



March 1, 2022

COMMITTEE AGENDA ITEM 5 A

STADIUM DRIVE AT LAKE BRADFORD ROAD INTERSECTION

TYPE OF ITEM: Presentation/Discussion/Action

STATEMENT OF ISSUE

Capital Region Transportation Planning Agency (CRTPA) staff and RS&H staff (the Project Team) will be making a presentation regarding the Stadium Drive at Lake Bradford Road Intersection Project.

RECOMMENDED ACTION

For Committee Information

INTRODUCTION

Over the last several years, the southern portion of downtown Tallahassee has undergone dramatic growth and significant investments in transportation infrastructure. The Gaines Street Corridor Revitalization Plan included extensive infrastructure improvements designed to foster multimodal usage and economic investments. In addition to the corridor revitalization and redevelopment, the Capital Cascades Park at the eastern end of Gaines Street was also developed, which fostered even more growth in the area. The adjacent streets within the area also received major economic investments as the areas continues to redevelop.

With the presence of the FSU campus and stadium, additional properties are being developed or redeveloped and/or are anticipated to be redevelop in the future. These developments include large apartment complexes targeted to the student market. This increasing presence of residential uses has increased the need for pedestrian and bicycle safety as the number of users continues to rise both during every-day conditions, as well as game day conditions.

The intersection of Stadium Drive and Lake Bradford Road is a very large, complex intersection that can easily confuse drivers, as well as pedestrians. The width of pavement, complex turning movements, and increasing numbers of pedestrians, particularly accessing campus from the residential areas on the south side of Gaines Street and Stadium Drive poses multiple hazards for all entering the intersection regardless of the mode of travel.

In assessing the intersection area, it is important to consider both the “upstream” and “downstream” areas that potential recommendations will likely impact. Understanding the ripple effects will be

critical to ensure any recommendations are feasible and will not adversely impact other intersections or mobility efficiency in the surrounding area.

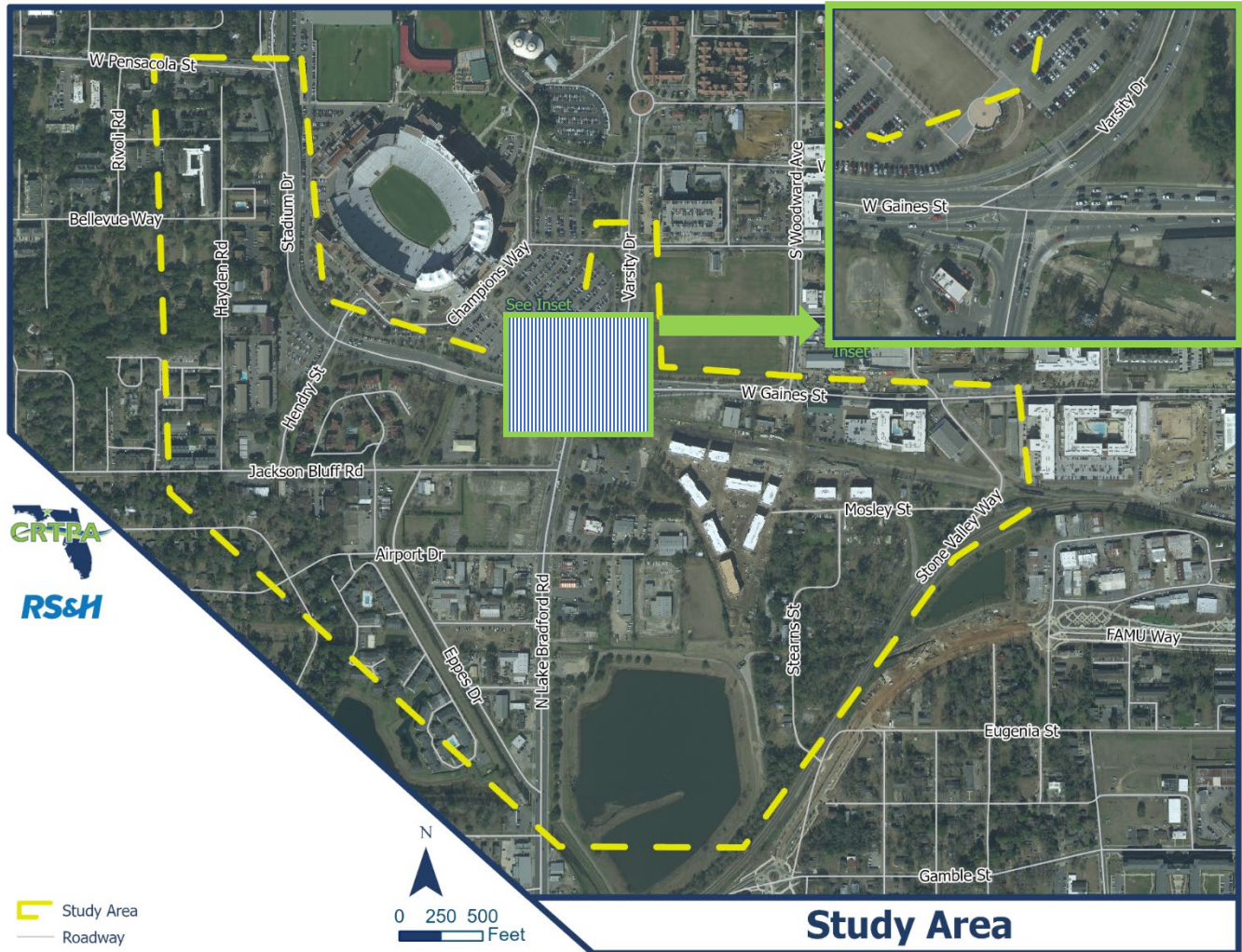
PROCESS

Like other CRTPA studies, the first effort of this project was to develop an [Existing Conditions Report](#) that was based on the collect of data along any of the Study Area corridors and/or intersections. In addition to transportation data, the following was also collected for this project.

- Existing Land Use
- Building locations
- Historic and Cultural Sites
- Socioeconomic Data

STUDY AREA

The study area is shown in the graphic on the following page and will roughly cover from Stone Valley Way/Gaines Street intersection on the east, to Pensacola Street on the north, Hendry Street on the west, and Eppes Drive on the south.



GOALS AND OBJECTIVES

The intent of this project is to identify existing and future conditions within the area which will be used to develop recommendations for improving the intersection. The project intersection has unconventional vehicle movements and lane merging areas, making it confusing for motorists in the area. Additionally, its location next to the FSU campus leads to an increased number of pedestrians and cyclists that frequent the area during the academic year. The following goals have been identified to provide the framework for this effort.

General Improvement of traffic flow through the area within the future year 2045

- Consider recommendations that allow this intersection to achieve Level of Service (LOS) C during peak hour traffic.
- Consider the transportation impact on nearby intersections for any proposed changes at the project intersection.

Reduction in vehicular crash severity and frequency within the study area

- Propose recommendations that will lead to fewer and less severe crashes.

- Reduce pedestrian and cyclist conflict points.

Continue the trend of roadway improvement within Tallahassee

- Consider the development of the Gaines Street corridor and the planned improvements along Lake Bradford Road.

PREVIOUS AND ON-GOING STUDIES

There are several studies that have occurred at this intersection between 2017 and 2020. These includes projects completed by the Florida Department of Transportation (FDOT) in 2017 and 2020. In addition to these studies the Blueprint Intergovernmental Agency is performing a Project Development and Environment (PD&E) Study for the Airport Gateway.

EXISTING CONDITIONS REPORT TRANSPORTATION DATA

The Existing Conditions Report includes the following information to develop a database to use for creating and evaluating intersection and study area alternatives.

- Turning Movement Counts
- 24-Hour Pedestrian Actuated Counts
- Peak-Hour Determination
- Existing Operational Performance
- Pedestrian Movement Analysis
- Bicycle and Micro-Mobility Considerations
- Crash Analysis
- Transit Operations

ALTERNATIVES DEVELOPMENT

After completing the Existing Conditions analysis in July of 2021, the Project Team initiated the Alternatives Development phase of the project. This effort built on the data that was gathered (for modeling purposes) to evaluate eleven (11) alternatives for the Stadium Drive at Lake Bradford Road intersections. The Project Team has provided links for a visual rendition of each improvement.

Alternative 1 No-Build

- Existing conditions maintained in the design year of 2045

[Intersection Image](#)

Alternative 1B No-build – Slip Lane Removal

- Removal of the northbound right slip lane at the study intersection
- Replaced with an exclusive northbound signalized right-turn lane

[Overhead image](#)

[Slip Lane removal \(northbound Lake Bradford Road turning right onto Stadium Drive\)](#)

Alternatives 2A and 2B - Eppes Drive Extension

Extension of Eppes Drive to create either

- A direct connection with Hendry Street (2A).
- Improved existing connection with Jackson Bluff Road via W Eppes Drive (2B).

Optional: Hendry Street intersection improvements

- Adds capacity to the southern leg of the Hendry Street and Stadium Drive intersection .
- Additional northbound lane (Hendry Street), while also converting the current right-turn lane to a shared through/right lane.
- Two exclusive left-turn lanes (Hendry Street) while also accommodating an exclusive left-turn phase.

[Overhead Image](#)

[Hendry Street Improvement](#)

[Eppes Drive Improvement](#)

[Hendry Street and Eppes Drive Rendition](#)

Alternative 3 - Quadrant System

Closes the northbound-to-westbound and eastbound-to-southbound movements at the Stadium Drive/Lake Bradford Road intersection, diverting the corresponding traffic to a quadrant system via Hendry Street and Jackson Bluff Road.

Stadium Drive at Lake Bradford Road

- Removes eastbound right-hand turn from Stadium Drive onto Lake Bradford Road. Under this configuration, this movement is made at the Hendry Street and Stadium Drive intersection.
- Removes direct access to Checkers from Stadium Drive and limits access to right-in and right-out only onto Lake Bradford Road.

Stadium Drive and Hendry Street intersection

- Add northbound lane (Hendry Street) with the exclusive right-turn lane converted to a shared through/right lane.

Jackson Bluff Road and Lake Bradford Road intersection

- Add exclusive southbound right-turn lane (from Lake Bradford Road turning onto Jackson Bluff Road).
- Add exclusive westbound left-turn lane (at Jackson Bluff Road and Hendry Street).
- Add dual northbound left and eastbound right-turn lanes (from Lake Bradford Road turning onto Jackson Bluff Road).

[Overhead Image](#)

[Zoomed in configuration](#)

[Stadium Drive at Lake Bradford Road Rendition](#)

Alternative 4 - East-West Overpass

This alternative proposes a single-lane grade-separated overpass that bypasses the Stadium Drive and Lake Bradford Road intersection. The eastbound and westbound through movements at the study intersection are diverted through the overpass, and the remainder of the geometry is maintained from existing conditions.

[Overhead Image](#)

[Zoomed in Configuration](#)

[Overpass Rendition](#)

Alternative 5 - Existing Intersection 'Build-Out'

The purpose of this alternative is to achieve LOS D at the study intersection without diverting traffic

Stadium Drive and Lake Bradford Road intersection

- Additional through lane is added in all four directions.
- Exclusive left-turn lanes are provided at the northbound and southbound approaches to accommodate exclusive phases for those movements (split-phasing is currently provided).

Jackson Bluff Road and Lake Bradford Road intersection

- Exclusive right-turn lane is provided to prevent queue spillback to Stadium Drive.

[Overhead Image](#)

[Zoomed in Configuration](#)

[Build-out Rendition](#)

Alternative 6 - Two-Lane Roundabout

Proposes a two-lane roundabout at the intersection of Stadium Drive at Lake Bradford Road.

- Right-turn bypass (slip) lanes are provided for the northbound, southbound and eastbound right-turning movements.

[Overhead Image](#)

[Zoomed in Configuration](#)

[Roundabout Rendition](#)

Alternative 7 - Realignment

Proposes median and roadway realignment at the study intersection to reduce complexity and improve the bike/ped experience.

- All existing vehicle movements are maintained.

[Overhead Image](#)

[Zoomed in Configuration](#)

Alternatives 8A and 8B - Eppes Extension and Quadrant “Full Build-out”

Proposes a hybrid alternative which combines the Eppes Drive extension along West Eppes Drive. Closes the northbound-to-westbound and eastbound-to-southbound movements at the study intersection, diverting the corresponding traffic to a quadrant system via Hendry Street and Jackson Bluff Road and the Eppes Extension. Since the traffic diversion is enough to provide LOS D or better at the Jackson Bluff Road / Lake Bradford Road intersection, an iteration was performed maintaining the existing geometry at that location. An additional “Full Buildout” was also assessed, which carries over all capacity improvements from the original Quadrant alternative.

Alternatives 8A & 8B - Hendry Street and Stadium Drive intersection

- Add NBL lane, while also converting the current right-turn lane to a shared through/right lane.
- Two exclusive left-turn lanes while also accommodating an exclusive left-turn phase.

Alternative 8A – Jackson Bluff Road and Lake Bradford Road intersection

- Alternative 8A
 - Add exclusive southbound right-turn lane.
 - Add exclusive westbound left-turn lane.
 - Add Dual northbound left and eastbound right-turn lanes.
- Alternative 8B
 - Jackson Bluff Road and Lake Bradford maintain existing conditions.

[Alternative 8A Overhead](#)

[Alternative 8A Zoomed in Configuration](#)

[Alternative 8B Overhead](#)

[Alternative 8B Zoomed in Configuration](#)

FUTURE YEAR TRAFFIC ANALYSIS

The next step in the process is assessing the alternatives impact on the transportation network. Using the Existing Conditions documentation, traffic was projected to the year 2045 and then applied to the varying alternatives that were presented on the previous pages. This effort produced the [Future Year Traffic Analysis – Level of Service](#). The table indicates the delay that each vehicle will experience at the Stadium Drive / Lake Bradford Road intersection, which in turn, equates to a “level-of-service” (shown in **RED** if the intersection is at E or F).

COMPARING ALTERNATIVES

While the level-of-service is an important indicator of how the vehicular traffic flows it is not the sole determinant of evaluating various alternatives. Other factors included:

- Bike and Pedestrian System Improvement
- Vehicle Safety
- Bike and Pedestrian Safety
- Timeline for Implementation

- Construction Complexity
- Driver Perceived Complexity

These factors and the specific possible scores can be found in the [Comparison Matrix](#). The results of applying these factors to the alternatives produced a total score for each alternative ([Matrix Results](#)). The three alternatives scoring the highest include:

Alternative 3- Quadrant System (16 points)

Alternative 8A – Eppes Extension and Quadrant “Full Build-out” (16 points)

Alternative 8B - Eppes Extension and Quadrant Reduced Build (16 points)

PROJECT COORDINATION

Additionally, the Project Team coordinated with the City of Tallahassee, Leon County, Florida State University, and Blueprint to ensure that their input was incorporated into the process.

NEXT STEPS

After the CRTPA Board meeting in March the project will move to a public engagement phase which will begin in Summer/Fall of 2022.