

Median Guidelines – Case Study

Project Information

Project Name: St. George Boulevard Reconstruction; Bluff Street to I-15

Location: St. George, Utah

Owner: Utah Department of Transportation (UDOT)

Project Manager: Tamerha Maxwell

Design: 2003-2004

Construction: 2005-2006

AADT Before Construction: 19,230 (west end) to 33,960 (east end) (2004)

AADT After Construction: 18,275 (west end) to 42,020 (east end) (2015)



Project Overview

UDOT addressed safety and congestion concerns along St. George Boulevard through widening, upgrading pedestrian ramps, installing a landscaped raised median.

Goals

1. Safety – reduce crashes, improve intersections and pedestrian ramps
2. Mobility – improve traffic flow, consolidate/redesign access points
3. Aesthetics – capitalize on historic nature of downtown; provide appealing community feel
4. Quality – improve and upgrade drainage
5. Innovation – implement UDOT’s new access management guidelines



Process

Public Involvement

The project team hosted several public open houses and organized one-on-one meetings with stakeholders as needed throughout design. The local business community, including the Chamber of Commerce, was heavily involved.

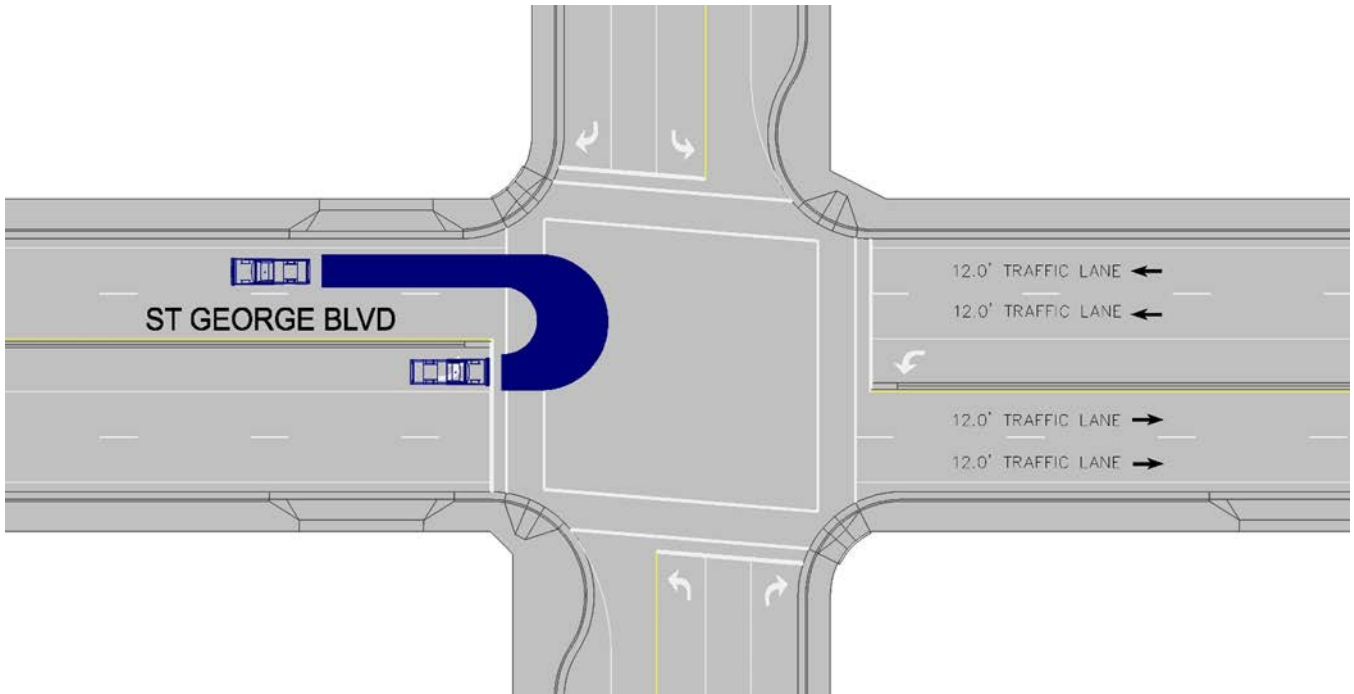
- Agency Coordination
 - o The project team ensured that St. George leaders were supportive of the project goals and plans for median implementation and worked with them throughout the process.
 - o Coordination with city landscape architects to determine what type of foliage would work on the median without obstructing the sightline for drivers was critical.
- Key Stakeholders
 - o The project team worked closely with the local Chamber of Commerce, whose office is along the project corridor, to communicate with the thriving business community.
 - o Block captains were assigned along project corridor to help disseminate design and construction information to other businesses and residents nearby.
 - o Detailed traffic modeling helped the project team demonstrate how much better traffic would be and helped businesses understand more visitors would be able to travel the boulevard.
- Public Concerns
 - o The project received pushback from business owners worried about the economic effects of a raised median.

Design

- Design Development
 - o The medians themselves were designed by looking at traffic volumes and crash data along the corridor.
 - o With the increased number of U-turns being made on the corridor due to the median, the design was altered to widen and flatten curb approaches at each intersection so that vehicles had plenty of room to maneuver.
- Design Adjustments
 - o The project team collaborated with several property owners on the design, especially in terms of access management.
 - o When the idea of a raised median was initially proposed to nearby businesses, many business owners along the corridor were concerned about limited access to their property as a result of the new raised median. UDOT and city officials worked together to install modified curb returns, in both directions of travel, at every single intersection along the corridor to better facilitate U-turns. With the improved curb returns and median breaks that maintained left turns at each intersection, business owners felt more comfortable knowing customers would still be able to easily access their businesses.

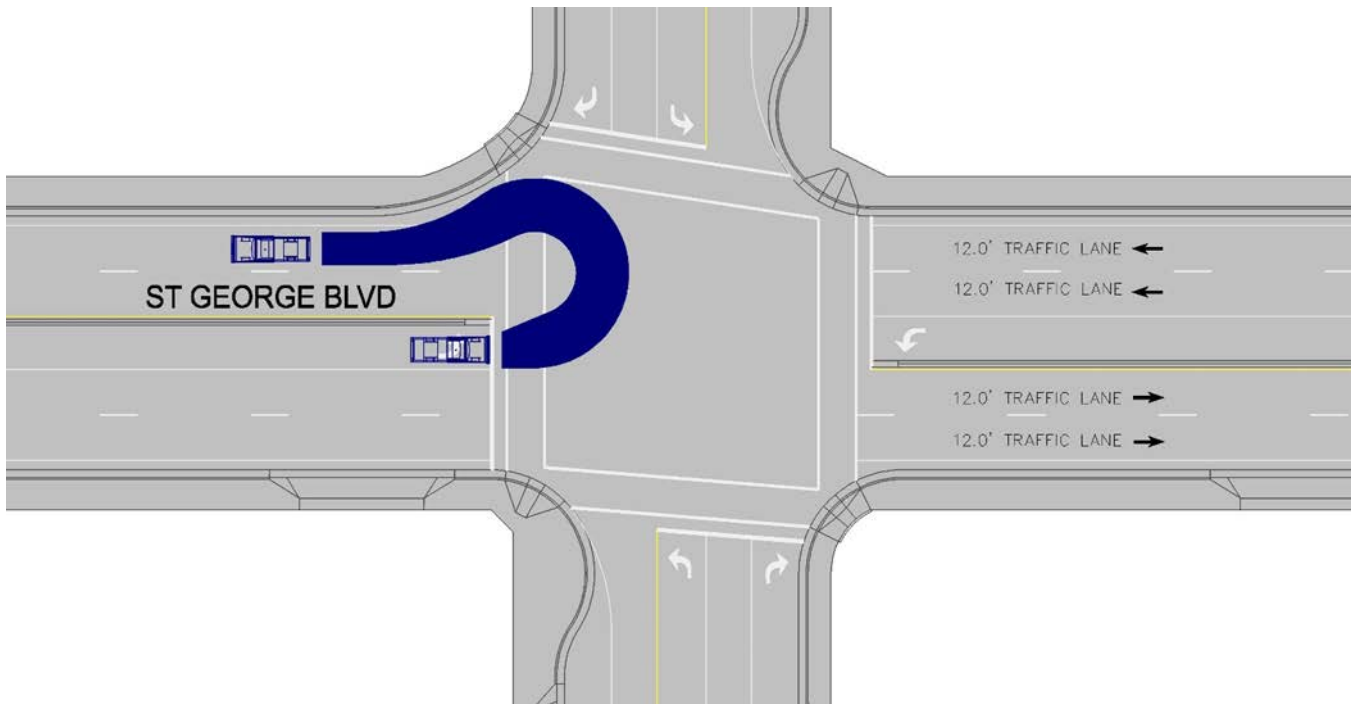
Standard Intersection

- Can accommodate most mid-size passenger cars and SUVs.



Modified Intersection

- Can accommodate larger vehicles.



Outcome

- Crash Rate reduced from 7.2 to 3.9 crashes/mvm.*
- Crash Frequency reduced by 33 percent.
- Angle Crash *increased* from 17 percent to 25 percent.
- Non-intersection angle crashes reduced from 6 percent to 1 percent.
- Access Density: Reduced from 93 to 19 full access points per mile.

Lessons Learned

- UDOT and St. George officials remained a united front despite pushback from business owners along the corridor.
- Graphic visualizations and detailed traffic modeling were a key part in helping the stakeholders prepare for what to expect in regards to the changes a raised median would bring.
- When dealing with stakeholders, the project team tried to determine what their main concerns were and then tried to find the root cause of those concerns to help quell fears.
- The project team would keep the same approach if doing it again, but would utilize new data and technology available to better justify the need for raised medians.
- Social media is a useful tool that wasn't utilized as much for this project but would be helpful to communicate with stakeholders on future projects.