CRUISIN’
THE BOULEVARD WITH
RAISED MEDIANS

Lee Cabell, PE
Discussion Topics

- Context Sensitive Access Management
- Access Management Challenges
  - Public education and acceptance
- Case Study
  - St. George Boulevard (St. George, UT)
Context Sensitive Access Management

- Figuring out how to blend
  - Design requirements
  - Needs of property owners
    - Reasonable access
  - Desires of the public
  - Vision of the community
  - Aesthetics
  - Maintenance
  - Funding
St. George Boulevard Case Study
St. George Boulevard Case Study

- 2.15 mile
- 5-lane Principal Arterial
  - 4 travel lanes with center median lane
- 20,000 to 40,000 ADT
  - Location & season dependent
- Number of businesses
  - South side (eastbound) = 59
  - North side (westbound) = 92
- Number of access
  - South side (eastbound) = 50 (33.5/mile)
  - North side (westbound) = 63 (40.2/mile)
- The heart of St. George’s CBD
Public Responses to Raised Medians
Public Education

TELL 'EM NO MEDIAN ON THE BLVD.
Medians raise fierce debate

By HILLARY GUBLER
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ST. GEORGE — After a two-hour emotional and intense debate Thursday concerning reconstruction of the St. George Boulevard, the St. George City Council decided it needed some time for additional discussion before making its final recommendation for the street.

Damaris Maxwell, Utah Department of Transportation project manager, said UDOT could give the city 360 days to make its recommendation on the future of the street and raised medians in it.

However, Maxwell said if the city had not heard from the city within 30 days, UDOT would assume its mandatory raised medians would be the only medians.

UDOT requires raised medians about 200 feet approaching each stop light within the St. George Boulevard. The council will decide whether it wants to connect the stoplight medians with landscaped medians which would stretch the length of the block.

Because of the urgency of the issue, the council scheduled a special work meeting to further discuss possibilities. The meeting is open to the public and will be at the city offices. The council will make its final recommendations at its regular meeting Dec. 4.

Lori Keelak-Puchtle, president of the St. George Area Chamber of Commerce, voiced her concerns about installing raised medians on St. George Boulevard while an image depicting what the medians might look like is displayed on the school behind her at Thursday's St. George City Council meeting.

"The world of all (would be) having medians without landscaping," said Mayor Dan McArthur. "We'd be stuck with a median and still have an ugly street."
No happy medium on median

St. George Boulevard: Officials say the addition will beautify the area, but many businesses insist it will drive away their customers.

By Mark Havnes
The Salt Lake Tribune

ST. GEORGE — Some business owners fear that plans to put more greenery on St. George’s main drag could mean less green in their till.

Despite those worries, the city and state are driving ahead with an $8.6 million project to add a raised median — complete with flowers, shrubs and trees — down the middle of St. George Boulevard. The makeover will eliminate the center lane that currently allows motorists to turn left into the motels, eateries and other businesses that line the busy street.

The city and the Utah Department of Transportation say the overhaul — which is still a year away — will improve safety and traffic flow. Crews also will resurface the state road, a surviving remnant of old See SOME, B2

Nathan McIverley, owner of the FrostTop drive-in on St. George Boulevard, worries that a planned raised median down the center of the popular five-lane street will cost him customers.
In Our View

Medians only safe choice for boulevard

The struggle of words has gone on for months, but the St. George City Council is expected to make its final decision about medians for St. George Boulevard in December.

It’s a no-win situation for the council because a vote for medians would require a $10 million bond, and a vote against it could leave people frustrated for years to come.

What You Can Do

- The St. George City Council will meet in a special work session at 8 p.m. Dec. 2 at the city offices, 175 E., 200 North. The council will make its final recommendations to the Utah Department of Transportation.

Cruisin’ the Boulevard with Raised Medians
Access Management

- Safety
  - up to 35% reduction in crashes
- Increased capacity/reduced congestion & delay
  - up to 20%-40% travel time reduction
  - up to 35% emissions reduction
- Reduced conflicts – number, type & severity
- Aesthetic opportunities
- Economic benefits
- Public education
Access Management

RIGHT-IN/RIGHT-OUT

MEDIAN

2 CONFLICTS

CRUISIN’ THE BOULEVARD WITH RAISED MEDIANS
Access Management

Economic Benefit

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<th>Reduction in Avg. System Speed</th>
<th>Market Area Relative to previous size</th>
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<tr>
<td>0%</td>
<td>100%</td>
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<tr>
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<td>50%</td>
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45 mph

30 mph

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
UDOT Access Management Brochure

- PR Campaign
- States Facts
  - Safety
  - Crashes
  - Traffic flow
- Dispels myths
  - Bad for business

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
A raised median treatment is a physical barrier in a roadway designed to safely separate traffic traveling in opposite directions. Raised medians are usually concrete formed to create a curb. Median islands are bounded by the curbing, and island interiors may be landscaped. Raised medians are typically placed as a result of high accident locations and where left turns need to be limited. Medians are commonly used to enhance traffic efficiency in high volume areas and on multilane roads.

**WEEK TRAFFIC FLOWS, BUSINESS GROWS**

Studies have shown that medians actually help move traffic more efficiently than on undivided roadways. By channeling left-turning vehicles out of the main traffic flow and preventing unsafe turns, raised medians keep the traffic moving while increasing the safety of both drivers and pedestrians in the area.

With traffic congestion playing such a large role in consumers' decisions to shop in certain areas, any improvement in local traffic patterns tends to prove beneficial to local businesses. While medians reduce traffic congestion, they are not seen as a barrier to shoppers. In a Utah study, 83 percent of customers surveyed regarding a new median in Provo said they were just as likely to patronize a business as before the median was built. In fact, customers ranked accessibility as the most important of six factors when choosing to visit a business.

Further studies have shown that drivers make little connection between raised medians and business access, seeing them only as a minor inconvenience and necessary safety feature. Raised medians have been shown to have minimal impact on planned destination shopping, while 8 out of 10 drivers say they avoid shopping in congested areas.

83% of motorists say medians have no influence over their shopping decisions.

As traffic increases, accidents increase significantly on roads without medians.

9" of concrete: a measure of safety.
Of course, safety is also a major reason for installing raised medians. In national studies, medians have proven greatly beneficial to community areas seeing a high volume of auto and pedestrian traffic, providing a markedly safer environment for all involved! By controlling the flow of traffic and limiting turns to specific locations, random movement is eliminated and overall safety is vastly improved both for drivers and pedestrians.

**GOOD FOR BUSINESS, AND NOT BAD LOOKING EITHER**

While function often has proven to be of greater concern than looks, many steps can be taken to help raised medians actually improve aesthetics in certain areas. With regular maintenance and reflective striping, as well as the addition of landscaping when appropriate, medians are often a welcome addition to their locations.

Medians lead to improved traffic flow which leads to decreased frustration. Horrocks Engineers

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
SAFE ACCESS IS GOOD FOR BUSINESS

You may be reading this primer because your state transportation agency or local government has told you about plans that will affect access to your business. They may be planning to install a raised median on your roadway, to close a median opening, or to reconfigure your driveway. Perhaps your request for a driveway is under review or the regulating agency has imposed conditions on its approval. Or, maybe the state or local agency is planning a new access policy and you have questions or concerns about the economic effects of these changes.

Whatever the reason, it is important for you to understand the basis for these changes and how they might affect your business. This primer will address questions you may have about access management and its effect on business activity and the local economy. It focuses on economic concerns that may arise in response to proposed access changes or policies, including potential impacts on business activity, freight and deliveries, parking for customers, and property or resale value of affected property.
Photo Simulation

CRUISIN’ THE BOULEVARD WITH RAISED MEDIANS
Public Involvement Tips

Get Help!
St. George Boulevard - Construction
St. George Boulevard - Construction

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CRUISIN’ THE BOULEVARD WITH RAISED MEDIANs
St. George Boulevard - Construction

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
St. George Boulevard - Construction

CRUISIN' THE BOULEVARD WITH RAISED MEDIANs
St. George Boulevard - Construction

Cruisin' the Boulevard with Raised Medians
St. George Boulevard - Construction

Cruisin' the Boulevard with Raised Medians
St. George Boulevard - 10 Years Later
St. George Boulevard -10 Years Later
St. George Boulevard - 10 Years Later
St. George Boulevard -10 Years Later

CRUISIN’ THE BOULEVARD WITH RAISED MEDIANS
St. George Boulevard -10 Years Later
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CRUISIN’ THE BOULEVARD WITH RAISED MEDIANs
Results? We were hoping for…

- **Safety (Crashes)**
  - Up to 35% reduction in total crashes
    - 25% reduction in types that could be prevented by median
  - Reduced severity
  - Reduced rate
- **Aesthetics and Maintenance**
  - Aesthetically pleasing urban corridor
- **Economics**
  - No adverse impacts to businesses
Safety – Average Daily Traffic

Median Construction

CRUISIN’ THE BOULEVARD WITH RAISED MEDIANS
Safety – Annual Number of Crashes

Median Construction

Pre-median = 327
Post median = 121
Reduction = 63%
Safety – Crash Rate

Median Construction

Expected = 4.5
Pre-median = 12.4
Post median = 5.1
Reduction = 59%

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
Safety – Severity Rate

Expected = 1.55
Pre-median = 1.50
Post median = 1.48

Fatalities Pre-median = 2.5
Fatalities Post median = 0.5
Reduction = 80%

- Front to Rear: 59%
- Angle: 24%
- Unknown: 6%
- SS Opposite Dir: 2%
- SS Same Dir: 6%
- Parked Vehicle: 1%
- Rear to Side: 0%
- Rear to Rear: 0%
Safety – Crash Locations

Accidents by Year (2011-2015) - Number of Crashes

1.0 - 4.6  4.6 - 8.2  8.2 - 11.8  11.8 - 15.4  15.4 - 19.0

CRUISIN' THE BOULEVARD WITH RAISED MEDIANS
Safety - Results (2002-2015)

- Annual crashes reduced by 63%
- Crash rate reduced by 59%
- Fatality rate reduced by 80%
- Mid-block crashes dramatically reduced
- Nothing to indicate U-turn related crashes at intersections have significantly increased
- Consistent with other studies done in UT which all showed significant reductions in crashes (> 25%)
Aesthetics
Aesthetics
Aesthetics
Maintenance

CRUISIN’ THE BOULEVARD WITH RAISED MEDIANS
Economic Results

- Number of businesses
  - Relatively unchanged at about 150
  - Consistent with normal business turn-over rates
- Dependent on general economic health of area
  - No statistical significance associated with medians
- No negative impacts reported by city economic officials
  - Many existing businesses have upgraded and expanded
Economic Results

- Similar Utah studies
  - Hurricane State Street (SR-9)
  - Logan Main Street (US-89)
  - Salt Lake County State Street (US-89)

- Conclusion
  - No negative economic impacts as determined by examination of sales tax records along any of the corridors studied
  - All corridors studied actually experienced an increase in sales
  - Business owners still generally have a negative perception
Questions

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