

# **EVALUATING FREIGHT INTERMODAL CONNECTORS (FICS) IN TENNESSEE**

Project #: **RES2016-35**

## **PURPOSE OF THE PROJECT**

Intermodal connectors are public, short mile road or rail track that connect intermodal terminals to national highway systems (NHS) mainline routes (primarily interstates and arterials). This project will evaluate Freight Intermodal Connectors (FICs) in Tennessee to identify deficiencies related to congestion, capacity, safety, and supply chain demand needs. The study will focus on “roadway connectors” that is; segments, corridors and intersections that connect Tennessee freight trucks to/from the major freeways from/to high-priority facilities such as truck hubs, airport terminals, freight rail terminals, passenger rail and intercity bus terminals, waterways, warehouses, depots, centers, etc. For efficient intermodal freight movement, these roadway connectors must be in a desired service conditions (operational, safety, and environmental) capable of accommodating truck and freight needs. If FICs have little capacity, they will cause traffic congestions that in turn will dramatically increase travel time, energy consumption, and air pollution. On the other hand, if FICs have too much capacity, their utilizations will be too low to justify monetary investment on them. In other words, FICs need to match operational and safety needs as well as the supply chain demand along the connectors.

## **SCOPE AND SIGNIFICANCE OF THE PROJECT**

The study will perform a multimodal inventory check and evaluate some of critical freight connectors in Tennessee by identifying improvement needs with respect to: access and connectivity, capacity, safety, supply chain and environmental impacts. The study will provide technical analysis and summary of freight related deficiencies that exist along roadway connectors connecting freight especially trucks to known warehouses, depots, hubs and terminals.

## **EXPECTED OUTCOMES**

The study will come up with potential deficiencies warranting improvement needs which eventually will improve FICs’ capacity, congestion, supply chain demand, safety and environmental impacts. The study will also perform FICs route optimization on potential alternative connectors to the existing ones. The analysis will provide diverse recommendations on the improvement priorities among the analyzed FICs. FICs will be assigned a score on congestion, capacity, safety, supply chain demand, risk, and emission basis, relying on what is known about the issues from the field review, data review, traffic analysis and simulation, model optimization and stakeholders’ inputs. The following are some of the expected outcome deliverables:

- Comprehensive Literature Review
- Engaged freight stakeholders
- FICs Multimodal Inventory
- FICs Operation and Safety Deficiencies
- FICs Supply Chain Demand Evaluation
- Evaluated FICs Risk Management
- Evaluated Emissions along the FICs
- Evaluated FICs MOE’s

## **TIME PERIOD**

The project period is 30 months starting 8/1/2016 to 2/1/2019.

## CONTACT INFORMATION

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