

TTE 3004

**INTRODUCTION TO
TRANSPORTATION ENGINEERING**

**LAB PROJECT 1: TRAFFIC STREAM
CHARACTERISTICS**

Department of Civil, Environmental, and Geomatics Engineering

Florida Atlantic University

OBJECTIVE

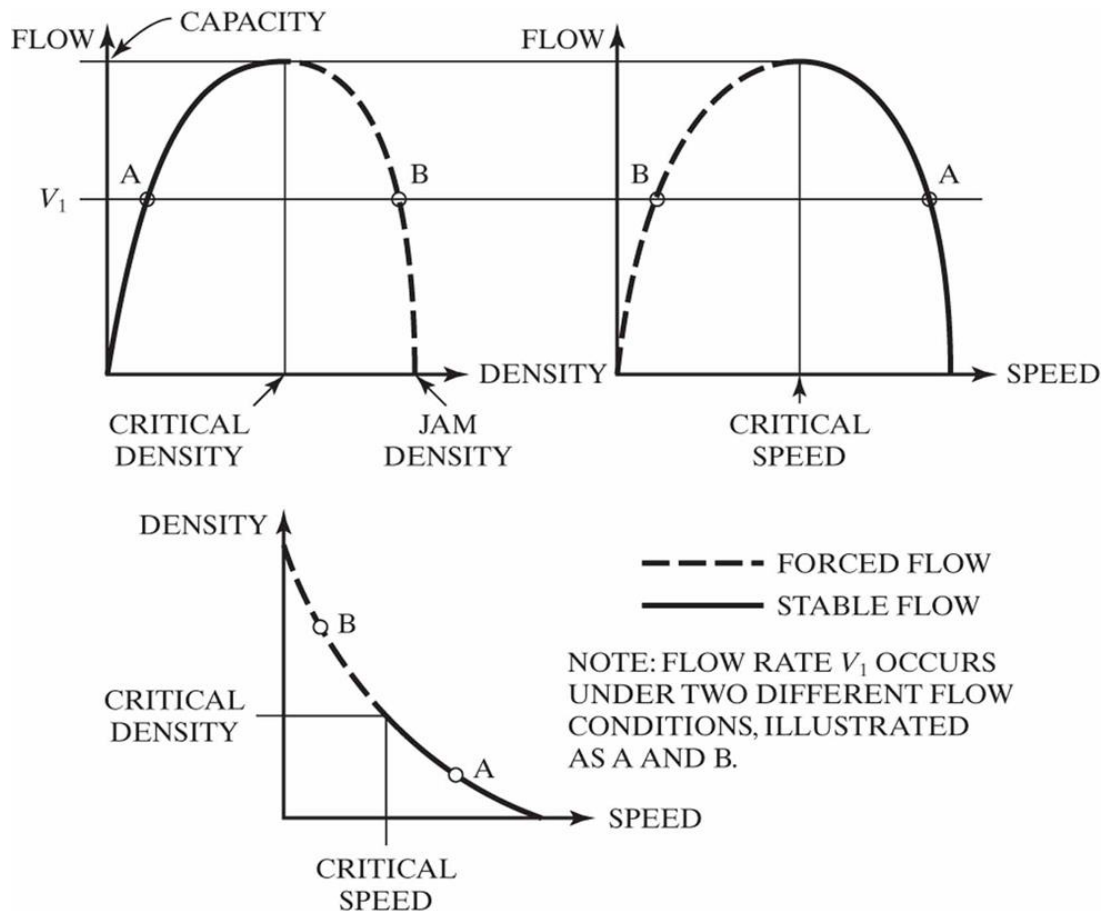
The objective of this lab project is to establish relationship among flow, density, and space mean speed using field data collected from the Regional Integrated Transportation Information System (RITIS).

PROJECT DESCRIPTION

You are required to collect traffic data from 09/04/2018 to 09/06/2018 of two detectors using RITIS:

- FLD4095SB031.8: This detector collects data of the mainline of I-95 southbound close to the ramps of Commercial Blvd.
- DS-0033S-GP: This detector collects data of the general purpose lanes of I-95 southbound close to the interchange of I-195

Upon completion of the data collection, you will be required to plot flow vs. density, flow vs. speed, and density vs. speed curves similar to the figures shown below:



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Once completed, determine the capacity per lane, free flow speed, critical density per lane, and jam density per lane of both freeway segments, respectively.

Bonus (10 points):

You can collect additional data from the aforementioned two detectors to get better results. HOWEVER, if the overall conclusion drawn is incorrect, the bonus points will not be awarded.

DELIVERABLES

A short 3-5 page (does not include cover page and table of content) technical report that includes the following:

Cover Page: Title of the lab project, name of group members (5 points)

Table of Content (5 points)

Executive Summary: brief description of the objective of this lab project and a brief summary of the findings (10 points)

Introduction: motivation for the project and a brief description of the project objective (10 points)

Methodology: summary of procedures, statement of assumptions (20 points)

Results: figure, tables, description of the results, comments on the validity of the results (30 points)

Conclusion: summary of findings and brief comments on the results (10 points)

Overall presentation style: 10 points