

**NEW ENGLAND TRANSPORTATION CONSORTIUM
QUARTERLY PROJECT PROGRESS REPORT**

A. PROJECT NUMBER AND TITLE:

NETC 18-2: Framework of Asphalt Balanced Mix Design (BMD) for New England Transportation Agencies

B. PRINCIPAL INVESTIGATOR(S) & UNIVERSITY(S):

Professor Walaa Mogawer, PhD., PE, F.ASCE -University of Massachusetts Dartmouth

C. WEB SITE ADDRESS (If one exists):

<https://www.newenglandtransportationconsortium.org/research/netc-research-projects/netc-18-2/>

D. START DATE (Per NETC Agreement): 02/05/2019

E. END DATE (Per NETC Agreement): 12/31/20

F. ANTICIPATED COMPLETION DATE: 12/31/20

G. PROJECT OBJECTIVES:

The objective of this research project is to synthesize existing information and to develop recommendations for a rational BMD approach for use by New England transportation agencies. Gaps in testing and performance data will be identified through this project and an experimental plan for required future work will be developed.

H. REPORT PERIOD: *Quarter 2: April to June 2020*

I. ACCOMPLISHMENTS THIS PERIOD:

- 1. UMass Dartmouth formally requested a NO COST time extension for this project in February 2020. The approval for this extension was received in June 2020. The project was extended six months to a new end date of 12/31/2020.*
- 2. The research team hosted an internet-based meeting on Friday June 5th 2020 with representatives from the NETC state agencies for this project. The purpose of the meeting was to give a project status update. The progress on Task 3 “Collect existing performance test data, available from recent state/regional projects, and related historical field performance data on the representative pavements” and Task 4 “Analyze test and field performance data in order to develop preliminary recommendations for a BMD approach” were discussed as related to the data that was provided from each state agency. Vermont and Connecticut provided data. Vermont provided laboratory testing and field performance comparison data. Specifically, rutting data (Hamburg wheel tracking test and field rutting) and fatigue cracking data (SCB flexibility index and field cracking) were provided. It was recommended that field cores be taken and tested from projects exhibiting poor rutting and fatigue cracking performance to help better establish BMD criteria as most laboratory test data from good performing projects. Connecticut provided PMS data for rutting and fatigue cracking that could, in the future, be compared laboratory testing of field cores.*

3. *Due to the lack of data, the challenges on developing specific BMD recommendations for each state were discussed as it influences the experimental (work) plan that needs to be developed for Task 5 “Identify gaps in the test and performance data, and develop an experimental plan for future research with the goal to further refine the development, validation, and implementation of a BMD approach for New England states.” Without more data, the research team recommendations and future workplans will have to be generic in nature.*
4. *In the next quarter, the research team will continue to attempt to receive data from the states that did not provide data previously.*

J. PROBLEMS ENCOUNTERED (If any):

Very little data has been provided for Task 3. Only Vermont, Connecticut, and Maine have provided data as outlined in the Accomplishment section of this report.

K. TECHNOLOGY TRANSFER ACTIVITIES: n/a

L. STATUS BY TASK:

Task Number	Description	Percent Complete
1	Identify typical pavement distresses in each of the New England states.	100%
2	Identify candidate performance tests for each identified common distress.	85%
3	Collect existing performance test data, available from recent state/regional projects, and related historical field performance data on the representative pavements.	75%
4	Analyze test and field performance data in order to develop preliminary recommendations for a BMD approach.	75%
5	Identify gaps in the test and performance data and develop an experimental plan for future research with the goal to further refine the development, validation, and implementation of a BMD approach for New England states.	0%

M. PERCENT COMPLETION OF TOTAL PROJECT: 70 %

N. ACTIVITIES PLANNED FOR NEXT QUARTER:

1. *Contact the appropriate person at each NETC agency to obtain PMS data.*
2. *Work on Task 3, 4 and 5.*

O. FINANCIAL STATUS:

As of: June 30th, 2020

Total Project Budget: \$ 127,499

Total Expenditures : \$ _____

Note: This report should not require more than 2-3 pages & should be e-mailed to the NETC Coordinator so as to arrive no later than three (3) working days after the end of each calendar quarter.