

Lessons Learned: Designing & Building Roundabouts 4-Years Later

Background image is of the
Northern Cross/N. Riverside RAB:

DESIGNED

Kimley»Horn



CONSTRUCTED

FAIN

BACKGROUND:

- The City of Fort Worth started building modern roundabouts in 2012 with the construction of the Summer Creek/McPherson RAB.
- By the end of 2016, the City of Fort Worth will have
 - 12 multi-lane roundabouts operational, 5 under construction, and 11 in design.
 - 5 single lane roundabouts operational, 2 more under construction, and 1 in design.

Summer Creek/McPherson RAB:





THE GOOD



THE BAD



THE UGLY

COST DRIVERS:

5 Major Project Cost Drivers

- Right of Way and Easements
- Franchise Utilities
- Expanded scope due to pavement rehab or other incidental work
- Storm Sewer/Drainage Changes
- Pavement Method/Type



PHASING:

- Whenever possible, close the intersection completely during construction.
- Rule of thumb for RAB construction phase timeline:
 - 10-weeks to construct if the intersection is completely shutdown.
 - 8-weeks per phase when construction occurs in phases.
- Asphalt roundabouts can be constructed quicker and have been performing well.

Northern Cross Roundabout



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WORK ZONES

- Complete intersection shutdown is the safest way to build a roundabout.
- Variable Message Boards should be present on all legs of the intersection for the ENTIRE duration of the project.
- Project Manager should visit the site regularly throughout construction to observe traffic controls.

Northern Cross Roundabout



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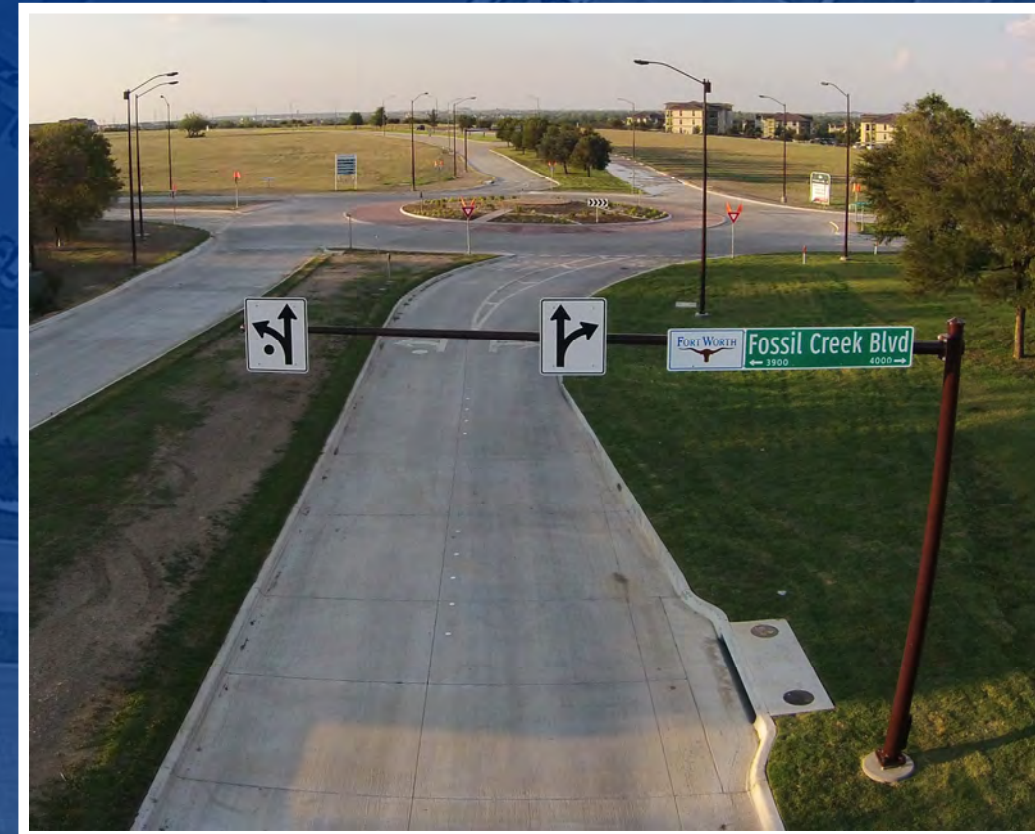
FAIN

SIGNS & MARKINGS

- Now adding striping in the circle for multi-lane roundabouts, but only in front of the splitter island
- Reflective RPM's are being added to the center island along the mountable curb for visibility.
- Evaluate the type and size of signs for actual driving conditions and location in the corridor.

Remember, the internal speed of the roundabout is less than 25-MPH!

Fossil Creek Roundabout



DESIGNED

FREESE
NICHOLS



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NEXT STEPS:

- Explore the use of LED pavement markers installed flush with the pavement or top of curb where lighting concerns are prevalent.
- Continue monitoring performance of asphalt paved roundabouts versus concrete.
- Look for opportunities to use alternative paving methods such as RCC.
- Evaluate alternative sign styles and sizes to better convey traffic movements to drivers.

QUESTIONS?

Drone Images by:



