bridges MRER Activities
- Next Steps



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CAPE COD CANAL FEDERAL NAVIGATION PROJECT AUTHORIZATION

- River and Harbor Act of 30 Aug 1935, 74th Congress, 1st Session (P.L. 74-409)
- Project is comprised of:
 - Federal Navigation Channel linking Buzzards Bay to Mass Bay
 - Access / recreational area surrounding the Canal
 - Railroad Bridge
 - Bourne and Sagamore Highway Bridges
- Authorization Specific to the Highway Bridges:
 - Two Highway Bridges providing access to/from the Cape
 - 4 lanes total per bridge; 2 lanes each way
 - No Tolls
 - Abutment to Abutment



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MAJOR REHABILITATION EVALUATION OF CAPE COD CANAL HIGHWAY BRIDGES

- Components of the Major Rehabilitation Evaluation include:
 - Structural Engineering
 - Cost Engineering
 - Economic Justification
 - Environmental Analysis
- MRER will evaluate Rehabilitation and Replacement alternatives for both the Bourne and Sagamore.
- Layout the necessary major rehabilitation milestones over the functional life (50 yrs) of the structure, or recommends replacement of one or both structures.
- MRER uses modern bridge replacement type for comparison purposes; replacement will require its own authorization and studies for implementation.



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STATUS OF MRER ACTIVITIES (1)

- Structural Engineering – Risk and Reliability study identifies components and complex systems which need restoration / replacement to improve or maintain performance. (Completed)
- Cost Engineering – Calculates the construction estimates and risk to cost / schedule for rehab and replacement alternatives over. (Completed)
- Award Traffic Modeling contract to TrafiInfo Inc. to determine potential impacts of lane closure and enable economic / environmental analysis of all alternatives. (Completed)



Photo credit: Brian Shriver



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STATUS OF MRER ACTIVITIES (2)

- Traffic Modeling – near completion; additional scenarios being run to quantify traffic improvements from different lane schemes.
- Economic Justification – evaluate the cost of alternatives against their benefits/impacts resulting in Benefit to Cost Ratios (BCR). Being completed in parallel with modeling. (Feb 18)
- Capturing other social effects (OSE) of rehab and replacement alternatives affecting public safety and quality of life (non-BCR).
 - Disaster Management (example Hurricane landfall)
 - JBCC supply/delivery & response mobilization
 - Emergency Medical Services
 - Public Services (Police response, School bus delays)
- Environmental Analysis – In process of awarding task order to consultant to assist in the NEPA process.



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NEXT STEPS

- Public and Stakeholder Involvement meetings / presentations to start in late spring:
 - Including Cooperating agencies, Stakeholder & Working Groups, and Public
 - Held multiple locations (at least 5) around the Cape, Islands, and South Shore for maximum participation
- Continued collaboration with MASSDOT
 - Technical Meetings to confirm results of traffic modeling, and cost attribution for bridge approaches.
 - MRER External Technical Review member
- Continue regular routine inspection and maintenance on both bridges. [Joint replacement on Sagamore – Spring 18]



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QUESTIONS / COMMENTS

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