

# Predictive Model of Adaptive Cruise Control Speed to Enhance Engine Operating Conditions

Srikanth Kolachalama\*, Hafiz Malik

*Corresponding author.* e-mail: [skola@umich.edu](mailto:skola@umich.edu); *Co-author.* e-mail: [hafiz@umich.edu](mailto:hafiz@umich.edu);  
Electrical and Computer Engineering, University of Michigan, Dearborn 48128, USA

## Supplementary Material - Figures

### 1. Prediction of EOP- Test Cases

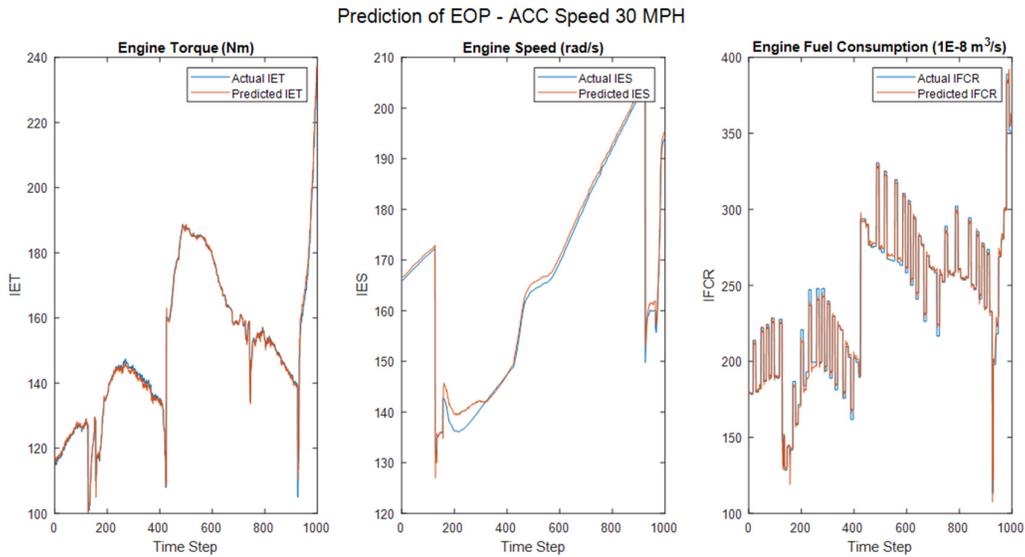


Figure S1: Prediction of EOP - ACCSSP = 30 MPH, 2020 Cadillac CT5

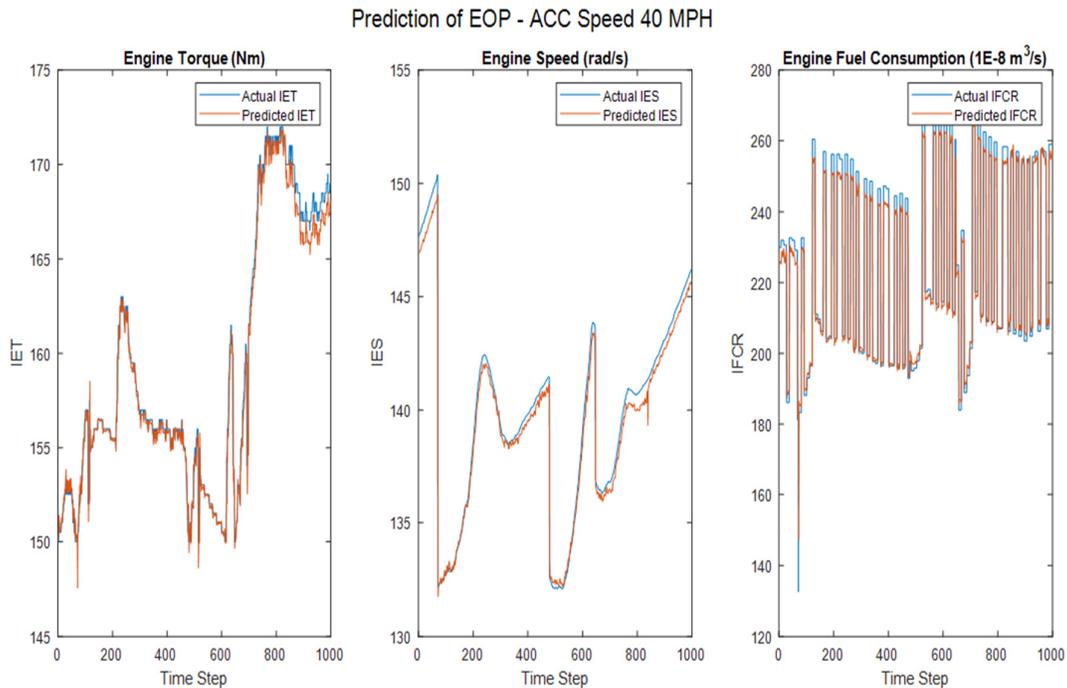


Figure S2: Prediction of EOP - ACCSSP = 40 MPH, 2020 Cadillac CT5

Prediction of EOP - ACC Speed 50 MPH

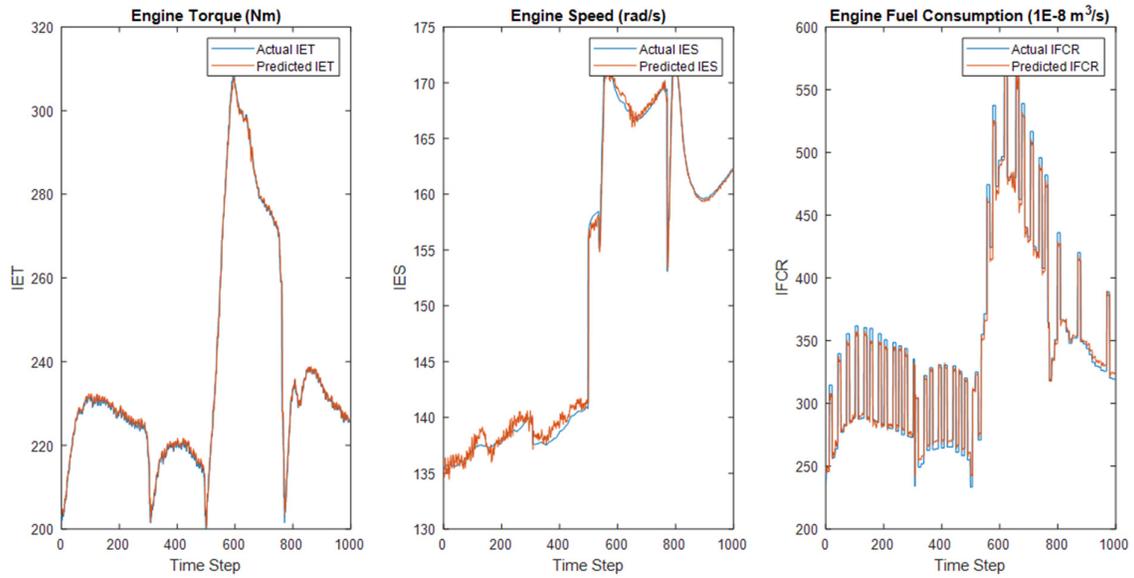


Figure S3: Prediction of EOP - ACCSSP = 50 MPH, 2020 Cadillac CT5

Prediction of EOP - ACC Speed 60 MPH

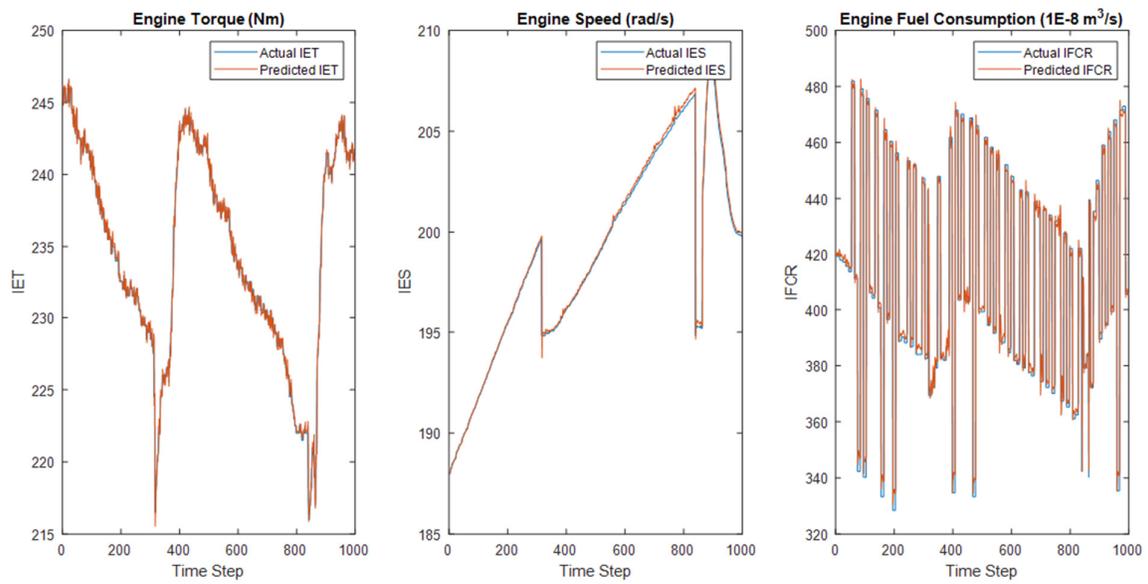


Figure S4: Prediction of EOP - ACCSSP = 60 MPH, 2020 Cadillac CT5

Prediction of EOP - ACC Speed 70 MPH

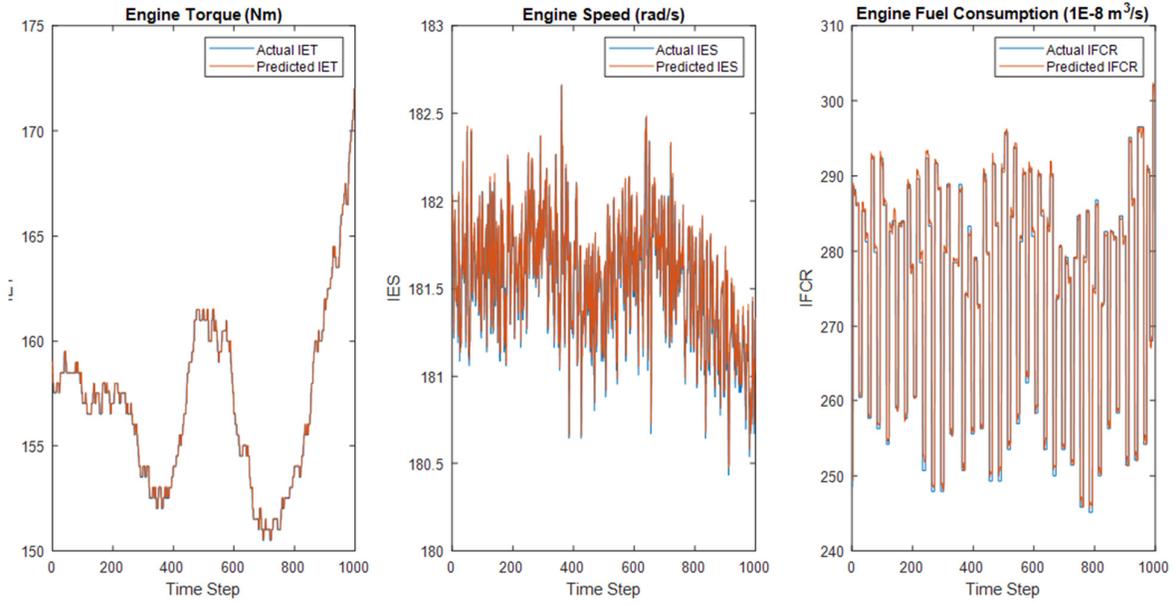


Figure S5: Prediction of EOP -. ACCSSP = 70 MPH, 2019 Cadillac XT6

Prediction of EOP - ACC Speed 80 MPH

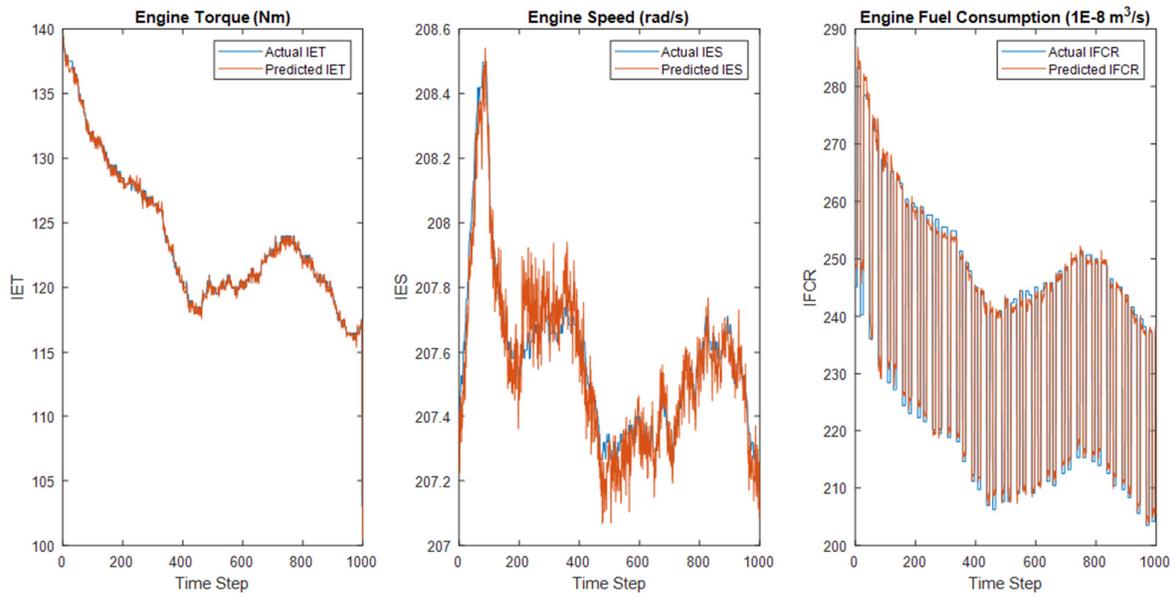


Figure S6: Prediction of EOP - ACCSSP = 80 MPH, 2021 Cadillac CT4

## 2. Prediction of ACCSSP - Test Cases

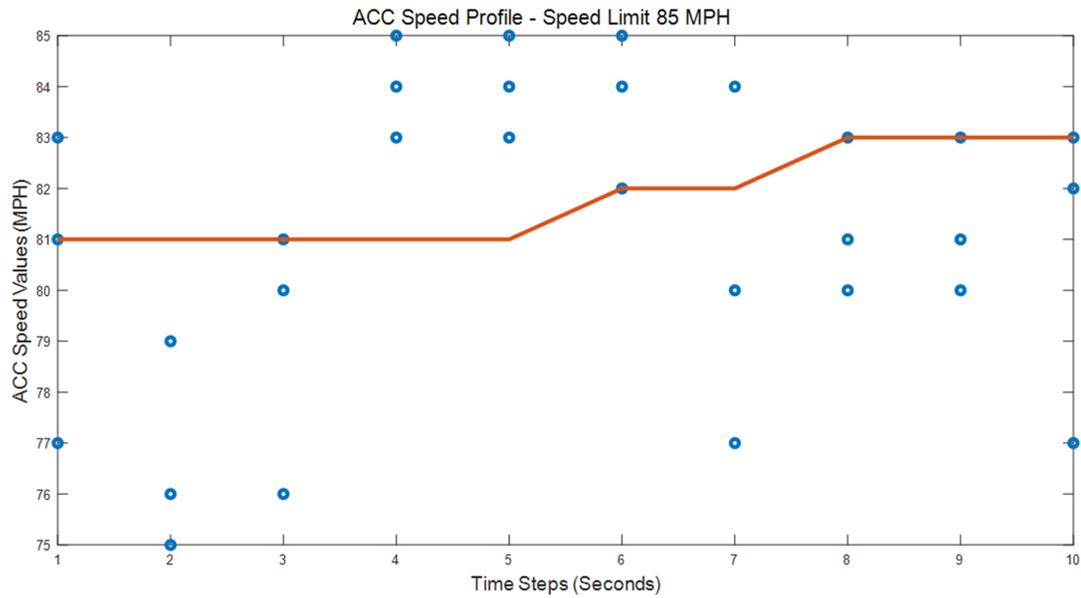


Figure S7: Prediction of ACCSSP - IAS = 80 MPH, SL = 85 MPH

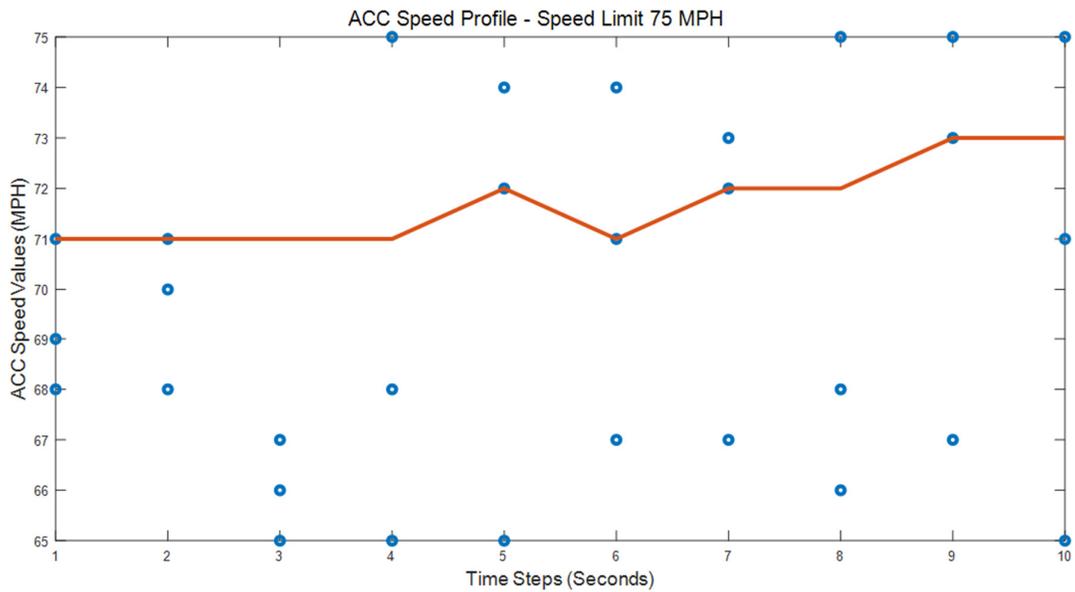


Figure S8: Prediction of ACCSSP - IAS = 70 MPH, SL = 75 MPH

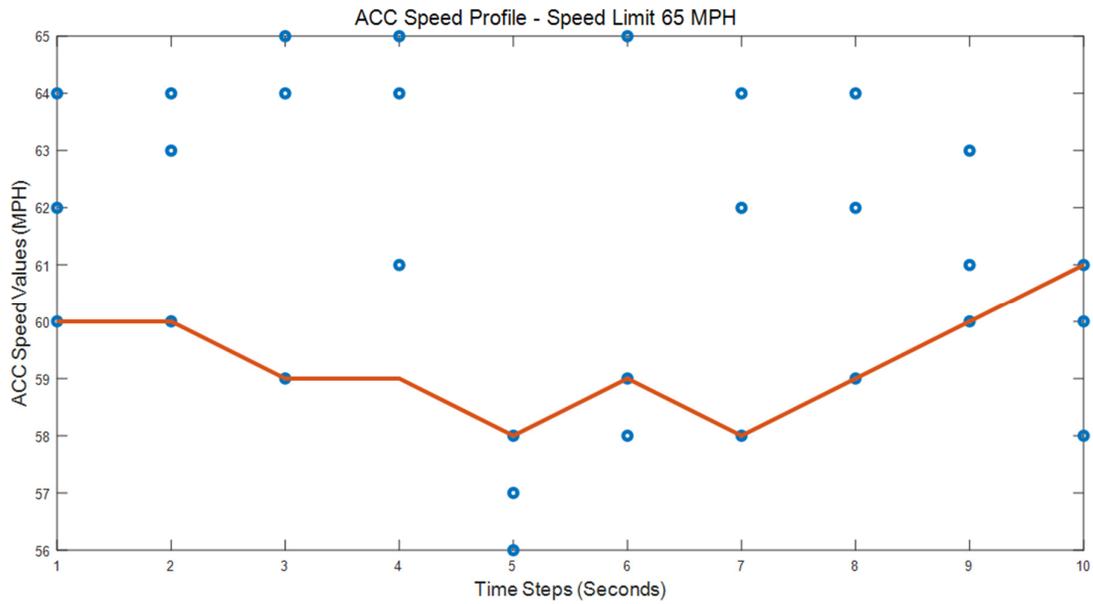


Figure S9: Prediction of ACCSSP - IAS = 60 MPH, SL = 65 MPH

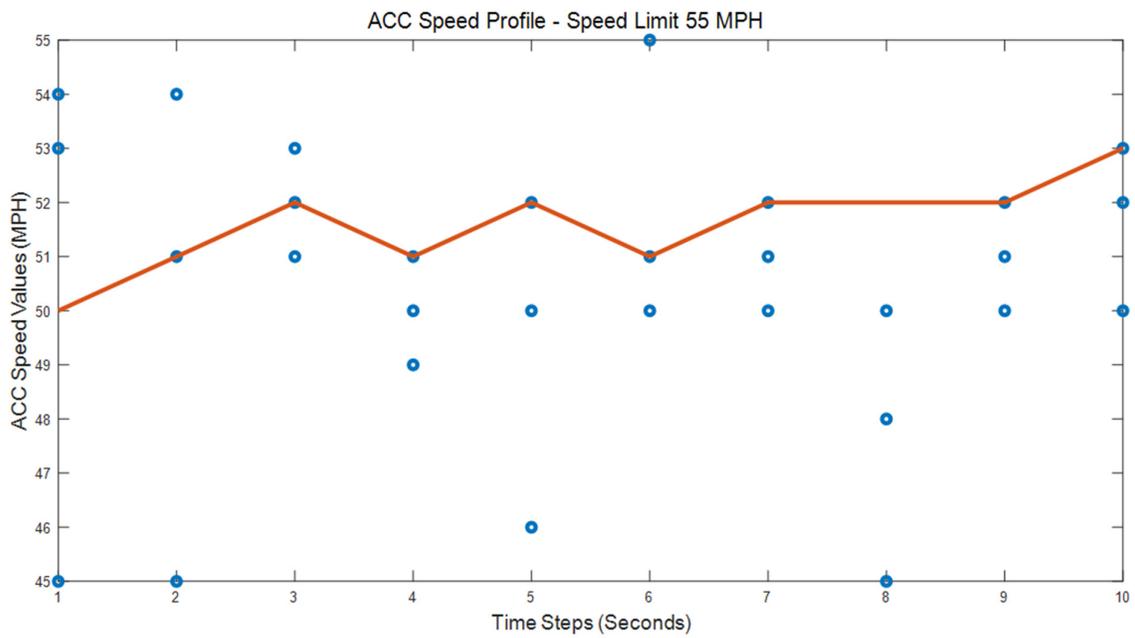


Figure S10: Prediction of ACCSSP - IAS = 50 MPH, SL = 55 MPH

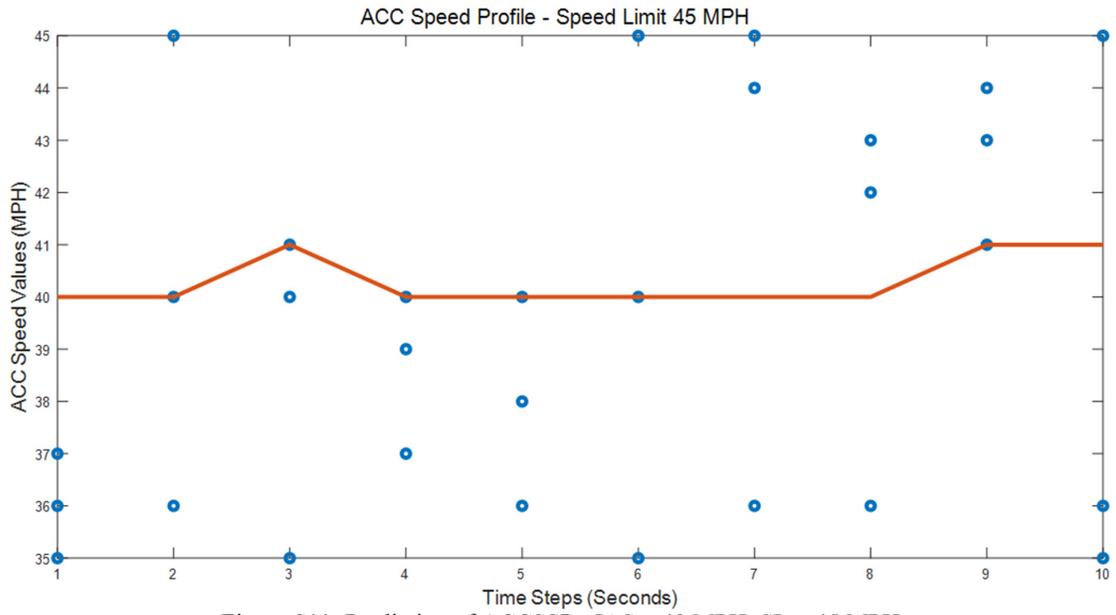


Figure S11: Prediction of ACCSSP - IAS = 40 MPH, SL = 45 MPH

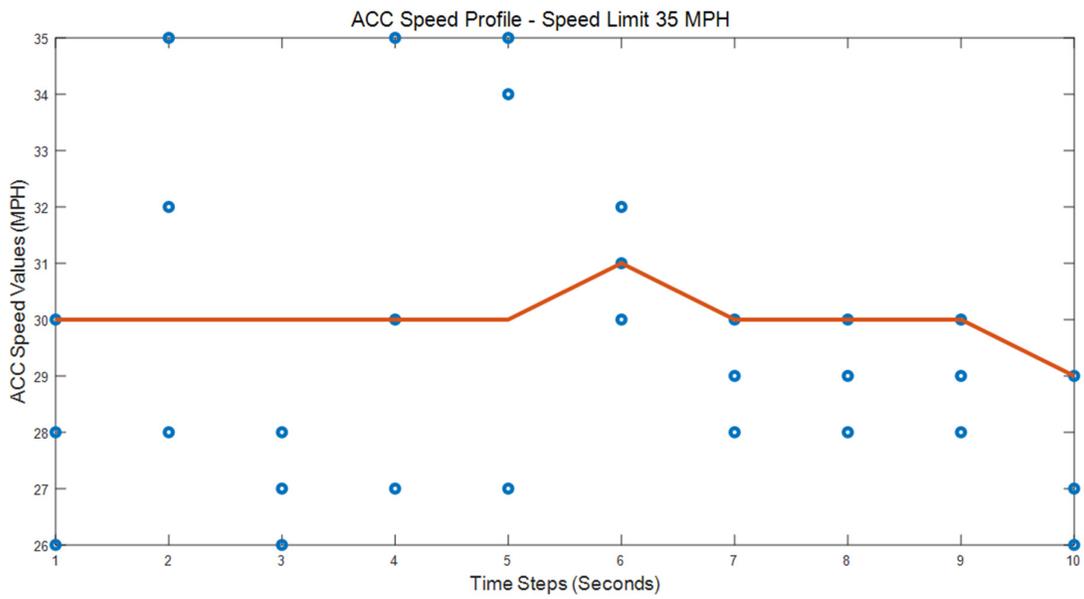


Figure S12: Prediction of ACCSSP - IAS = 30 MPH, SL = 35 MPH