

Supporting Safe and Efficient Public Transit on State Routes

PROBLEM

Transit agencies are responsible for planning, installing, and maintaining bus and streetcar stops, shelters, and other facilities, while local government agencies are responsible for local roads and most pedestrian facilities connecting to transit, as well as for permitting transit facilities on their roadways. Louisiana DOTD, in turn, must permit transit facilities on state-owned roads, on which approximately half of all fixed-route transit stops in the state are located. The complexity of relationships surrounding the development and management of transit facilities and pedestrian network connections can create challenges for improving conditions for transit riders and for implementing innovative design approaches or technologies.

Local agencies and stakeholders involved in supporting the development of safe, efficient transit systems that provide access to jobs and a dignified rider experience anecdotally report experiencing challenges in efficiently planning and designing new transit infrastructure, or upgrading/improving existing infrastructure, where transit routes intersect with state-controlled assets.

Meanwhile, DOTD's Access Connection (Traffic Generator) Permit Supplement for Bus Shelters and Benches provides some guidance for bus benches and shelters permitted along DOTD right-of-way, but does not differentiate between urban, suburban, and rural contexts, prescribes stop location protocols that are potentially inconsistent with national guidance and impedes context-sensitive design, and may not provide local agencies with enough information to address the challenging spatial constraints and intersecting design and operational challenges of urban environments. As Louisiana moves toward context classification as a key framework for roadway decision-making, additional guidance is needed to provide for clear yet flexible context-sensitive design while improving the transparency and efficiency of permitting processes for local agencies to enhance transit services.

Investments in public transit support congestion mitigation, economic development, and equitable access for all Louisianians. Exploring the challenges of safely and efficiently balancing the needs of multiple modes of transport and user groups within limited right-of-way will aid DOTD, local governments, and transit agencies in improving the safety, efficiency, and communication related to transit design and implementation. This will lead to presenting possible ways to address these challenges based on national best practices and data development. All of these steps ultimately address safety issues associated with transit vehicle and pedestrian activity on and crossing state routes. This project aims to improve interjurisdictional and multimodal coordination and communication through the development of



Figure 1. Bus Rapid Transit (BRT) Station, Clayton Drive, Baton Rouge

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Duration

24 months

Funding

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data, resources, and recommendations for potential policy and design guidance updates relevant to all areas of the state where fixed-route transit is provided.

OBJECTIVE

The overall goal of this study is to improve coordination between DOTD, MPOs, and agencies providing fixed-route transit throughout Louisiana. Specific objectives include:

1. Develop a geospatial planning tool (i.e., dashboard) that includes regularly updated stop and route location information, as well as data pertaining to transit facilities and amenities, to support DOTD, transit agencies, MPOs, and local municipalities in considering transit during all phases of project identification, scoping, and delivery.
2. Assess the extent and characteristics of traffic crashes involving transit vehicles and/or occurring in close proximity to transit stops and involving vulnerable road users to analyze patterns, evaluate relationships to specific characteristics of roadway geometry, define typical crash types associated with transit vehicles or facilities, and identify appropriate safety countermeasures to proactively inform project identification, scoping, and design.
3. Draft recommendations for revised or expanded planning, policy, and design guidance for transit facilities and operations on state routes, including future ITS transit signal priority service packages and transit priority roadway design and operational strategies. This includes bus stop amenities and roadway configurations for different contexts.

METHODOLOGY

This research will be completed with seven (7) tasks:

- **Task 1: Literature and Practice Review:** This task will include a review of national guidance and other state DOT practices, policies, and design guidance pertaining to the planning, placement, permitting, and design of bus stops on state-owned right-of-way, as well as emerging transit infrastructure.
- **Task 2: Stakeholder Outreach:** This task will involve a survey, interviews, and/or site visits with stakeholders to identify current challenges to, or concerns with, the provision of transit service and amenities on state routes, including transit

service priority treatments and strategies, system chokepoints, etc. Where relevant enhancement projects are underway, the research team will work with stakeholders to track challenges, questions, and opportunities associated with such “real-time” case studies, e.g. New Orleans’ Bus Rapid Transit project.

- **Task 3: Transit Safety Review:** This task will include a statewide assessment of traffic crashes involving buses and streetcars, as well as vulnerable road users, to identify corridors with elevated crash frequency and the characteristics of such crashes.
- **Task 4: Interim Presentation:** Key elements include a literature/practice review, key findings, and best practice recommendations; summary results of stakeholder outreach efforts; and transit safety analysis results.
- **Task 5: Create Statewide Transit Dashboard:** This task will develop an updated map of transit routes and stops that includes planned/proposed fixed-route services, rural on-demand transit service areas, etc.
- **Task 6: Planning, Policy, and Design Recommendations:** This task will synthesize findings from Tasks 1 to 4 into a series of recommendations and model context-sensitive planning, policy, and design guidance, language, and examples for DOTD.
- **Task 7: Final Report:** All project findings will be summarized in a final technical report per LTRC guidelines.

IMPLEMENTATION POTENTIAL

Anticipated implementation outcomes related to this study include:

- Development of an updated transit component to the DOTD Active Transportation Dashboard, providing an up-to-date inventory for stops and routes and a snapshot inventory of basic characteristics and transit propensity.
- Communication of safety findings to transit agencies to help inform prevention strategies, including operator training or potential infrastructure interventions.
- Draft expanded design guidance for DOTD to improve coordination and clarify and communicate expectations around transit facilities in various contexts on state routes with local agencies and partners.