Implications and Placement of a modern Roundabout

CHEYENNE, WYOMING
19th Street, Converse Avenue, and Pershing Boulevard

Preliminary Transportation Analysis
Current Issues & Concerns

- Visually Confusing
Current Issues & Concerns

- Proximity & angle of the Intersections
Current Issues & Concerns

- Split phase signal timing impacts intersection capacity

![Phase 1](Phase 1)
![Phase 2](Phase 2)
![Phase 3](Phase 3)

No left turn phase
Current Issues & Concerns

- Limited distance between left turns creates unexpected driver conditions
Current Issues & Concerns

- Limited northbound left turn lane & southbound right turn lane
Current Issues & Concerns

- Through to left turn lane transition occurs in the intersection
Current Issues & Concerns

- Intersection is unfriendly to pedestrians
Current Issues & Concerns

- Numerous driveways within immediate proximity of intersection
Current Issues & Concerns

- 20-foot left turn lane does not permit adequate transition/storage
Current Issues & Concerns

- No left turn is permitted at this location
Existing ‘03 & Forecast ‘25 Traffic Volumes

Legend
- Existing (Forecast)
- Average Daily Traffic (1,000's)
- P.M. Peak Hour Turn Movement

16.1 (21.0) 18.2 (24.6)
7.2 (10.4) 7.2 (9.8)
15.1 (18.9)
2000 Conditions

- **Pros:** Conventional signal phasing
- **Cons:** Poor Level of Service
2000 Conditions
Current 2003 Conditions

- Right Turn Lane Added, Improves Capacity and Level of Service
- Large Backup of Westbound Through Traffic
- Insufficient Distance to Accommodate Eastbound Left Turn Lane
- Left Turn Lane Shortened, Traffic Backs into Through Lane
- Left Turn Lane Added

OPTION:
Install Raised Median to Preclude Cole Shopping Center Left Turn Ingress/Egress, which will Result in Improved Safety and Northbound Left Turn Capacity

Changes since 2000

Signal Phasing

Prior
Current

2003/2025 Level of Service
Current 2003 Conditions
Pershing Westbound Direct

- Insufficient Distance to Accommodate Eastbound Left Turn Lane
- Modifying to Accommodate Two Westbound Through Lanes, Reduces Backup
Pershing Eastbound & Westbound Direct Connection
Eliminated 19th/Pershing Intersection

Westbound Left and Westbound Through 19th Traffic Must Make a Left at Converse/Pershing. Impact can be Partially Mitigated with Second Left Turn Lane.

Pershing Through Movement

Insufficient Distance to Accommodate Eastbound Left Turn Lane

Cole Shopping Center Access Modified

Residential Impact

2003/2025 Level of Service
W* = Weave Impact
Eliminated 19th/Pershing Intersection & Relocated Pershing/Converse to the North
Multi-Intersection Roundabout
Modern Roundabout

Residential Access Impact

Commercial Impacts

2-Lane Roundabout Provides Capacity for 2025 Traffic Volumes, but is Unconventional in Cheyenne

2003/2025 Level of Service
Modern Roundabout
Converse Grade Separation

Overall View
North
Plan
Profile

NOTE: Vertical dimension is shown 2 to 1.

Grade Separation
Ramp to Grade Separation

2003/2025 Level of Service
# Summary of Public Meeting

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Where Are We Now

- A preferred alternative will be selected by staff using public input and study data.
- Intersection improvements will likely be funded using an existing infrastructure sales tax that will be voted on during the 2006 election season.
- The preferred alternative will need support from the voting public.
Questions / Comments

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