

## **MassDOT Cape Cod Canal Area Transportation Study**

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#### **RE: Fifth Working Group Meeting**

*Date and Time:* July 26, 2016, 4pm-6pm

*Location:* Massachusetts Maritime Academy, Admiral's Hall, 101 Academy Drive, Buzzards Bay

*Attendees:* [Sign in names attached]

#### *Meeting Notes:*

Ethan Britland, MassDOT Project Manager, welcomed the Working Group members and thanked them for attending the meeting. Mr. Britland went through the agenda, which included a Welcome and Introductions before discussion of the Study Process & Framework, Study Framework: Goals and Objectives, Future No-Build Traffic Conditions, Alternatives Development, and Schedule/Next Steps.

Mr. Britland introduced himself and the team working on the Cape Cod Canal Bridge Study. He began by introducing Craig Martin from the US Army Corps of Engineers and noting Michael Walsh's involvement from the Army Corps as well. He then introduced the study team: Bill Reed, P.E., Principal-in-Charge from Stantec, Mike Paiewonsky, AICP, Project Manager from Stantec, Ed Hollingshead, AICP, Team Senior Advisor from Stantec, Heather Ostertog, P.E., Transportation Engineer from Stantec, Sudhir Murthy, P.E., PTOE, Transportation Modeler from TrafInfo, and Alison LeFlore, AICP Public Involvement Planner from The Cecil Group.

Mr. Britland stated that the study process has five steps: 1) Goals and Objectives, Evaluation Criteria, and Public Involvement Plan, 2) Existing Conditions, 3) Future Conditions, Alternatives Development, and Issues Evaluation, 4) Alternatives Analysis, and 5) Recommendations. He said we would refresh the group about each these five steps, but that the day's meeting would primarily focus on Step 3, Alternatives Development.

Mr. Britland specified that the study goals are to create/improve multimodal mobility in the Cape Cod Canal Area and to establish an alternative 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.

Mr. Britland said the study objectives are to: 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 the 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, and ensure that cross canal connectivity does not become a barrier to reliable intra-community connectivity for the Towns of Bourne and Sandwich.

Mr. Britland displayed a map of the study area that showed both the focus area and larger study area.

Mr. Britland introduced Heather Ostertog to provide a brief summary of the analysis of existing traffic operations in the study area.

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Ms. Ostertog showed a map that highlighted the transportation corridors in the larger study area. She stated that there were three (3) types of traffic data collected for the study: Automatic Traffic Recorders (ATR), Turning Movement Counts (TMC), and BlueTOAD. Traffic data was collected in the Summer season and the non-summer season. ATRs are the cables that cross the road; they collect traffic data for a 24-hour period, seven days a week. TMC is data that is collected manually. This data was collected on a weekday for both summer and non-summer from 7 AM to 9 AM and 4 PM to 6 PM and on Saturday from 10 AM to 12 PM. BlueTOAD is collected from bluetooth devices, also for a 24 hour, seven day period. The BlueTOAD was also able to collect data from cars entering and leaving Cape Cod.

Ms. Ostertog showed the 57 locations where they collected ATR data, the 37 locations where data was collected through TMCs, and the locations for BlueTOADs throughout the study area.

Wendy Northcross asked what the study team considered to be summer and non-summer and Ms. Ostertog answered that the summer counts occurred in July and non-summer counts were conducted in October.

Ms. Ostertog showed a chart showing the differences in traffic volume between between summer and non-summer. They varied from a 24% change on Sandwich Road to 63% on Route 6. She then displayed a map showing peak queue lines from summer and non-summer on Saturday for both bridges and another slide showing the same information projected out to 2040. In 2040, the queue lengths have increased significantly.

Mike Paiewonsky then presented a brief review of regional travel demands in the study area. Mr. Paiewonsky stated that demand models used the future years of 2020 and 2040 to identify no-build and build scenarios. Trip generation for the travel demand models are based on socioeconomic data, population, and employment. There are usually two (2) different types of trips: commuter and non-commuter trips. Commuter trips are trips to jobs or schools and non-commuter trips are everything else. However, the Cape has a third type of trip: visitor trips. Mr. Paiewonsky also showed a graphic of the percentage of commuter, non-commuter, and visitor trips. He stated visitor growth is forecasted to increase 0.26% to 0.69% annually. After speaking with the Cape Cod Commission, the study decided use the more conservative 0.69% annual increase for this study.

The speakers then paused for questions. Randy Hunt commented that the map Ms. Ostertog showed did not show as much traffic as there can be; sometimes the back-up goes to Exit 2. Ms. Ostertog said the maps showed a representative sample on Saturday morning in the summer.

Randy Hunt asked why the group choose 0.69% as the annual increase in visitation. Mr. Britland explained that the Study Team's projections were lower than those of the Cape Cod Commission, so it was decided to use the higher end of the range that the Study Team had identified. He then asked if Glenn Cannon, from the Cape Cod Commission, wanted to provide additional information. Mr. Cannon said that the Cape Cod Commission's projections were even higher than the 0.69 annual increase, so they had worked with the Study Team to settle on the 0.69 value.

With no additional questions, Ms. Ostertog resumed the presentation. She discussed the comparison of traffic volumes between 2015 and 2040 under the no-build scenario for both summer and non-summer traffic volumes. Increase in summer traffic volumes varies between 5% to 40%. For non-summer, the increase ranges from 14% to 56%.

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Ms. Ostertog explained what level of service (LOS) is, including that it is rated on a scale from A to F with A being the best. For a suburban area, LOS A through D are acceptable. During the summer AM peak, there were ten intersections with unacceptable LOS and six intersections with a LOS of F. Based on the 2040 projections, the models indicate there will be 15 locations with unacceptable LOS and up to 13 intersections will have a LOS of F. During the summer PM peak, there were 15 intersections with unacceptable LOS and 11 intersections with an F LOS. In 2040, the models indicate there will be 21 locations with unacceptable LOS and up to 20 locations with a LOS of F. During the weekend morning time period, there were 16 places with unacceptable LOS and 11 locations with a LOS of F. In 2040, the models indicate there will be 24 locations with unacceptable LOS and up to 23 locations with a LOS of F.

During the non-summer months, the morning peak had 11 locations with unacceptable LOS and 5 locations with a LOS of F. The models indicate that by 2040, there will be 17 locations with unacceptable LOS and up to 14 locations with a LOS of F. The afternoon peak currently has 13 locations with unacceptable LOS and 8 locations with a LOS of F. Models indicate that in 2040, there will be 21 locations with unacceptable LOS and up to 18 locations with a LOS of F. The non-summer weekend analysis showed 12 intersections with unacceptable LOS and 9 locations with LOS of F. By 2040, the models indicate there will be 20 locations with unacceptable LOS and up to 18 locations with a LOS of F.

Ms. Ostertog then mentioned that some of the intersections consistently had unacceptable LOS. She said there are eight (8) locations with year-round problems and that, by 2040, there will be thirteen (13) areas with unacceptable LOS year-round during all of the key times (weekday morning and afternoon peak and weekend mornings). The eight (8) intersections that are consistently performing unacceptably are: Bourne Rotary, Sandwich Road at Bourne Rotary Connector, Sandwich Road at Harbor Lights Road, Belmont Circle, Scenic Highway at Nightingale Pond Road, Scenic Highway at Canal Road/State Road, Route 6A at Cranberry Hwy/Sandwich Road, and Route 130 at Cotuit Road. The additional areas the models indicate will have unacceptable performance in 2040 are: Herring Pond Road at Exit 2 Southbound, Herring Pond Road at Exit 2 Northbound, Quaker Meetinghouse Road At Exit 3 Eastbound, and Quaker Meetinghouse Road At Exit 3 Westbound.

Randy Hunt asked if additional pinch points could be created by improving performance at particular intersections. Ms. Ostertog answered that Bill Reed would be discussing those issues later in the presentation.

Glenn Cannon then asked a question about additional turning analysis and Ms. Ostertog said weekend data was only collected on Saturday from 10 AM to 12 PM, so intersection data can only be analyzed for that time period. Mr. Cannon said that the Cape Cod Commission may have some traffic data to supplement the study's data to help with this information.

Mr. Paiewonsky then spoke about the development of alternatives. He stated that the alternatives development is seeking 1) to satisfy study goals and objectives from Task 1; 2) is based on the issues, constraints, and opportunities identified in Task 2; and 3) minimize property, community, and environmental impact. He then re-presented the study's goals and objectives.

Task 2 included a review of existing traffic, environmental conditions, bicycle, pedestrian, and transit facilities, the travel demand model, the future 2040 no-build traffic model, and discussions with the Army Corps of Engineers.

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In addition to the traffic data and modeling, additional considerations will influence the alternatives development. These outside considerations include the US Army Corps of Engineers plan for the bridges, the examination of prior alternatives developed as a Public Private Partnership (P3), and review of outside submissions.

The Army Corps is conducting a Major Rehabilitation Evaluation Study to determine if the Sagamore and Bourne Bridges must be replaced or if rehabilitation is feasible. For the purpose of this study's analysis, the team will assume both bridges will be replaced.

Mr. Paiewonsky mentioned that a P3 Concept had been developed in response to increasing need for maintenance on the bridge and the aging infrastructure.

The alternatives development process is focused on 2040 non-summer traffic volumes with the understanding that improvements will also ease some of the traffic congestion during the summer. Mr. Paiewonsky explained that the Study Team doesn't believe that better infrastructure will increase demand because demographics and socioeconomic conditions are the greatest contributors to traffic. The Cape Cod population is growing very slowly, job growth is forecasted to be slow, and visitor growth is projected to be 0.69% annually. Another demographic trend that must be considered is that the population is growing older, so it is anticipated that an increasing number of summer homes will be converted into year-round residences.

Plans for transit, including passenger and freight train service and ferry services, will influence the development of alternatives. Additionally, the Cape Cod Commission's Land Use Plan and long range transportation plans will also influence alternatives development.

Mr. Paiewonsky handed the presentation over to Bill Reed.

Mr. Reed said that the alternatives developed will focus on improving mobility and safety. Mr. Reed explained that the current travel patterns within the study area strongly influenced alternatives development.

Mr. Reed explained that even though it may appear that there are some "easy" connections to make, there are many constraints including environmental resources, rare species habitat, and current land development.

Mr. Reed said there were many design ideas from members of the general public. Ideas received to date include a rail tunnel, direct third bridge crossing, a vehicular tunnel under Buzzards Bay between Marion and North Falmouth, a mid-canal crossing, an airport, additional Sandwich Road access, a Buzzards Bay multimodal transit station, improvements to Exit 2 on Route 6, widening Route 6, and combining ramps to and from Route 6.

Mr. Reed reviewed some of the alternatives the Study Team is developing. The team is examining potential improvements north of the Bourne Bridge at Belmont Circle including a flyover and an additional on-ramp from Scenic Highway to Route 25 Northbound. The team will also analyze improvements south of the Bourne Bridge including a Bourne Rotary bypass, an acceleration lane southbound on Route 28, and may also consider the impacts of a flyover at the Bourne Rotary. For changes north of the Sagamore Bridge, the potential improvements include reconstruction of Exit 1A, an

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acceleration lane at Exit 1A, and a flyover lane. South of the Sagamore Bridge, potential improvements include an acceleration lane at Exit 1C and a review of the ramps around the Christmas Tree Shop. The Study Team will also be analyzing improvements to Scenic Highway and Sandwich Road. As the Study Team's work progresses, additional alternatives may be identified. The forthcoming analyses may show that potential improvements are unworkable or require the Study Team to look outside of the Study Area to suggest additional improvements.

Mr. Reed said that even though many of the potential improvements he had just outlined are longer-term efforts, they are likely to be a number of short-term improvements that can improve traffic flow while the long-term projects are designed. For example, he indicated that there may be locations where adjusting the signal timing could improve traffic flow.

Wendy Northcross asked if it might be worthwhile to temporarily close certain exits to study traffic impacts. Mr. Britland stated that he has heard resistance to closing any exits, even on a temporary basis. Pamela Haznar said that seasonal closure of exits would force more drivers to use local roads, causing problems in other locations. She added that the Police Chiefs and other public safety personnel have been opposed to closing exits because the additional local traffic could cause safety concerns and make it more difficult to access certain areas.

The group then had a discussion about the number of lanes each bridge would have if the bridges were to be replaced. Mr. Reed said that he believed Federal Highway regulations would require three lanes on each side, but the number of lanes would be determined during the permitting process.

Mr. Hunt asked if it would be possible for the State of Massachusetts to pay for a third lane if analysis showed that three lanes would provide optimal traffic flow and the federal government was only going to pay for an exact replacement of two lanes in each direction. Mr. Britland responded that we do not yet know if three lanes in each direction would be optimal because the analysis has not been completed yet. Mr. Britland and Mr. Reed explained that replacing the bridges would require an EIS (Environmental Impact Statement), so there would be extensive review and opportunities for public comment on the bridge design. Mr. Reed reminded the audience that the Study Group's analysis would assume that both bridges were going to be replaced and that the replacement structures would have an additional lane in each direction.

There was also some discussion about the historic nature of the bridges. Since both bridges are on the historic register, the Massachusetts Historic Commission will have some ability to influence the design of the new bridges. Ms. Northcross stated residents and visitors have a strong affinity for the bridges; they are not just bridges. Their striking appearance are part of what makes Cape Cod special.

Mr. Britland opened the meeting to general discussion and asked whether Working Group members felt that the community might be open to discussing whether or not a toll might be appropriate. Ms. Northcross suggested that any and all options should be on the table, with the caveat that a toll shouldn't burden residents who often cross back and forth multiple times a day. She suggested that perhaps residents could get a certain number of free trips, there could be reduced fees based on where a car is registered, or some other structure to ensure that residents are not unduly burdened. Ms. Haznar said that there are a lot of businesses and residents who cross the bridges as many as five or six

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times a day, so tolls may not work. The Working Group decided that the Study Group should at least analyze how a toll system could impact traffic volumes and congestion.

Mr. Britland then asked if anyone had additional questions or concerns. Since there were no additional questions or concerns, Mr. Britland concluded the meeting. He explained that the presentation would be available on the project website. One member of the Working Group asked when the next meeting would be. Mr. Britland briefly showed the schedule and said he expected to have the next meeting sometime in September.

*Meeting notes compiled by Jennifer Siciliano and Alison LeFlore; July 29, 2016*

Attendees:

Name	Affiliation
Craig Martin	United States Army Corp of Engineers (USACE)
Thomas Baron	Citizen
Pamela Haznar	Massachusetts Department of Transportation (MassDOT) – District 5
D. Kammerer-Cody	United States Army Corp of Engineers (USACE)
Charles Kilmer	Old Colony Planning Council (OCPC)
HC Hun	MassDevelopment
Paul Rendon	Joint Base Cape Cod (JBCC)
Jan Jodice	Massachusetts Department of Transportation (MassDOT)
Glenn Cannon	Cape Cod Commission (CCC)
Jim Hoyle	Federal Highway Administration (FHWA)
Paul Tilton	Sandwich Department of Public Works (DPW)
Marie Oliva	Cape Cod Canal Region Chamber of Commerce (CCRCC)
Steve Mellin	6th Space Warning Squadron
Pat Ciaramella	Old Colony Planning Council (OCPC)
Sallie Riggs	Bourne Financial Development Corporation (BFDC)
Lance Lambros	Senator Demacedo's Office
Don Keeran	Association to Preserve Cape Cod (APCC)
Wendy Northcross	Cape Cod Chamber
James Jodice	Massachusetts Department of Transportation (MassDOT)
Randy Hunt	MA House of Representatives

Also in attendance were the following team members:

- Ethan Britland, MassDOT
- Mike Paiewonsky, Stantec
- Bill Reed, Stantec
- Ed Hollingshead, Stantec
- Heather Ostertog, Stantec
- Alison LeFlore, The Cecil Group
- Jennifer Siciliano, The Cecil Group
- Frank Mahady, FXM Associates
- Diane Tsitsos, FXM Associates
- Sudhir Murthy, TrafInfo
- Deanna Peabody, TrafInfo