

A Proposed Design Alternative for Inserting Dedicated Light Rail Transit Lanes and Other Facilities in a Constrained Arterial Roadway

Lyndon Henry
Transportation Planning Consultant
Online Columnist
Railway Age
Austin, Texas
16 November 2015



13th National Light Rail & Streetcar Conference



Basic Problem

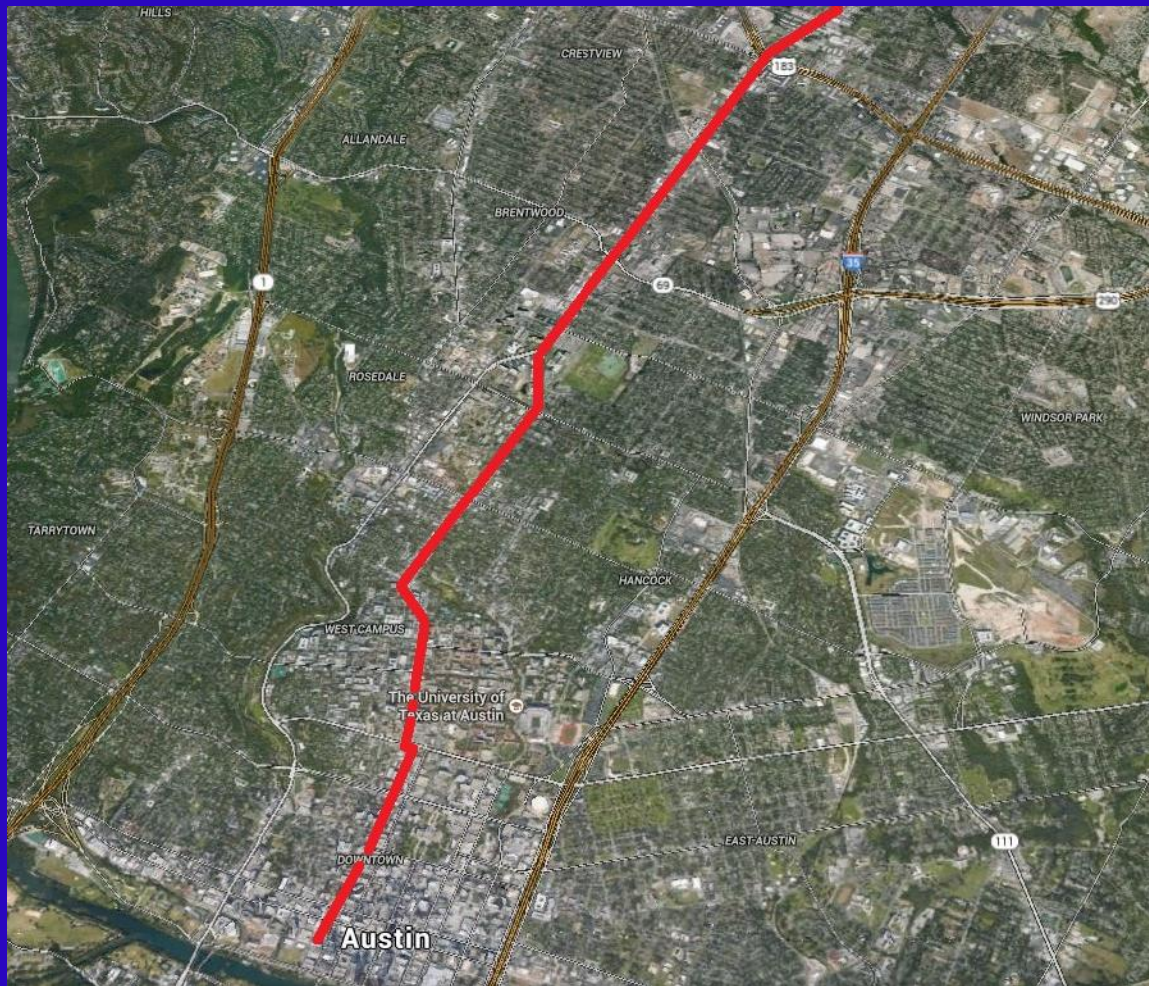
- How to insert 2 dedicated lanes of light rail transit (LRT) in a heavy-traffic major arterial travel corridor with severely constrained right-of-way (ROW) width, while maintaining 2 traffic lanes in each direction...

Austin's Guadalupe-Lamar Corridor: Busiest Central-City Arterial Corridor, But With Only 80-Foot ROW Width



Photo: L. Henry

Guadalupe-Lamar Corridor: North Lamar Blvd. to Guadalupe St



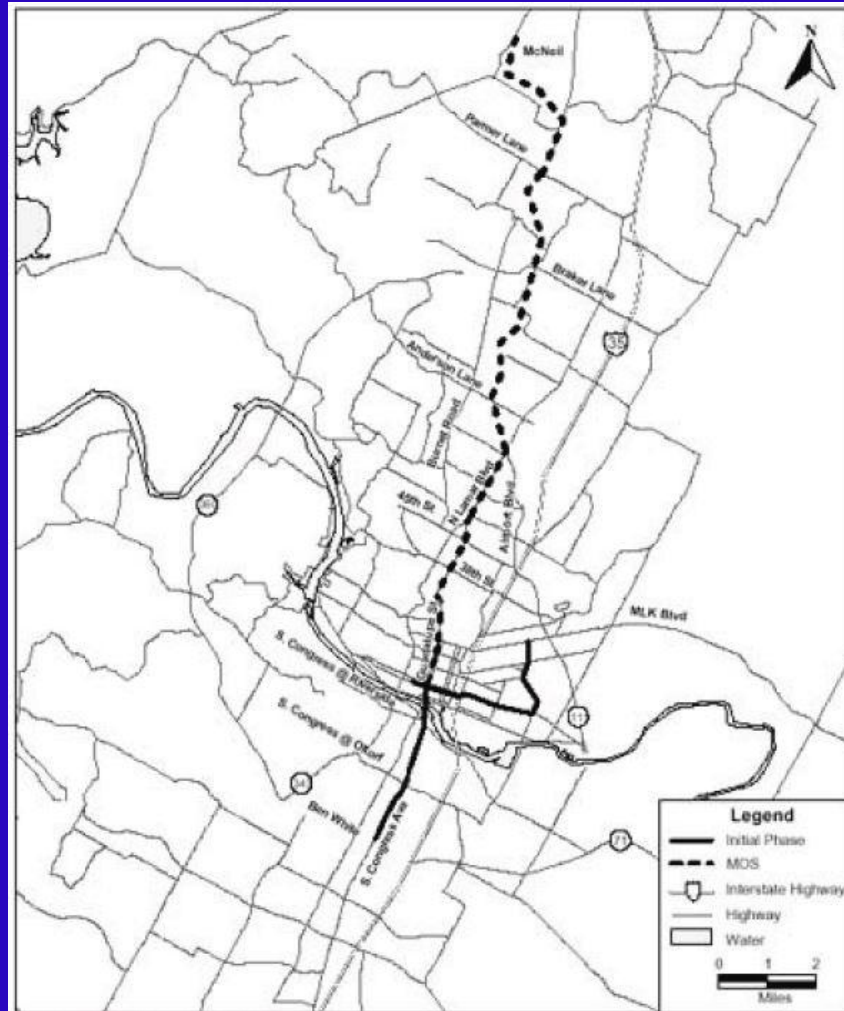
Graphic: Austin Rail Now



13th National Light Rail & Streetcar Conference

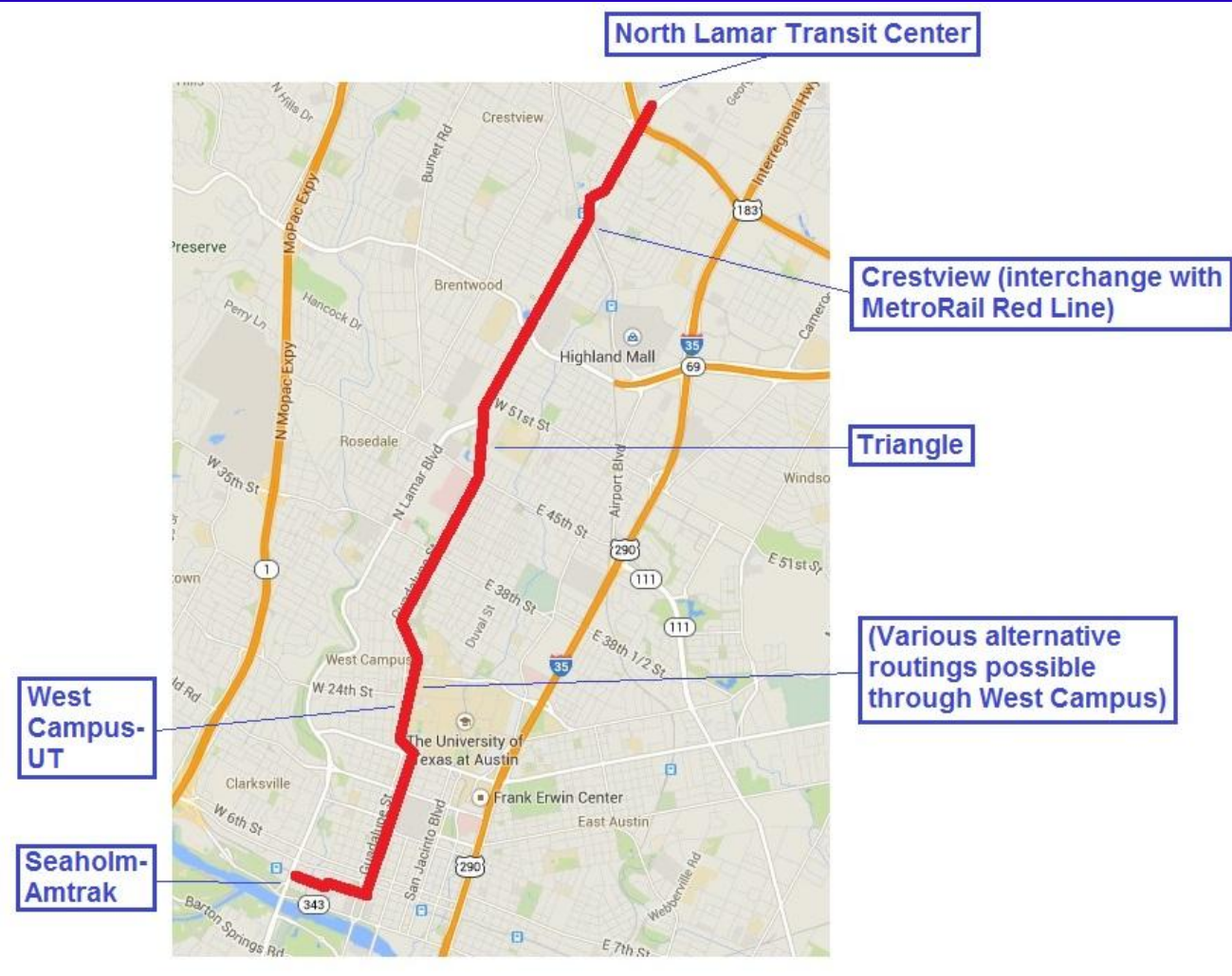


Proposed LRT Plan (CMTA/FTA, 2000)



Map: FTA

Proposed LRT Plan (Austin Rail Now, 2014)



Graphic: Austin Rail Now



13th National Light Rail & Streetcar Conference



So ... How to squeeze in 2 dedicated LRT tracks and keep 4 traffic lanes plus pedestrian facilities?



Graphic: Be a Leader

San Francisco's N-Judah LRT Line on Judah St. Provides a Model



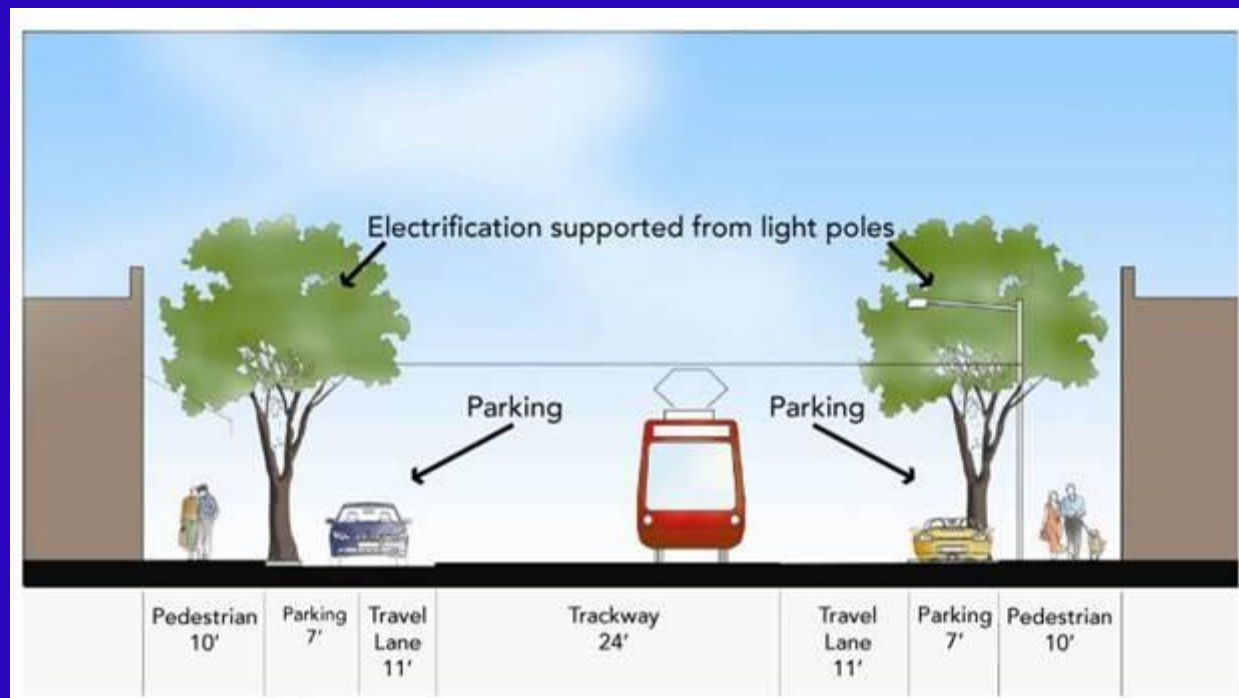
Photo: Eric Haas/NYCSubway.org



13th National Light Rail & Streetcar Conference

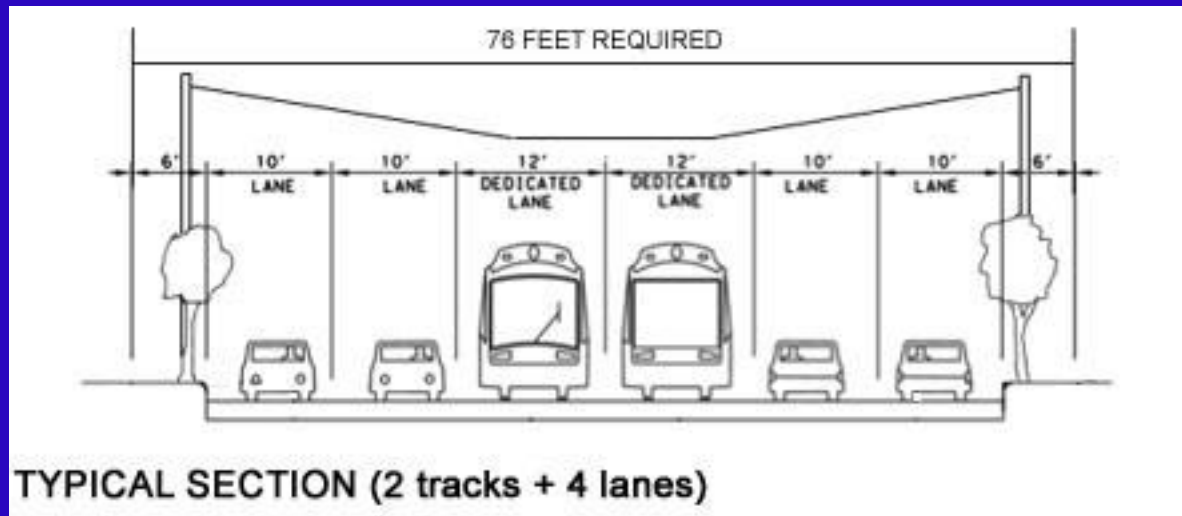


Similar Design Considered for Santa Monica Expo LRT Line



Graphic: City of Santa Monica

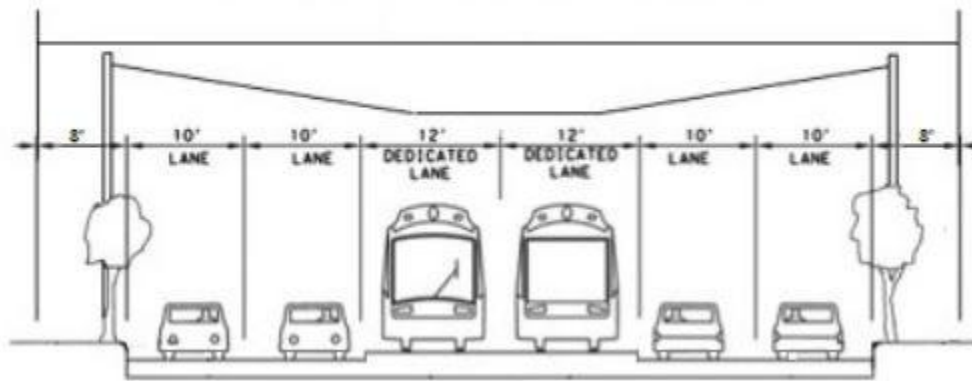
Similar Design Considered for Houston MetroRail in 76-Foot ROW



Graphic: Houston Metro

Proposed Solution for Austin's Guadalupe-Lamar Corridor

LRT Alignment in North Lamar Blvd. and Guadalupe St.
within 80-ft right-of-way width



Graphic: Austin Rail Now

Result Might Look Similar to This...



Photo: Eric Haas/NYCSubway.org



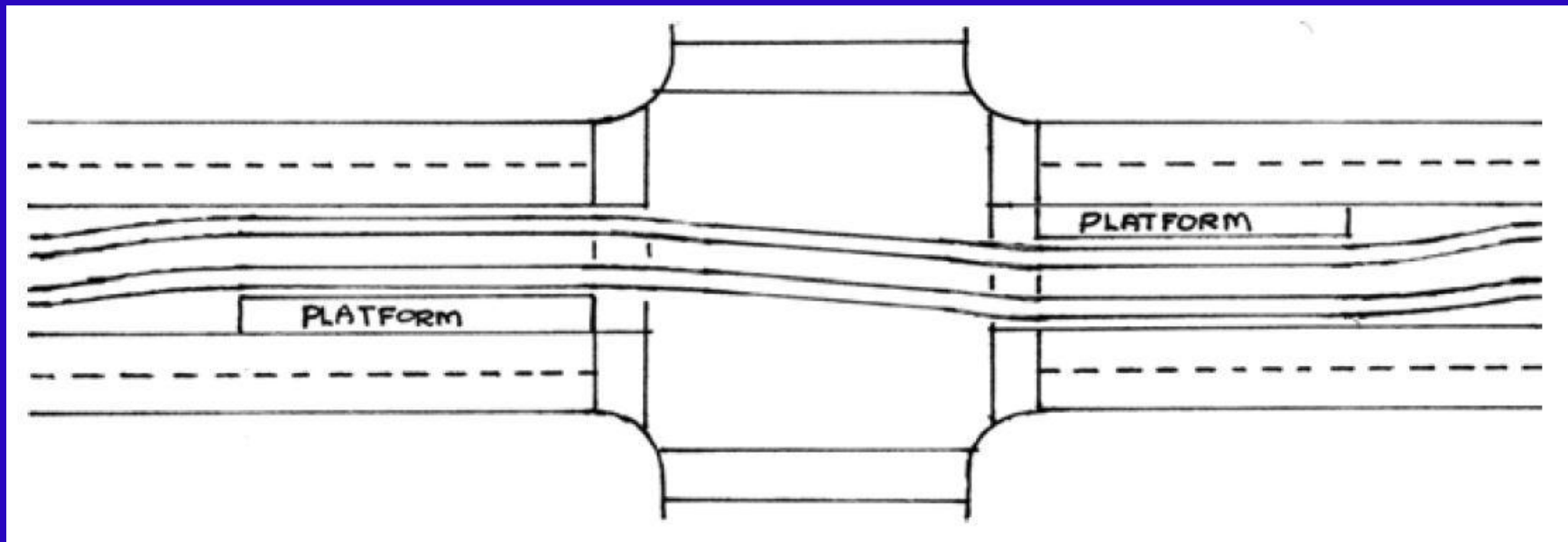
13th National Light Rail & Streetcar Conference



Design Assumptions

- **Side-mounted TES (power) masts**
- **12-ft width for each trackway (could be reduced to 11.5-ft)**
- **10-ft traffic lane widths (per NACTO), no turning lane**
- **8-ft sidewalks shared with bikes, but main bike route on parallel street**

Stations would straddle major intersections and require 10-ft additional ROW width for 300-ft each side of intersection



Graphic: Robert R. Clark

Example: Portland's MAX LRT along East Burnside St.



Graphic: Google Earth

Conclusion

- “Elements of this design may have applicability, potential adaptability, and transferability for a broad range of North American communities confronting similar design challenges.”

Further Information

Copy of paper:

LightRailNow.Wordpress.com

Contact author:

Lyndon Henry

Nawdry@gmail.com

Phone 512.441-3014

