

Professional Agreement Invoice and Progress Report

Idaho Transportation Department



This page must be filled out monthly by the Consultant and forwarded to the Agreement Administrator with the monthly invoice. If necessary, attach additional sheets for continuation.

Key Number	Project Number ITD RP 235	Project Name ITD AASHTOWare Pavement ME Design	Date 4/17/2017
Agreement Administrator Ned Parrish		Progress Report Number KLK572-23	Agreement Number UI-15-04
Consultant			Report/Billing Period (From and To) 3/1/17-3/31/17
Certification of Payment Submitted <input type="checkbox"/> Yes <input type="checkbox"/> No	Certification Date	PSA Number	Invoice Number Invoice 19
<p>Description of Work Accomplished During the Month</p> <p>Work progress during this month (March 2017) included:</p> <ul style="list-style-type: none"> - Conduct sensitivity analysis of rutting models calibration factors β_{1r}, β_{2r}, β_{3r} for the HMA, unbound and subgrade layers. - Started calibration of fatigue cracking model to determine the regional calibration factors β_{f1} & β_{f2}. - Started testing with using dummy samples for Creep Compliance and IDT for the mixes that were not tested at WSU. - Updated the literature review. - Worked with ITD asset management to obtain video files for performance data. 			
<p>Summary of Work Completed to Date (Milestones Completed and Dates)</p> <p>Please refer to the attached Gantt Chart. So far, we have done several trials on calibration using data from some projects from Districts 1, 2 and 3. We stopped procuring new projects from ITD districts, and are focusing on analyzing the data from the projects in-hand.</p> <p>Work progress so far is estimated by about 65% complete.</p>			
Information Required from ITD to Avoid Delays			
List Changes in Scope or Complexity Requiring a Supplemental Agreement or Time Adjustments			
Consultant's Signature		Printed Name and Title Fouad Bayomy, Principal Investigator	

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Key Number	Program (Work Authority)	Progress Report Number 23	Agreement Number UI-15-04
Report Reviewed By			Review Date
The Following was Initiated			

Status Report

A completed status report must accompany all Agreement invoices recommended for payment. The requested percentage measurements of progress to this report are required.

Agreement Time 36 months	Time Passed 23 months	Percent of Agreement Time Elapsed 63.89%	Percent of Work Completed 65%
Original Agreement Amount \$338,036.53	Supplemental(s) \$0.00	Current Agreement Amount \$338,036.53	Payments (Including this Payment) \$158,830.35
Percent of Agreement Dollars Paid 46.99%			
Certification of Payment Submitted <input type="checkbox"/> Yes <input type="checkbox"/> No	Certification Date	Fixed Fee	This Invoice \$
			To Date \$
			Negotiated \$
If There is a Significant Variance Between the Percentages, Please Explain			
Consultant Invoice Number Invoice 19		This Payment Amount \$12,400.30	

- Progress Payment:** I certify that the Agreement provisions have been reviewed, the invoice amount checked, progress is substantiated, significant material expenses have support documentation (receipts), and the costs billed are project related and represent the work accomplished. I hereby approve the progress estimate for payment.
- Final Payment:** I certify that all work under the terms of the Agreement has been satisfactorily completed, any capital assets acquired have been delivered or value received, an affidavit of indebtedness received, and the project reviewed or audited and costs verified for work performed. I hereby approve final payment under the Agreement.

Agreement Administrator's Signature	Date	Second (Independent) Reviewer's Signature
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RP 235 (KLK 572)

**Calibration of the AASHTOWare Pavement ME Design Performance Models for Flexible Pavements in Idaho - Time Schedule
(Revised May 2016)**

Task No	Task Description	Year	2016												2017												2018								
		Month	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr									
		Elapsed Month	1	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36									
Task 1	Review of the ME software distress prediction models for Flexible Pavements		5%				10%						5%																						
Task 2	Evaluate the design inputs required for the ME Software			5%			10%																												
Task 3	Identify and select the pavement sections for the calibration		17%	5%			This	10%	5%				5%	5%																					
Task 4	Conduct Creep Compliance and IDT Testing		15%	20%	25%				2%	5%			2%	2%											4										
Task 5	Develop a performance database for the ME calibration for the selected sections		7%	10%	25%				10%	15%	8%	5%	5%											5											
Task 6	Run the software with the assembled database						25%	5%	5%	5%	10%	15%	5%														6								
Task 7	Development and Validation of Idaho calibration factors						10%					5%	5%	5%														7							
Task 8	Summary of findings and recommendations																												8						
Task 9	Prepare and conduct training workshop																															9			
Task 10	Final Report																																		
a	Submit Outline for ITD to Review																																		
b	Meet ITD to discuss outline																																		
c	Prepare report and send draft to peer reviewer																																		
d	Send draft to report editor																																		
e	Submit draft of required output																																		
f	ITD / FHWA Review																																		
g	Final Report due to ITD																																		10
	Indicates Submittal # to ITD																																		