

FLORIDA STATE UNIVERSITY
FAMU-FSU COLLEGE OF ENGINEERING

A COMPREHENSIVE ASSESSMENT OF ADVANTAGES AND
DISADVANTAGES FROM ELECTRIC TUGBOAT DEPLOYMENT IN
MARITIME TRANSPORTATION

By
SHANMUKH SAI CHANDRA PRASAD DEVARAPALI

A Thesis Submitted to the
Department of Civil and Environmental Engineering
in partial fulfillment of the
requirements for the degree of
Master of Science

2024

Shanmukh Sai Chandra Prasad Devarapali defended this thesis on March 1, 2024.

The members of the supervisory committee were:

Maxim A. Dulebenets

Professor Directing Thesis

John Sobanjo

Committee Member

Michael Elwardany

Committee Member

The Graduate School has verified and approved the above-named committee members and certifies that the thesis has been approved in accordance with university requirements.