

**I-40/Choctaw Road
Alternatives Screening Matrix**

Evaluation Factors and Criteria	Alternative 1	Alternative 2	Alternative 3	No Build
Brief Description of the Alternative	Diamond Interchange	Partial (2-Quadrant) Cloverleaf Interchange	Partial Diamond / Cloverleaf Interchange	Existing interchange
Purpose and Need	To enhance the operational characteristics of I-40 east and west of the I-240 merge to the Choctaw Road interchange.			
Does the alternative meet the purpose and need for the project?	Yes (+)	Yes (+)	Yes (+)	No (-)
Traffic Performance, Safety and Access				
<u>Traffic Operations (LOS) (2037 - AM)</u> I-40/I-240 Merge WB	C	C	C	F
I-40 Mainline WB (I240 to C. Rd.)	D	D	D	F
I-40 Mainline WB (east of C. Rd.)	D	D	D	F
Choctaw WB (off-ramp)	C	D	D	F
Choctaw WB (on-ramp)	C	D	D	F
Choctaw Road	C (SB)	B (SB)	A	F
<u>Traffic Operations (LOS) (2037 - PM)</u> I-40/I-240 Merge EB	C	C	C	F
I-40 Mainline EB (I240 to C. Rd.)	D	D	D	F
I-40 Mainline EB (east of C. Rd.)	D	D	D	F
Choctaw EB (off-ramp)	C	C	D	F
Choctaw EB (on-ramp)	C	D	D	F
Choctaw Road	B (NB)	C (NB)	A	F
Safety	The improved configuration should reduce collision rates. (+)	The improved configuration should reduce collision rates. (+)	The improved configuration should reduce collision rates. (+)	Geometric improvements would not be constructed. (-)
Access to Businesses and Residential Driveways	The ramp configuration will take the Love's Country Store site and cause a negative impact. The ramp configuration may impact the Anderson's Travel Plaza. (-) The residential access will be modified, but not eliminated - No impact (0)	The ramp configuration may impact access to the Sonic restaurant. The profile modification of Choctaw Road may impact access to the Love's Country Store and Anderson's Travel Plaza (-). The residential access will be modified, but not eliminated - No impact (0)	The ramp configuration will impact a portion of the Love's Country Store site. The ramp configuration may impact access to the Sonic restaurant and Anderson's Travel Plaza. (-) The residential access will be modified, but not eliminated - No impact (0)	No Impact (0)
Engineering Feasibility and Constructability				
Maintenance of Traffic on I-40 and Choctaw Road	The traffic on I-40 will have to be shifted for a shorter period of time because it will require a 6-lane bridge. Choctaw Road will also have shorter delays and closures due to the shorter bridge construction time. (+)	The traffic on I-40 will have to be shifted for a longer period of time because of the 8-lane bridge and the phasing necessary for the ramp construction. Choctaw Road will have longer delays and closures due to the longer bridge construction time. (-)	The traffic on I-40 will have to be shifted for a longer period of time because of the 8-lane bridge and the phasing necessary for the ramp construction. Choctaw Road will have longer delays and closures due to the longer bridge construction time. (-)	No impact (0)
Complexity of Construction	The I-40 bridge and the exit ramps will be constructed first, traffic moved onto the new ramps while the entrance ramps are built through the old exit ramps. Choctaw Road will be reconstructed after the I-40 bridge and the ramps are complete. This will result in the shortest construction period. (+)	The I-40 bridge will be constructed first, traffic moved onto it while the ramps are built in parts. The traffic will have moved and phased several times to complete the tie-ins to I-40 and Choctaw Road, resulting in a longer construction period. (-)	The I-40 bridge will be constructed first, traffic moved onto it while the ramps are built in parts. The traffic will have moved and phased several times to complete the tie-ins to I-40 and Choctaw Road, resulting in a longer construction period. (-)	No impact (0)
Temporary Construction Impacts (effects of temporary closure on businesses, etc.)	Choctaw Road temporary closure will have a shorter duration to construct 6-lane I-40 bridges. (+)	Choctaw Road temporary road closure will have a longer duration to construct 8-lane I-40 bridges. (-)	Choctaw Road temporary road closure will have a longer duration to construct 8-lane I-40 bridges. (-)	No impact (0)
Right-of-Way Requirements				
Relocations: Major Utilities	None (0)	None (0)	None (0)	None (0)
Relocations: Commercial	2 relocations (-)	3 relocations (-)	3 relocations (-)	None (0)
Relocations: Residential	None (0)	None (0)	None (0)	None (0)
Tribal, Federal or State Lands	None (0)	None (0)	None (0)	None (0)



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Cost				
Construction Cost	There are reduced costs associated with a smaller bridge, fewer lane miles and reduced user delays. (+)	There are additional costs associated with a larger bridge, additional lane miles and longer user delays. (-)	There are additional costs associated with a larger bridge, additional lane miles and longer user delays. (-)	No Cost (0)
Right-of-Way (R/W) Cost	There is additional R/W needed for the EB and the WB exit ramps. (-)	There is no appreciable R/W needed for this alternative. (+)	There is additional R/W needed for the EB and the WB exit ramps. (-)	No Cost (0)
Natural Resources				
Threatened & Endangered Species, Critical Habitat	None (0)	None (0)	None (0)	None (0)
Wetlands	0.7 acre of wetlands in the project area, impact to be determined	0.7 acre of wetlands in the project area, impact to be determined	0.7 acre of wetlands in the project area, impact to be determined	None (0)
Floodplains	Designated flood zones are located in the project area, impact to be determined	Designated flood zones are located in the project area, impact to be determined	Designated flood zones are located in the project area, impact to be determined	None (0)
Water Quality	To be determined	To be determined	To be determined	None (0)
Streams and ponds	10 waterways in project area, impact to be determined	10 waterways in project area, impact to be determined	10 waterways in project area, impact to be determined	None (0)
Hazardous Waste				
Hazardous Waste & Petroleum Underground Storage Tanks (USTs)	Potential involvement with contaminated soil and groundwater due to proximity of documented Leaking UST site and would require closure of storage tanks and waste water treatment lagoons at Love's Country Store site (-)	Potential involvement with contaminated soil and groundwater due to proximity of documented Leaking UST site (-)	Potential involvement with contaminated soil and groundwater due to proximity of documented Leaking UST site and would require closure of storage tanks and waste water treatment lagoons at Love's Country Store site or relocation of impacted facilities (-)	None (0)
Cultural Resources				
Archeological Sites (NRHP eligible)	None (0)	None (0)	None (0)	None (0)
Historic Properties (NRHP eligible)	None (0)	None (0)	None (0)	None (0)
Section 4(f) and Section 6(f) Resources	None (0)	None (0)	None (0)	None (0)
Community Resources, Social & Economic Impacts				
Emergency Response	Would improve emergency response capabilities by improving the traffic flow in the project area. (+)	Would improve emergency response capabilities by improving the traffic flow in the project area. (+)	Would improve emergency response capabilities by improving the traffic flow in the project area. (+)	A negative impact would occur over time due to increased traffic flow and congestion, reducing emergency response capabilities. (-)
Access to Community Facilities	Would improve access to community facilities by improving the traffic flow in the project area. (+)	Would improve access to community facilities by improving the traffic flow in the project area. (+)	Would improve access to community facilities by improving the traffic flow in the project area. (+)	A negative impact would occur over time due to increased traffic flow and congestion. (-)
Neighborhood Cohesion	None (0)	None (0)	None (0)	None (0)
Farmlands	Prime farmland soils are located in the project area, impact to be determined.	Prime farmland soils are located in the project area, impact to be determined.	Prime farmland soils are located in the project area, impact to be determined.	None (0)
Environmental Justice	None (0)	None (0)	None (0)	None (0)
Socioeconomic Impacts (from relocations, etc)	Improved access to the area may make it more attractive to both residential and commercial development. (+) Requires up to two business relocations. (-)	Improved access to the area may make it more attractive to both residential and commercial development. (+) Requires up to three business relocations. (-)	Improved access to the area may make it more attractive to both residential and commercial development. (+) Requires up to three business relocations. (-)	None (0)
SUBTOTAL SCORING	9(+), 5(-)	6(+), 8(-)	5(+), 9(-)	0(+), 4(-)
Public Acceptance				
Differences in Public Acceptance				
Context Sensitivity				
Differences in how each alternative fits within the context of the surrounding area (are design elements consistent with the rural setting)	Consistent with rural setting. (0)	Consistent with rural setting. (0)	Consistent with rural setting. (0)	Consistent with rural setting. (0)
TOTAL SCORING AND PREFERRED ALTERNATIVE				
	To be determined after public input.	To be determined after public input.	To be determined after public input.	To be determined after public input.

