

Bellemont Area I-40 DCR Update Public Meeting



January 15, 2025



WELCOME!

Thank you for attending

Please complete a one-question anonymous Self-ID Survey at the welcome/sign-in table before leaving tonight's meeting

Tonight's Presenters

Kim Musselman, Coconino County, Deputy County Manager

Christopher Tressler, Coconino County, Public Works Director

Chris Rodriguez, ADOT, Project Manager

Nathan Reisner, Coconino County, Assistant County Engineer

Jackie Noblitt, Stanley Consultants, Senior Project Manager

Skye Gentile Bush, Parsons, Principal Project Manager

Other project team members are available for the Q&A session

Purpose of Tonight's Meeting

To provide:

- Study background.
- Overview of alternatives.
- Opportunity to ask questions and provide comments.

Bellemont I-40: Background

- 2013 I-40 DCR recommendations.
- Future development and growth.
- County studies.
- Current ADOT study.



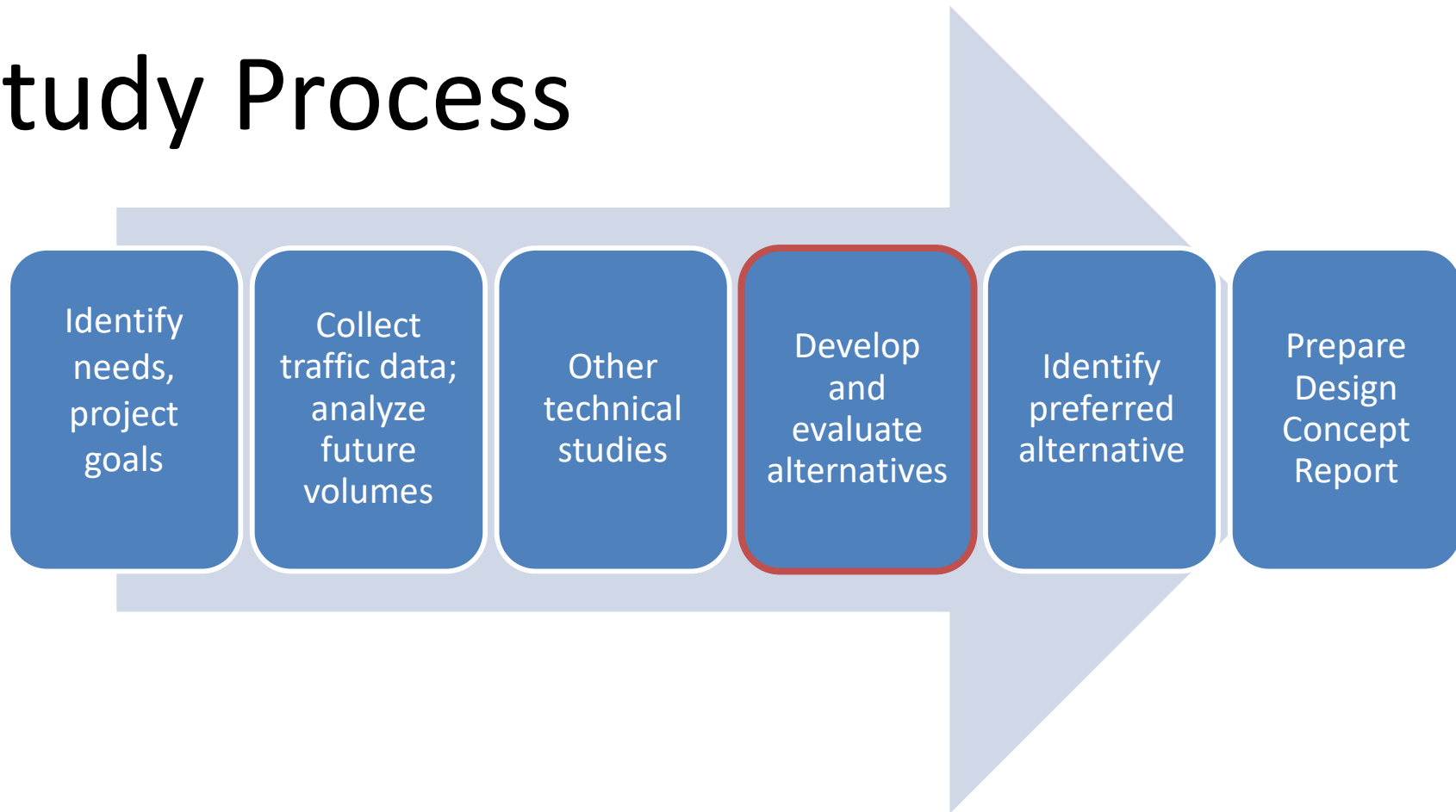
Study Purposes

- Evaluate options to improve, realign, and/or construct a new interchange and frontage road (Study #1).
- Evaluate options to improve Bellemont area county intersections (Study #2).
- Recommend a preferred alternative.
- Outline needed steps for potential future project(s).

Existing Bellemont Area Issues

- Congestion around truck stop.
- Mix of commercial trucks and residential traffic.
- Trucks have difficulty navigating existing roundabout, especially in snow.
- Predicted higher future traffic volumes and congestion.
- Constraints include I-40, residential neighborhood, Camp Navajo, Pilot Travel Center.

Study Process



Interchange Alternatives

- Six Build alternatives developed/evaluated.
- Developed based on operational needs and constraints.



Considerations for Alternatives

- Various locations for Hughes Avenue crossroad, including potential new crossroad and interchange to the east.
- All Build alternatives accommodate pedestrians and bikes.
- Modifications to north frontage road and Old Route 66.
- Considered but eliminated concept of new crossroad and interchange to west.

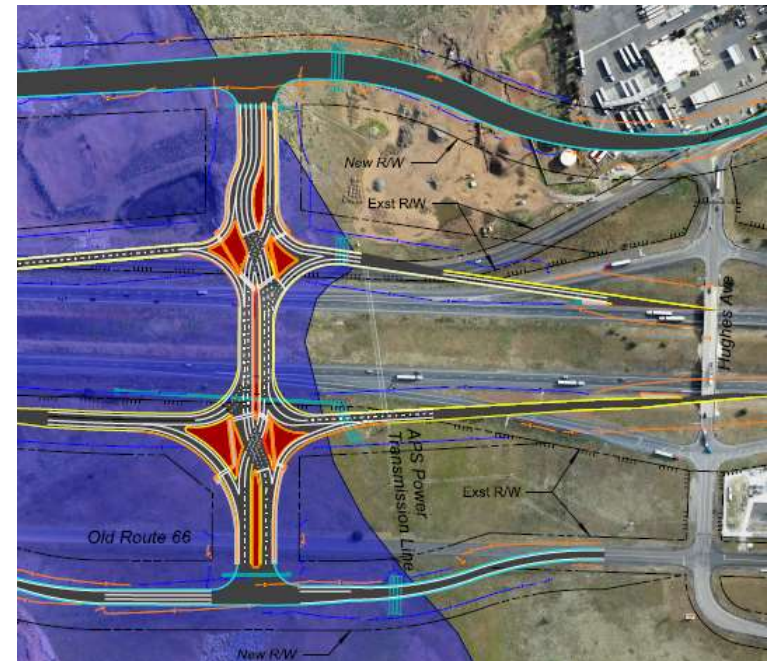
Alternative 1 – No Build

- No improvements to existing I-40 mainline, Hughes Avenue, or ramps.
- Projected future congestion, operational issues.
- May include County improvements to existing roundabout and Shadow Mountain Dr.



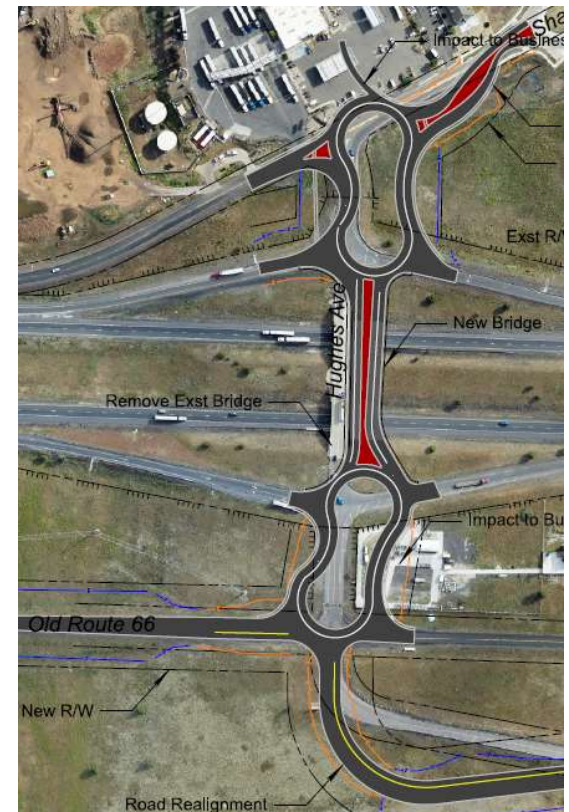
Alternative 2 – Diverging Diamond

- Replace existing traffic interchange (TI) with Diverging Diamond Interchange.
- Crossroad is 0.25 mile west of Hughes Avenue.
- Remove existing Hughes Ave crossroad and ramps.
- Cost: \$\$\$\$ (second highest).
- Relatively small footprint/low potential impact on cultural resources.
- No impacts to residences.
- Will impact Volunteer Wash floodplain.
- Estimated 46 acres of new ROW.



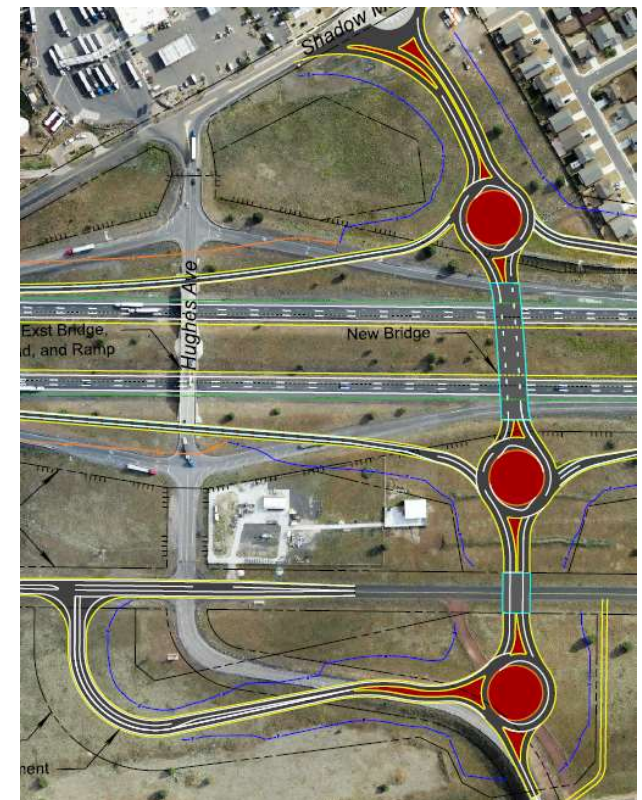
Alternative 3 – “Dog Bone” Roundabouts

- New “dog bone” roundabouts.
- Crossroad shifted slightly east.
- Roundabout intersections have fewest conflict points.
- Less-common intersection type.
- Cost: \$ (lowest).
- Major impacts to existing traffic operations during construction.
- No impacts to residential properties.
- Impacts two businesses.
- Small footprint/lowest potential impact on environmental resources.
- Estimated 9 acres of new ROW.



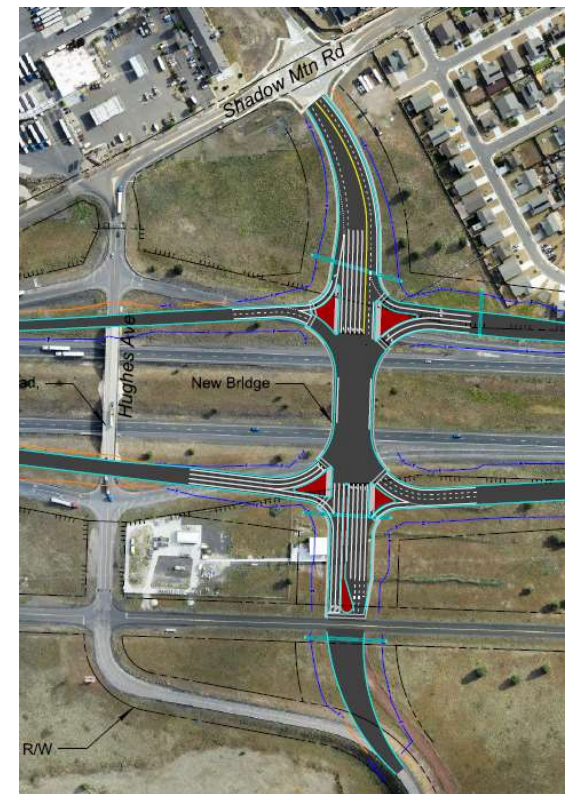
Alternative 4 - Roundabouts

- Replace existing TI with crossroad shifted 800 feet east and roundabouts at all intersections.
- Remove existing Hughes Ave crossroad and ramps.
- Recommended in 2013 DCR.
- Roundabout intersections have fewest conflict points.
- Cost: \$\$.
- Potential impacts to 33 residential properties.
- Small footprint/lowest potential impact on environmental resources.
- Estimated 24 acres of new ROW required.



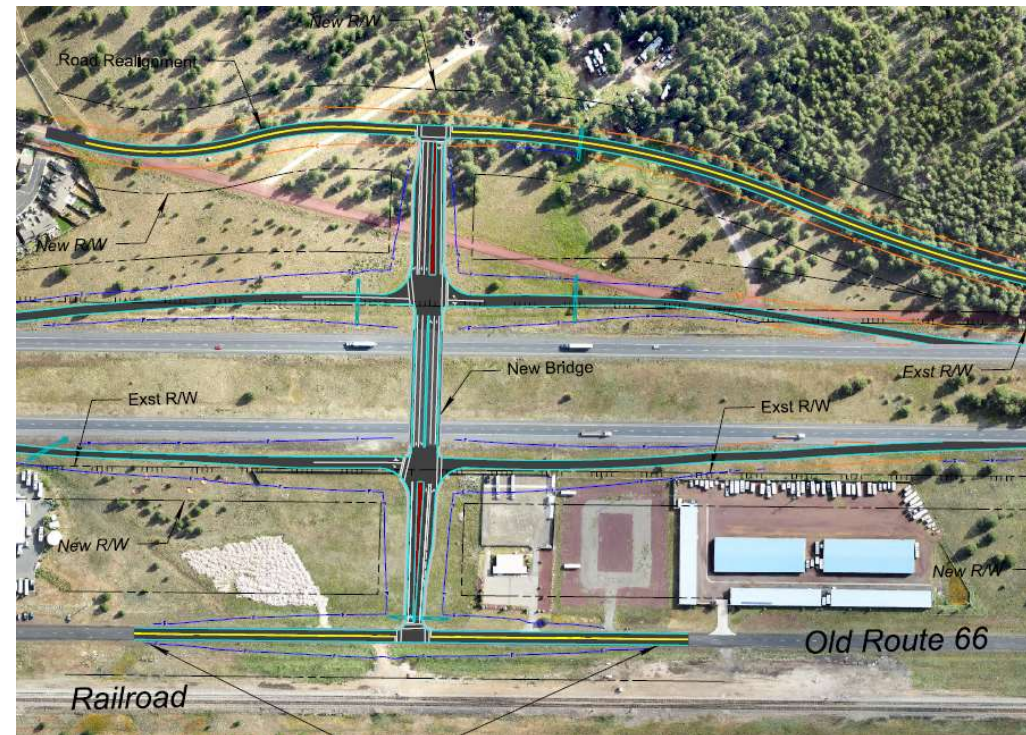
Alternative 5 – Single Point Urban

- Replace existing TI with Single Point Urban Interchange (SPUI).
- Relocate crossroad 800' east.
- Remove existing Hughes Ave crossroad and ramps.
- Not optimal solution for rural divided freeway.
- Less common rural interchange configuration.
- Cost: \$\$\$\$.
- Potential impacts to 11 residential properties.
- One impact to business.
- Low potential impacts to cultural resources.
- Estimated 15 acres of new ROW required.



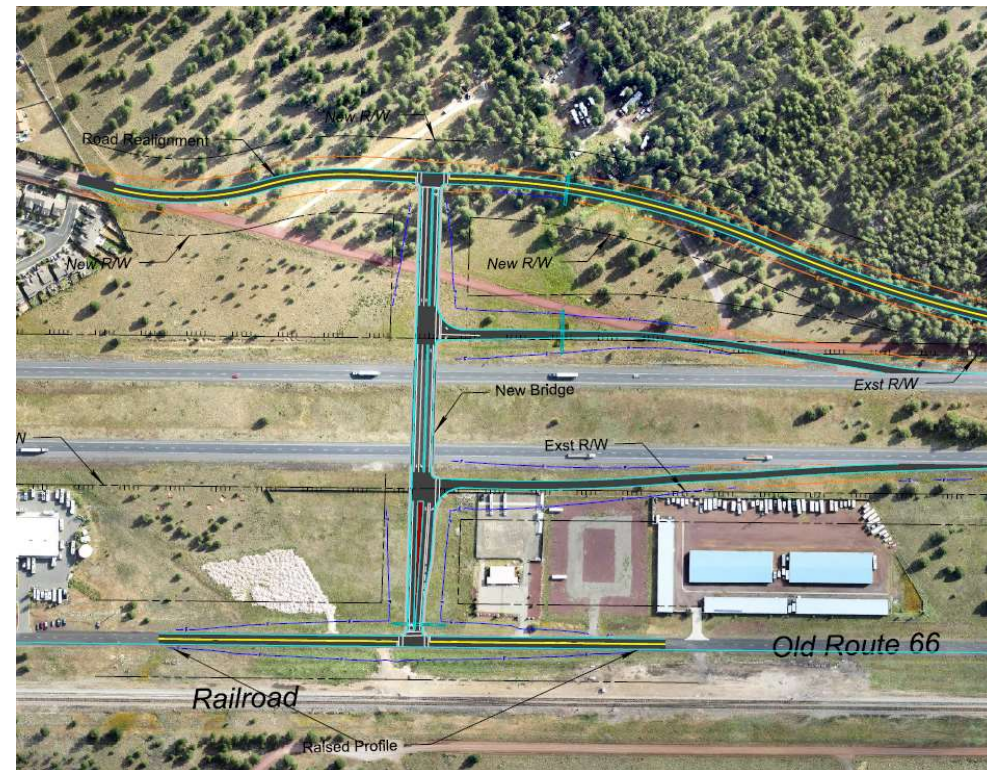
Alternative 6A – Add TI One Mile East

- Add new diamond interchange and four ramps 1 mile east of Hughes Ave.
- Existing Hughes Ave TI to remain, needs improvements.
- Realign forest/frontage road on north side and Old 66 on south.
- Common interchange type.
- Cost: \$\$\$\$\$ (highest).
- Impact to residential property and access.
- Impacts several businesses.
- Low potential impacts to cultural resources. Assess noise impacts.
- Estimated 45 acres of ROW required.
- Provides opportunities for project phasing



Alternative 7A – Add Half-TI One Mile East

- Similar to Alternative 6A except there are no west-side ramps at new TI.
- Realign forest/frontage road on north side and Old 66 on south.
- Less-common interchange type because only east ramps are included.
- Cost: \$\$\$.
- Impact to residential property and access.
- Impacts several businesses.
- Low potential impacts to cultural resources.
- Estimated 39 acres of ROW required.



Evaluation Criteria

- Traffic operations
- Conflict points at intersections
- Driver expectations/ common interchange type
- New right-of-way needs
- Estimated construction cost
- Permanent impacts to residences
- Permanent impacts to businesses
- Potential impacts to cultural resources and noise



Evaluation Matrix (excerpt)

Criterion	Alternative 1 No Build	Alternative 2 Diverging Diamond Interchange (DDI)	Alternative 3 "Dog bone" Roundabouts	Alternative 4 Roundabouts	Alternative 5 SPUI	Alternative 6A New TI to East	Alternative 7A New Half-TI to East	Recommend- ation
Description	No-Build Condition No TI or frontage road improvements will be considered. Coconino County's frontage road study recommendations may be incorporated into the Preferred Alternative if the No Build Alternative is recommended in the DCR.	New DDI with crossroad shifted 0.25 mile west of Hughes Ave. Remove existing Hughes Ave ramps and crossroad.	Shift crossroad ~100' east. New bridge. Add "dog bone" roundabouts at EB ramps and Old 66. Also add dog bone roundabouts at WB ramps and new location between 3-leg intersection and existing roundabout near Pilot.	The 2013 Draft Final DCR recommended shifting the crossroad approx. 800' to the east. The ramp intersections, approx. 600' apart, are proposed as 2-lane roundabouts. The profile of the south frontage road/Old 66, would be raised and the intersection with Hughes Ave reconstructed as a roundabout on fill.	Single Point Urban Interchange at relocated crossroad to the east approx. 800'.	New tight diamond interchange 1.0 mile to the east of Hughes Avenue with two-way crossroad and connections to north frontage/forest road and Old 66 on south side. Also includes needed improvements to existing Hughes Ave TI including bridge replacement.	New half diamond TI 1.0 mile to the east of Hughes Avenue with two-way crossroad and connections to north frontage/forest road and Old 66 on south side. No ramps on the west side of the new half-TI. Also includes needed improvements to existing Hughes Ave TI including bridge replacement.	
Traffic Operations / Level of Service (Design Year 2050)	Poor Level of Service: LOS C/F	Acceptable Level of Service: LOS A-C Ramp intersections are signalized. Insufficient space to flare lane widths between Shadow Mtn Rd and the WB ramps.	Good Level of Service: LOS A-B Insufficient space to fit dog bone geometry without encroaching on the Pilot travel center.	Good Level of Service: LOS A There is adequate space to develop new lanes.	Acceptable Level of Service: LOS B-C However, SPUI configuration works better on urban freeways with closed median than on rural freeway with wide median. Open median presents long distance from ramp stop bars to far side of intersection. Insufficient space to flare lane widths between Old 66 and the EB ramps.	Hughes Ave TI: acceptable Level of Service, LOS B-C. New TI: Good Level of Service: LOS A Insufficient space for all storage and flares/ tapers at existing Hughes Ave TI between Shadow Mtn Rd and WB ramps.	Hughes Ave TI: acceptable Level of Service: LOS B-C New Half TI: acceptable Level of Service: LOS A Insufficient space for all storage and flares/ tapers at existing Hughes Ave TI between Shadow Mtn Rd and WB ramps.	4, 3, then 5, 6A, 7A
Conflict Points at Intersections	Unsignalized intersections 26 conflict points (4 additional ramp conflicts)	Adds signals to intersections 10 conflict points (4 additional ramp conflicts)	Crashes at roundabouts are typically less severe than at signalized intersections. 8 conflict points at each (4 diverging and 4 merging) (4 additional ramp conflicts)	Crashes at roundabouts are typically less severe than at signalized intersections. 8 conflict points at each (4 diverging and 4 merging) (4 additional ramp conflicts)	Signalized intersection 24 conflict points (8 additional ramp conflicts)	Signalized ramp intersections at Hughes Ave; stop-controlled intersections at new TI. 26 conflict points (4 additional ramp conflicts) 26 conflict points (4 additional ramp conflicts)	Signalized ramp intersections at Hughes Ave; stop-controlled intersections at new TI. 26 conflict points (4 additional ramp conflicts) 12 conflict points (4 additional ramp conflicts)	3, 4, 2
Driver Expectancy	No change.	DDI is a fairly new interchange type in Arizona. Limited arterial street network exists to north and south; drivers who may exit freeway by mistake may get lost and take time to return to I-40.	Less common intersection type. Roundabouts can be confusing to some drivers. Dog bone configuration may further confuse drivers. Extra signing and pavement marking may be needed.	Roundabouts can be confusing to some drivers; extra signing needed. Roundabouts can be difficult for large trucks to navigate. Trucks have difficulty navigating snowy conditions in existing roundabout.	Less common intersection type in rural settings.	Most common intersection type in area.	Drivers not familiar with area may be confused by access at Half TIs.	6A, 5, 2

Next Steps/Process

- Select preferred alternative and conclude study (summer 2025).
- Identify funding for project (TBD).
- Prepare design and environmental studies.
- Advertise and construct project.

Study Comments

- Comments on the study will be accepted through February 5.
- Comments can be submitted in the following ways:
 - Submit comment card at tonight's meeting
 - Online comment form: [I-40 Bellemont Traffic Interchange Design Concept Report Update / Department of Transportation](#)
 - Email: crodriguez9@azdot.gov
 - Phone (602) 617-9560
 - Mail: Chris Rodriguez, ADOT Project Manager, 205 S. 17th Ave., #292, MD 614E Phoenix, AZ 85007