

Western Row Road I-71 Interchange IMPROVEMENTS

Alternatives Matrix

Feature/Consideration	Comparative Impacts by Alternative		
	Alternative 4	Alternative 5	Alternative 6
Purpose and Need			
Interstate Accessibility	Improves access by providing full interchange movement (northbound and southbound), with added access to southbound I-71 from Western Row Road	Improves access by providing full interchange movement (northbound and southbound)	Improves access by providing full interchange movement (northbound and southbound), with added access to southbound I-71 from Innovation Way
Traffic Flow and Safety on Western Row Road	Reduces congestion and improves safety by providing adequate intersection spacing, new turn lanes and an improved curve; full interchange reduces circuitous travel; additional southbound ramp from Western Row Road reduces congestion at King Island Drive intersection Requires additional signal on Western Row Road	Reduces congestion and improves safety by providing adequate intersection spacing, new turn lanes and an improved curve; full interchange reduces circuitous travel Requires additional signal on Western Row Road	Reduces congestion and improves safety by providing adequate intersection spacing, new turn lanes and an improved curve; full interchange reduces circuitous travel; additional southbound ramp from Innovation Way reduces congestion on entire Western Row Road corridor through the interchange area Does not require additional signal on Western Row Road
Fit with Existing and Planned Development	Does not directly impact vacant parcels slated for development in southwest quadrant of interchange Impacts access to tennis center from Western Row Road	Bisects vacant parcels slated for development in southwest quadrant of interchange	Bisects vacant parcels in southwest quadrant of interchange, but maximizes development opportunities on remaining land Provides opportunity for regional stormwater basin on parcel remnant in floodplain New ramp intersection on Innovation Way provides opportunity for future roadway connection identified in City of Mason thoroughfare plan
Landscaping and Gateway Potential	New or modified I-71 exit ramps provide opportunity for City Of Mason gateway elements to be developed during detailed design	New or modified I-71 exit ramps provide opportunity for City Of Mason gateway elements to be developed during detailed design	New or modified I-71 exit ramps provide opportunity for City Of Mason gateway elements to be developed during detailed design
Community and Land Use			
Potential Residential Displacements	0	0	0
Potential Commercial Displacements	0	0	0
Other Property Impacts	Right-of-way impacts limited to vacant land or strip takes along existing roads	Right-of-way impacts limited to vacant land or strip takes along existing roads	Right-of-way impacts limited to vacant land or strip takes along existing roads
Environmental Justice/Title VI Populations	None	None	None
Floodplains and Groundwater			
100 Year Floodplain Encroachment	0.81 acre	1.46 acres	2.06 acres
Sole-Source Aquifer	0	0	0
Drinking Water Protection Areas / Public Water Supplies	0	0	0
Ecological Resources			
Federal-listed Species	Indiana bat – potential habitat, including 1 potential maternity tree and 5 acres of woodland	Indiana bat – potential habitat, including 2 potential trees (1 maternity, 1 roost) and 8.6 acres of woodland	Indiana bat – potential habitat, including 6.2 acres of woodland, but no roost or maternity trees
Wetlands	2 features; 0.07 acre	4 features; 0.11 acre	5 features; 0.13 acre
Streams	6 features; 769 linear feet	7 features; 1,274 linear feet	7 features; 725 linear feet
Cultural Resources			
History/Architecture Properties	None	None	None
Archaeology Sites	None	None	None
Public Parks / Recreation Areas			
Section 4(f) and/or 6(f) Parks	0	0	0
Noise and Air Quality			
Noise Sensitive Areas	7 impacted receptors; no barriers warranted	7 impacted receptors; no barriers warranted	7 impacted receptors; no barriers warranted
Air Quality	USEPA reports Warren County as Maintenance Area for particulate matter (PM2.5) and 8-hr ozone. Air quality analysis will be completed for the Preferred Alternative		
Potential Hazardous Materials			
Suspect Sites Adjacent to Construction Limits (additional study needed)	6 total (two manufacturing facilities, one nursery, one gas station, two transformer sites)	6 total (two manufacturing facilities, one nursery, one gas station, two transformer sites)	6 total (two manufacturing facilities, one nursery, one gas station, two transformer sites)
Design Considerations			
Retaining Walls	Retaining wall required at culvert extension under Columbia Road to protect Union Run Two additional walls required at southbound I-71 entrance and exit ramps to reduce right-of-way impacts	Retaining wall required at culvert extension under Columbia Road to protect Union Run Additional wall required along widened Western Row Road to protect Union Run	One retaining wall required at culvert extension under Columbia Road to protect Union Run
Structures	Culvert extension required under Columbia Road	Culvert extension required under Columbia Road Southbound I-71 overpass of Western Row Road requires widening to accommodate new exit ramp Requires new culvert for southbound I-71 ramp at Union Run	Culvert extension required under Columbia Road Southbound I-71 overpass of Western Row Road requires widening to accommodate new exit ramp Requires new culvert for southbound I-71 ramp at Union Run
Cost Estimates			
Preliminary Construction Costs	\$24,400,000	\$27,400,000	\$28,800,000
ALTERNATIVE RECOMMENDATION:	Eliminate from consideration	Eliminate from consideration	Advance as Preferred Alternative. Alternative 6 supports project Purpose and Need, including best overall traffic performance and best fit with existing and planned development
* Green shading indicates best alternative for category			