

Hinkle/Mimosa Roundabout



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Roundabout Purpose and Project Background

- Slows down the vehicular movement as a traffic calming device
- Accident severity is reduced compared to typical four-way stop intersections
- Maintenance costs are reduced as compared to signalized intersections
- Vehicle delays at the intersection are reduced since none of the approaches are required to come to a full stop
- Hinkle Roundabout was added by change order to the Magnolia Drainage Phase II Project in early 2019
 - Project has been substantially complete since October 2020, with remaining sitework to be completed by May 2021

Existing Hinkle Roundabout Concerns

- Yielding at roundabout can be confusing for motorists that are unfamiliar with navigation
- Emergency vehicles cannot traverse and are required to drive over the center of the roundabout, per design
- Citizen complaints and accidents received to-date:
 - 2 Engage Denton requests
 - Resident requests forwarded from 2 Council Members
 - 2 calls to Denton Police about the roundabout
 - 0 reported claims

Recommended Roundabout Safety Enhancements

- Photometric Study completed with recommendations
 - Results received March 24, 2021

- Hinkle Drive Recommendations
 - Add reflective pavement markings on the median nose
 - Add LED solar raised pavement markers
 - Add light poles and upgrade current lighting

- Mimosa Drive Recommendations
 - Modify the curb and median geometry
 - Increase the distance of the outside curb, narrowing further east

Additional reflective pavement markings on the median nose	\$ 3,000
LED solar raised pavement markers	
Additional light poles and upgrade current light fixtures	\$ 10,000
Modify the curb and median geometry	\$ 9,000
	\$ 22,000

Roundabout Removal

Potential Removal Concerns

- Vehicles required to come to a complete stop if returned to 4-way intersection
- Stop signs are not observed by motorists at all times
- Confusion on the right to proceed protocol
- Costs incurred to install roundabout (approximately \$137,000)

Potential Removal Benefits

- Installation of typical 4-way intersection with stop signs, which are familiar to motorists
- Reduced maintenance cost of striping and signage

Removal of existing roundabout and installation of new pavement and stop signs/markings	\$ 140,000
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Staff Recommendation

Staff recommends maintaining the existing roundabout and making upgrades recommended from the photometric study to improve visibility of the intersection.

Public Works staff will continue to work with DME as they implement the streetlight plan to address safety and mitigate for potential impacts that additional lighting may have on migratory birds and other wildlife.