

# Monthly Update on transportation projects 183 South Project (Bolm Rd./briefing on intersection configuration)

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## Agenda Item #19-B

Justin Word, P.E., Director of Engineering  
Jerel Rackley, P.E., 183S Design Lead, Atkins

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CENTRAL TEXAS  
Regional Mobility Authority



## Limit signalized intersections to optimize mobility and throughput

- Travel time savings for those traveling the length of the corridor (tolled and non-tolled routes).

## Provide Texas U-Turns to accommodate local traffic and mitigate loss of connectivity

- Reduced impact points - reduced chance for collisions.
- Separated high-low speed movements for safer traffic flow.
- Travel times comparable to existing condition in most cases.

## Improved non-tolled access

- Non-tolled capacity offers an improved driving experience.



## **Controlled Access Facility that offers benefits to the corridor:**

- Improved corridor safety and operations
- Contributes to project goal: greater mobility
- Balances accessibility of local residents vs. mobility of 60K+ daily travelers
- Places interchanges at regular intervals where need is greatest and safe, efficient movement can be provided.

# Common challenges



## Conversion of Urban Arterial to Freeway:

- Trade-Off of Mobility for Accessibility
- Changes to Facility Access
- Minimize Property Impacts
- Reduction of Facility Crossroads
- Intro of One-Way Access Roads

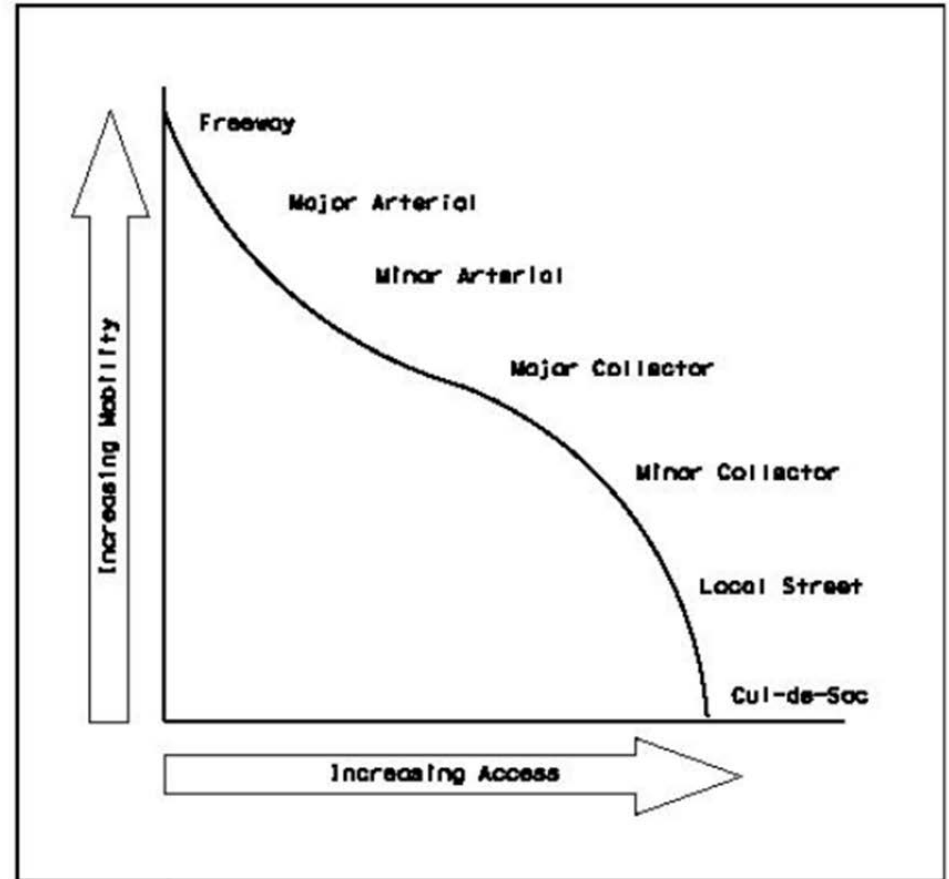
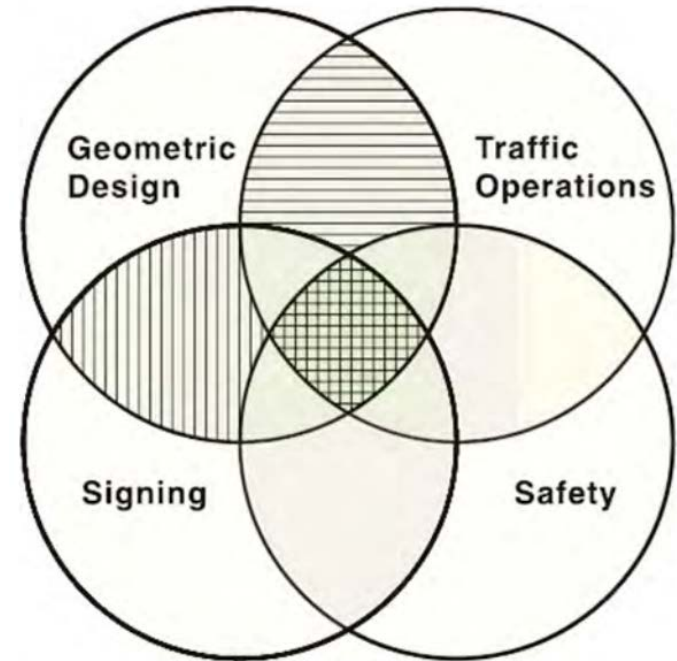


Figure 1-1. Access Function<sup>1</sup>



## Design Considerations

- Safety
- Traffic Operations
- Geometric Limitations
- Signing Limitations

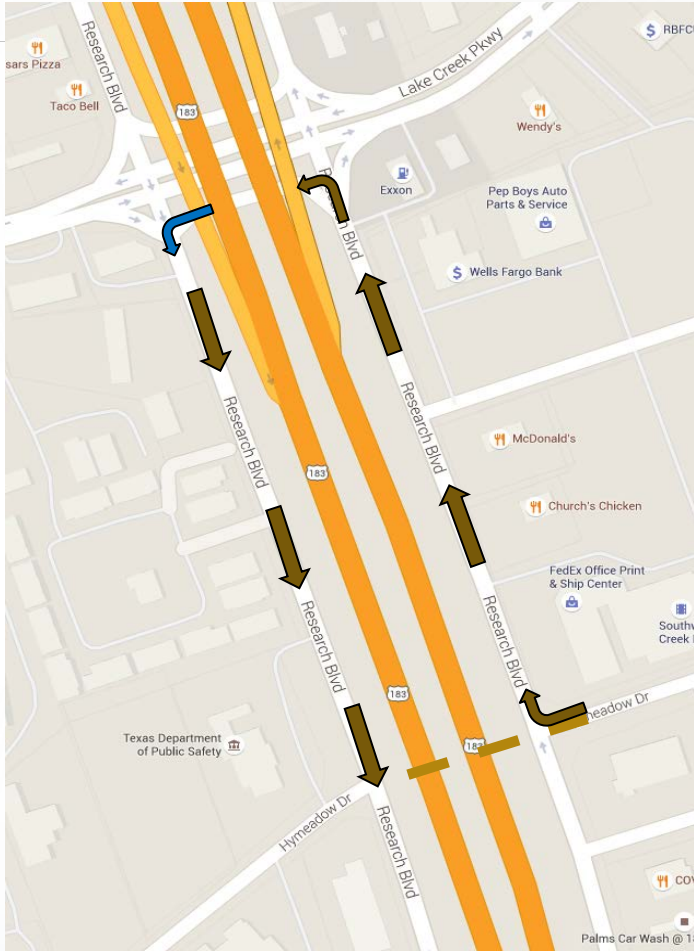


## Other Considerations

- Public Input
- Cost
- Context Sensitive Design
- Minimize Property Impacts

## Balance Between Accessibility and Mobility

# Accessibility



## Challenges

- Cross Connectivity
- One-Way General Purpose Lanes
- Driveway Impacts

## Mitigation

- General Purpose Lanes for Access
- Mainlanes for Mobility
- Increased Capacity = Less Congestion





## Traffic Volumes/Demands:

- Designed to meet projected 2035 traffic volumes
- Both economic and residential growth factors
- Analyzed all cross streets, compared volumes, designed crossover access to best fit traffic pattern analyses.

## Intersection Spacing:

- On a high-speed, grade-separated facility, minimum overpass spacing  $\frac{3}{4}$  mile apart.
- One mile minimum spacing for optimum balance between safety and operational benefits while maintaining adequate connectivity.



## **Balance Competing Needs: Safety, Mobility and Connectivity**

- A design that best serves the needs and safety of the greatest number of travelers of US 183.
- Use traffic modeling as tool to determine the design that will offer better overall mobility for all travelers as new development occurs and traffic increases in East Austin.
- A design that will deliver on commitment to safety and mobility; benefits outweigh the inconvenience of alternative cross street access.
- A design that optimizes alternative routes when connectivity is affected.



# Proposed/current design



**Provides crossings at the following locations:**

| Location                   | Miles<br>(From 290 East) | Current Design Description                     |
|----------------------------|--------------------------|--|
| <b>Springdale Rd</b>       | <b>0.9</b>               | <b>Improved Overpass</b>                       |
| <b>Loyola Ln</b>           | <b>1.8</b>               | <b>Signal + Overpass</b>                       |
| <del>51st St</del>         | <del>2.6</del>           | <del>Crossing / Signal Removed</del>           |
| <b>FM 969</b>              | <b>3.0</b>               | <b>Improved Underpass</b>                      |
| <del>Technicenter Dr</del> | <del>3.7</del>           | <del>Crossing / Signal Removed</del>           |
| <del>Bluestein Dr</del>    | <del>3.9</del>           | <del>Crossing / Signal Removed</del>           |
| <del>Hudson St</del>       | <del>4.2</del>           | <del>Non-Signalized Crossing<br/>Removed</del> |
| <b>Boggy Creek</b>         | <b>4.5</b>               | <b>New turnarounds</b>                         |
| <del>Belm Rd</del>         | <del>5.5</del>           | <del>Overpass / Signal Removed</del>           |
| <b>Levander Loop</b>       | <b>6.2</b>               | <b>Operational Improvements</b>                |
| <b>Montopolis Dr</b>       | <b>6.6</b>               | <b>Improved Underpass</b>                      |
| <del>Vargas Rd</del>       | <del>6.9</del>           | <del>Crossing / Signal Removed</del>           |
| <del>Thompson Ln</del>     | <del>7.1</del>           | <del>Crossing / Signal Removed</del>           |
| <b>Patton Ave</b>          | <b>7.5</b>               | <b>New Overpass</b>                            |
| <del>Old Bastrop Hwy</del> | <del>7.6</del>           | <del>Non-Signalized Crossing<br/>Removed</del> |



## Environmental study (2011–2015) with robust community outreach.

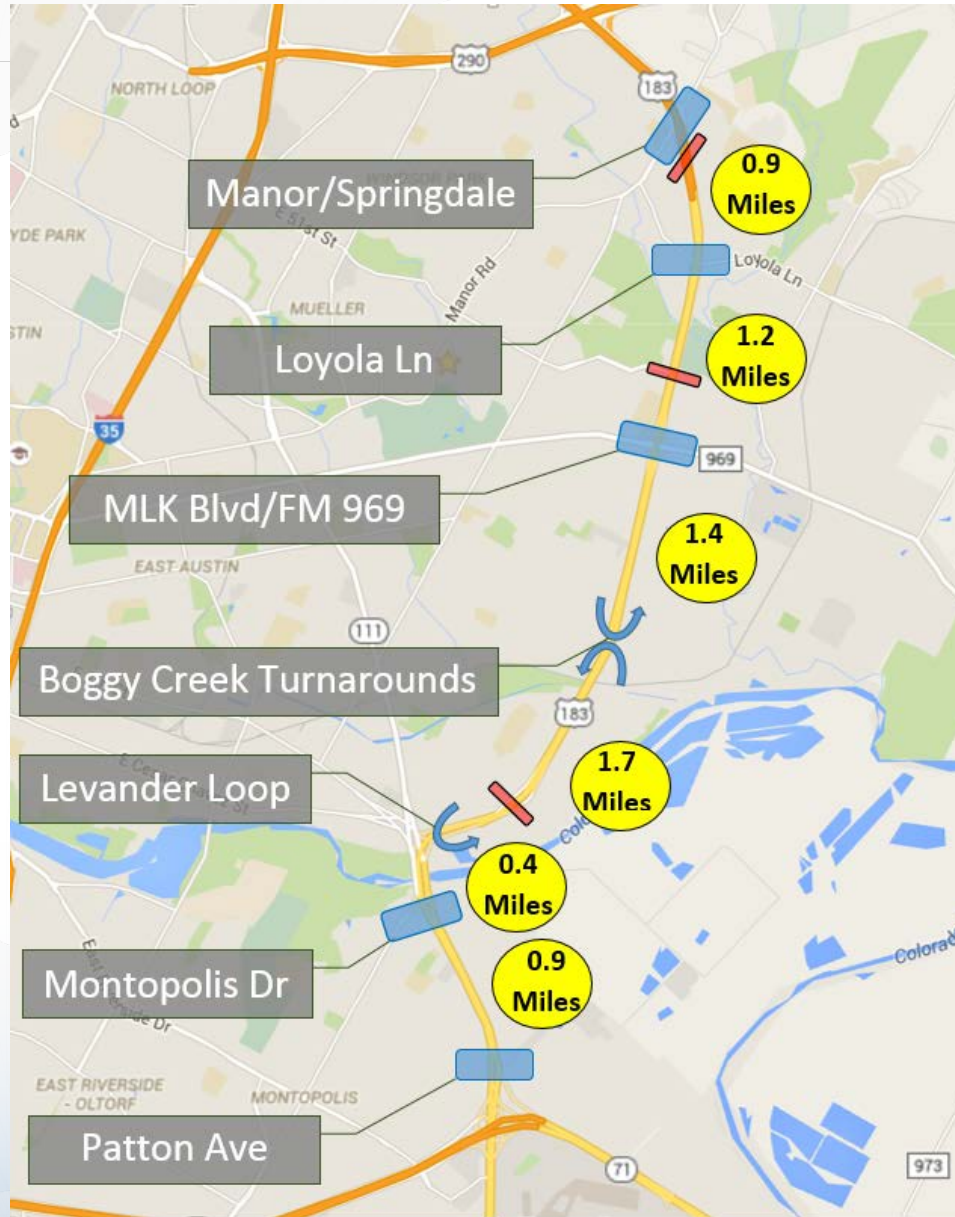
- Opportunities for public input: 5 open houses, more than 25 stakeholder meetings, and a final public hearing.
- Investigated concerns raised in public outreach process.
- Made adjustments and accommodations where feasible and reasonable.
- Final design serves the best interest of the traveling public as a whole.
- Approval of the Final Design received from TxDOT on March 6, 2015.



## What we changed...

- Added additional Texas U-turn opportunities to the project.
  - Near Boggy Creek
  - Patton Avenue
- Added lanes to the merge point of Levander Loop and the Northbound general purpose lanes.
- Added acceleration and deceleration lanes to side streets.
  - 51<sup>st</sup> Street
  - Bolm Road
- Added pedestrian bridges at 51<sup>st</sup> Street and Bolm Road.

# Current design



# PROJECT COMPARISON US 183 NORTH



**Now provides crossings at the following locations:**

| Location                 | Project Impact                  |
|--------------------------|---------------------------------|
| Pecan Park Blvd          | New Overpass                    |
| Lake Creek Pkwy          | New Overpass                    |
| Hymeadow                 | Non-Signalized Crossing Removed |
| Woodland Village         | Non-Signalized Crossing Removed |
| Anderson Mill            | Signal + Overpass               |
| Oceanaire/Hunters Chase  | Crossing / Signal Removed       |
| Spicewood Springs/McNeil | Signal + Overpass               |
| Oak Knoll Drive          | New Overpass                    |
| Duval Rd.                | New Overpass                    |
| Thunder Creek            | Non-Signalized Crossing Removed |
| Balcones Woods           | Signal + Overpass               |
| Hamilton                 | Non-Signalized Crossing Removed |
| Braker Ln                | New Overpass                    |
| Great Hills Trl          | Signal + Overpass               |
| Capital of Texas Hwy     | Signal + Overpass               |
| Burnet/FM 1325           | Signal + Overpass               |
| Payton Gin               | New Signal + Overpass           |
| Ohlen                    | Signal + Overpass               |
| Fairfield                | Signal + Overpass               |
| Lamar                    | Improved Overpass               |



- **Questions?**