



Cape Cod Canal Transportation Study First Public Meeting

Bourne, Plymouth, Sandwich, Wareham
January 15, 2015

Agenda

Welcome and Introductions
Study Background and Purpose
Study Process and Framework
Schedule/Next Steps
Discussion

Welcome and Introductions

MassDOT

Ethan Britland – Project Manager

Diane Madden – MassDOT Environmental

US Army Corps of Engineers

Michael Walsh, PE PMP – Project Manager

Study Team

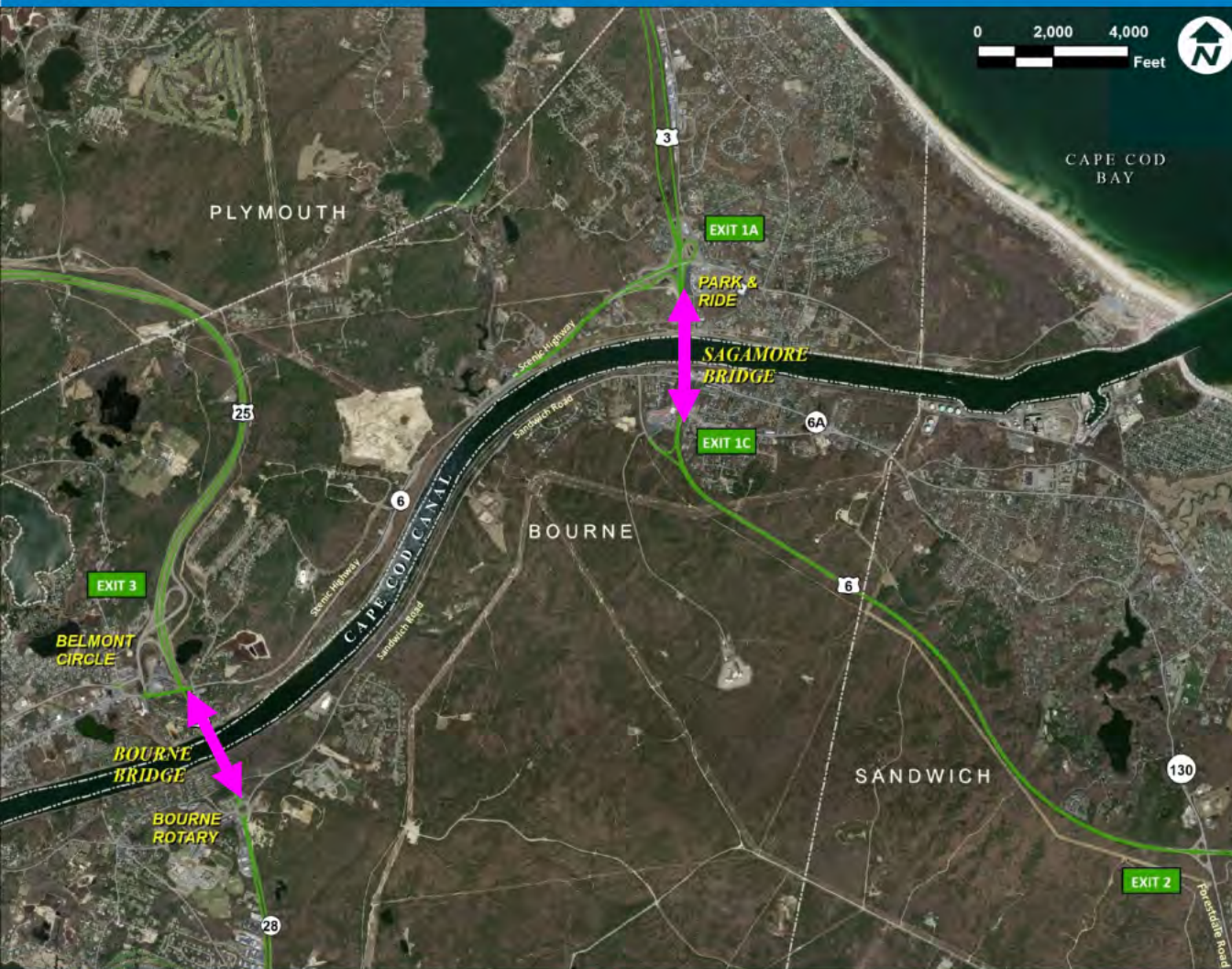
Ed Hollingshead, AICP - Team Project Manager (FST)

Bill Reed, PE – Principal in Charge (FST)

Michael Paiewonsky, AICP – Environmental (FST)

Ken Buckland, AICP – Public Involvement (Cecil Group)

Study Background and Purpose



The Bourne and Sagamore Bridges provide the only vehicular connections across the Cape Cod Canal and are owned by the U.S. Army Corps of Engineers.

They link 15 communities and 215,000 residents with the mainland. They also provide connections to the islands.



Study Background and Purpose: Page 2



Scenic Highway and Sandwich Road, which parallel the Cape Cod Canal, act as east/west connectors linking the two bridges and are owned by MassDOT.

Study Background and Purpose: Page 3

Until recently reaching Cape Cod involved peak season delays followed by unimpeded off-season access

Now off-season access is complicated by lane closures to allow ongoing bridge maintenance

Why is this happening now?

Study Background and Purpose: Page 4

The Sagamore and Bourne bridges were designed in the early 1930s and opened in 1935

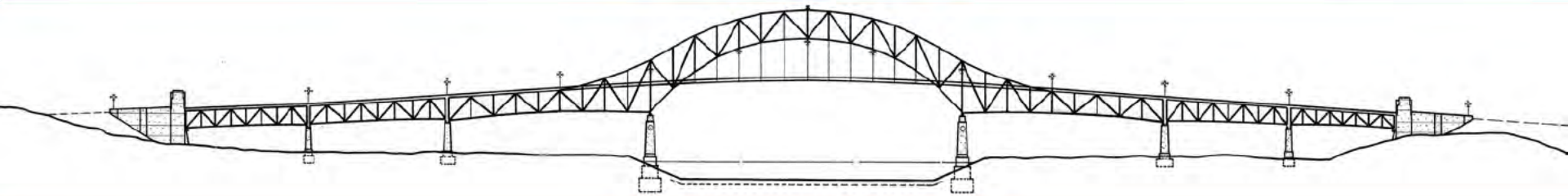
In the 1930s the anticipated design life of a bridge was approximately 50 years

Today the design life of a bridge is anticipated to reach 75 years

In 2035, this study's future analysis year, the Bourne and Sagamore bridges will be **100 years old**

Study Background and Purpose: Page 5

Aging infrastructure requires increased maintenance

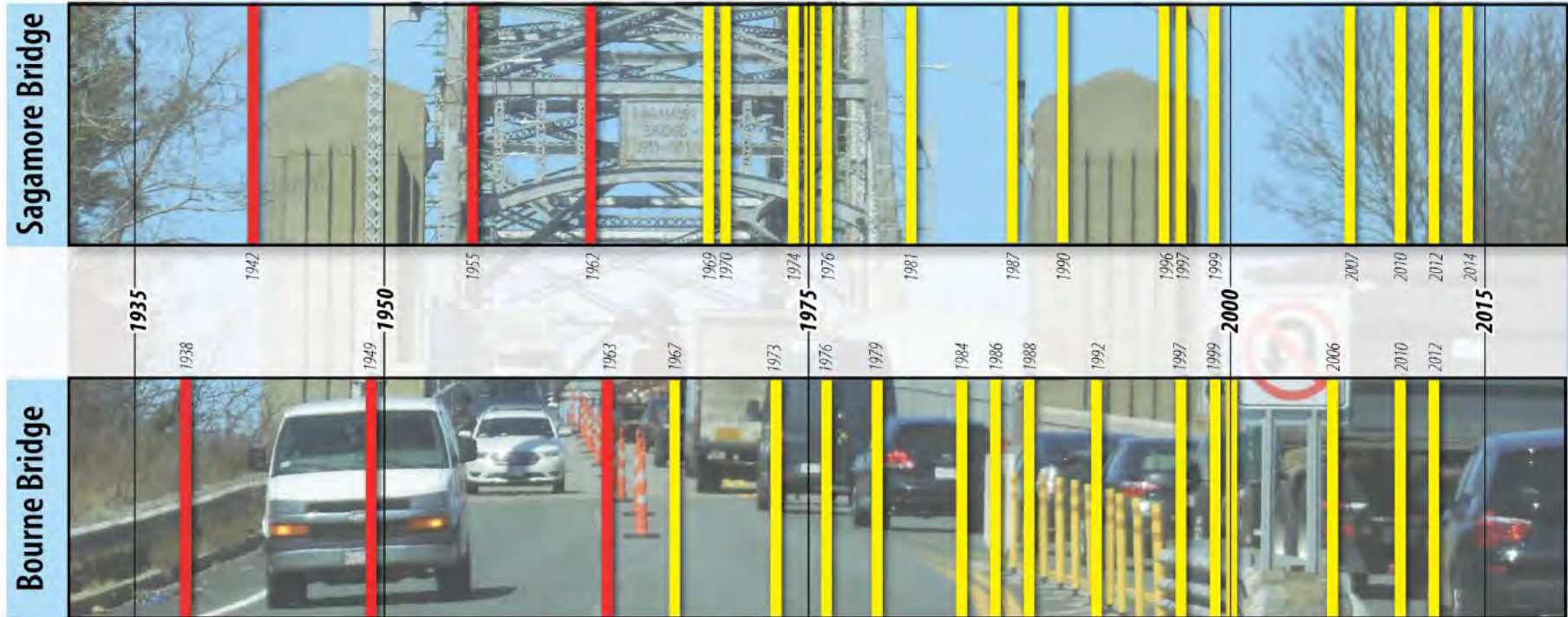


Two 80 year old bridges in salt water environment

As aging continues, different bridge components will deteriorate at differing rates

Study Background and Purpose: Page 6

Bridge Closed
Lane Closures



Bourne & Sagamore Maintenance History



Study Background and Purpose: Page 7

In 40 years between 1935 and 1975 Sagamore Bridge had lane closures 6 times, Bourne Bridge 5 times

In 25 years between 1975 and 2000 both bridges had lane closures 8 times

In the 14 years between 2000 and 2014 both bridges had lane closures 4 times

Study Background and Purpose: Page 8

There is not an impending risk to safety and connectivity as the bridges are inspected regularly

Bridges can be maintained for decades, with associated impacts to:

- Mobility – increased frequency and length of off-season delays with increasing potential for a future summer with lane closures

- Safety – lane closures could impact emergency response times

- Economy – lane closures increase travel time and costs for goods movement and may reduce the desirability of the area as a vacation destination

Study Background and Purpose: Page 9

Army Corps of Engineers is responsible for the Cape Cod Canal and bridges over it

MassDOT is responsible for maintaining safety, mobility and connectivity for its residents throughout the Commonwealth

MassDOT and the Army Corps of Engineers are coordinating their efforts identify a long-term solution for reliable connectivity



Study Background and Purpose: Page 10

ACOE Major Rehabilitation Evaluation Study Objectives

Establish Engineering Condition and Reliability of
Bridges

Identify and Define Problems and Opportunities

Develop Alternatives with Costs

Identify Economic Benefits

Evaluate Environmental Concerns & Impacts

Identify Recommended Plan



Repair -vs.- Replace



Study Background and Purpose: Page 11

ACOE Next Steps

Develop a Project Management Plan

Secure Funding

Conduct Study (3 years?)

Secure Funding for Recommended Alternative

Recommended Alternative May Take 2 Phases to Implement – Design and Construction

Each Phase Requires Funding



Study Background and Purpose: Page 12

To begin the process MassDOT has begun a
three part approach

Study Background and Purpose: Page 13

Part One - Define Problem and Potential Solutions

This Planning Study will result in publicly vetted alternatives for future detailed study in the state (MEPA) and federal (NEPA) environmental review processes. Generate traffic data and conceptual costs to inform the ongoing P3 evaluation process

Part Two – Environmental Review Process

Completion of the state (MEPA) and federal (NEPA) environmental review processes

Part Three - Potential Funding Sources

MassDOT has begun to explore the potential of a Public Private Partnership (P3) as an alternative procurement process. P3 projects are typically funded in part or in whole by tolls or user fees

Study Background and Purpose: Page 14

Study Purpose

Conduct a planning study to identify and analyze (at a conceptual level) bridge and non-bridge alternatives that meet the study's goals and objectives in an open and collaborative process

Develop a multi-phased multimodal improvement and implementation plan

Study Product

A set of short, medium and long-term alternatives that can be advanced into project development

Study Process & Framework

Step 1: Goals and Objectives, Evaluation Criteria, and Public Involvement Plan

Step 2: Existing and Future Conditions and Issues Evaluation

Step 3: Alternatives Development

Step 4: Alternatives Analysis

Step 5: Recommendations

Study Process and Framework: Page 2



Study Framework: Draft Goals

To create/improve multimodal mobility in the Cape Cod Canal area

To establish an additional or replacement crossing of the Cape Cod Canal to address the diminishing quality and reliability of year-round connectivity over the Cape Cod Canal, due to the aging Sagamore and Bourne Bridges

Study Framework: Draft Objectives

Create reliable multimodal connectivity and mobility levels such that the quality of life on Cape Cod is not diminished by unreliable connectivity across the Cape Cod Canal.

Create a reliable multimodal connection across Cape Cod Canal to maintain/enhance public safety in the event of the need for an emergency evacuation of portions of Cape Cod and to accommodate first responders accessing Cape Cod.

Ensure that cross canal connectivity does not become a barrier to reliable intra-community connectivity for the Towns of Bourne and Sandwich.

Study Framework: Draft Evaluation Criteria

Transportation Impacts	
Vehicles	Corridor intersections level of service (LOS)
	Corridor volume to capacity ratios
	50th and 95th percentile queues
Pedestrian and bicycles	Mobility and connectivity
	Bicycle/pedestrian delay
	Expansion/provision of bicycle facilities
	Expansion/provision of pedestrian facilities
Travel time	Average roadway travel time in study area
	Average roadway delay
Safety	
Vehicular safety	Conformance with AASHTO and MassDOT standards
	Delay to emergency vehicle access
Pedestrian and bicycle safety	Compliance with ADA requirements
	Compliance with MassDOT requirements
Environment	
Environmental impacts	Impact to coastal resources (sq. ft.)
	Impact to wetland resources (sq. ft.)
	Impact to ACEC
	Impact to rare species/habitat
	Impact to public water supply

Continued →

Study Framework: Draft Evaluation Criteria

Page 2

Community	
Community impacts	Impact to protected and recreational open space
	Impacts to Environmental Justice neighborhoods
	Impact to historical/archeological resources
Visual	Visual impacts
Alternative Feasibility	
Right of way impacts	Permanent and temporary right of way impacts
Cost	Capital and maintenance costs
Construction phase impacts	Construction duration
	Impacts to abutting land owners
	Impacts to marine traffic
	Impacts to vehicular traffic

Study Framework: Public Involvement Plan

Goal of Public Involvement Plan:
Achieve early and continuous public involvement
to build informed public support for proposed
improvements



Study Framework: Public Involvement Plan

Page 2

Multiple levels of communication:



Meetings with ...

- Working Group

- Focus groups

- General public

Get the word out

- Email, mail, media,
and online outlets

Study Framework: Working Group

Invited representatives of study area interest organizations:

Municipal, state and federal government officials and staff (elected

Study area neighborhood associations

Bicycling advocates

Regional planning and transit agencies

Environmental/water resources interests

Recreational interests

Role of the Group:

To provide input to the team on the study process

Act as conduit for information/issues with representative organization



Schedule/Next Steps

Finalize Study Framework (Goals/Objectives, Study Area, Evaluation Criteria, and Public Involvement Plan)

Study website launch

Existing Conditions

- Data Collection – Summer and off season traffic data collected

- Development of travel demand model

- Generate future travel demand forecast

- Coordinate with ACOE on program for bridge maintenance

- Identify issues and constraints

Next Working Group Meeting (March 2015)



Study Schedule

	2014			2015											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TASK 1															
Study Area															
Goals/Objectives															
Evaluation Criteria															
Public Involvement Plan															
Working Group Meeting															
Public Meeting															
TASK 2 Existing Conditions, Future No-Build															
Existing Conditions/Data Collection															
Traffic data/analysis summer and fall															
Crashes															
Land Use/Economic															
Environmental															
Public Health															
Future Conditions/Model/Analysis															
Issues and Opportunities															
Constraints Identification															
Working Group Meeting															
Public Meeting															

Continued →

Study Schedule: Page 2

	2014			2015											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TASK 3 Alternatives Development															
Working Group Meeting															
Public Meeting															
TASK 4 Alternatives Analysis															
Mobility/Accessibility Analysis															
Safety Analysis															
Environmental Effects Analysis															
Land Use/Economic Development															
Community Effects/TitleVI/EJ															
Cost Analysis															
Working Group Meeting															
Public Meeting															
TASK 5 Recommendations															
Draft report															
Working Group Meeting															
Public Meeting															
TASK 6 Final Report															

Questions?

Comments and feedback can be emailed to
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