

# EVALUATION MATRICES - TRANSPORTATION

**Table 1: Evaluation Matrix - Congestion & Efficiency**

	Level-of-Service (LOS)	Queuing	Truck/freight movement
<b>Alternative 1</b> No Action	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS D for some individual movements</li> </ul>	Predicted queue lengths of 600-850 feet at signals	Trucks experience difficulty with turning movements due to insufficient curb radii at driveways at most unsignalized intersections.
<b>Alternative 5</b> Access Management	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS D for some individual movements</li> </ul>	Minimal or no impacts on queue lengths at signals	Would improve efficiency of corridor due to fewer driveways. Would cause trucks to use side streets to access many businesses.
<b>Alternative 6</b> Upgrade Morgan Street Roadway Geometrics	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS D for some individual movements</li> </ul>	Minimal or no impacts on queue lengths at signals	May improve some turning radii for truck movements
<b>Alternative 7</b> Widen Morgan Street for Additional Travel Lanes	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS C or better for all individual movements</li> </ul>	Notable reduction of queue lengths	Travel times through Spencer would be reduced. May improve some turning radii for truck movements. Would cause trucks to use side streets to access businesses.
<b>Alternative 8</b> Morgan-Franklin One-Way Pair with Railroad Relocation	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS C or better for all individual movements</li> </ul>	Notable reduction of queue lengths	May result in additional turning movements for eastbound trucks. Westbound travel times through Spencer would be slightly reduced.
<b>Alternative 9</b> Morgan-Franklin One-Way Pair without Railroad Relocation	<ul style="list-style-type: none"> <li>LOS D or better at all intersections</li> <li>LOS E for some individual movements</li> </ul>	Reduction of westbound queue lengths. Possible increase of eastbound queue lengths.	May result in additional turning movements for eastbound trucks. Westbound travel times through Spencer would be slightly reduced.
<b>Alternative 10</b> Morgan-Hillside One-Way Pair	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS D for some individual movements</li> </ul>	Reduction of eastbound queue lengths. Minimal or no impact on westbound queue lengths, unless Hillside had two travel lanes.	Would result in additional turning movements for westbound trucks. Eastbound travel times through Spencer would be slightly reduced.
<b>Alternative 11</b> Northern Bypass	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> </ul>	Notable reduction of queue lengths	Would provide through trucks a more efficient means of travel, away from urbanized environment.
<b>Alternative 12</b> Southern Bypass	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> </ul>	Notable reduction of queue lengths	Would provide through trucks a more efficient means of travel, away from urbanized environment.
<b>Alternative 13</b> Combine Access Management and Upgrade Geometrics	<ul style="list-style-type: none"> <li>LOS C or better at all intersections</li> <li>LOS D for some individual movements</li> </ul>	Minimal or no impacts on queue lengths	Would improve efficiency of corridor due to fewer driveways. Would cause trucks to use side streets to access many businesses. May improve some turning radii for truck movements.

**Table 3: Evaluation Matrix - Safety**

	Effect on Safety
<b>Alternative 1</b> No Action	No crash reduction potential
<b>Alternative 5</b> Access Management	<p>Would eliminate left turn crashes at driveways converted to right-in/right-out (or more restrictive) access</p> <p>Would eliminate all crashes at driveways proposed for elimination/consolidation</p> <p>Would improve some substandard intersection designs</p> <p>Would improve corridor efficiency by having fewer locations for vehicles to enter/exit Morgan Street</p>
<b>Alternative 6</b> Upgrade Morgan Street Roadway Geometrics	<p>Minimal effect on crashes</p> <p>Would likely only reduce sideswipe crashes, which are already low in frequency</p>
<b>Alternative 7</b> Widen Morgan Street for Additional Travel Lanes	Would reduce rear-end crashes due to increased capacity
<b>Alternative 8</b> Morgan-Franklin One-Way Pair with Railroad Relocation	<p>Would reduce angle crashes and rear-end crashes on Morgan Street</p> <p>Would increase crashes on Franklin Street</p> <p>Would introduce high volumes of traffic into residential area and historic downtown</p> <p>Would remove 17 at-grade railroad crossings within Spencer</p>
<b>Alternative 9</b> Morgan-Franklin One-Way Pair without Railroad Relocation	<p>Would reduce angle crashes and rear-end crashes on Morgan Street</p> <p>Would increase crashes on Franklin Street</p> <p>Would introduce high volumes of traffic into residential area and historic downtown</p> <p>Introduces high traffic volumes adjacent to railroad tracks</p> <p>Introduces high traffic volumes on deficient Franklin Street geometrics</p>
<b>Alternative 10</b> Morgan-Hillside One-Way Pair	<p>Would reduce angle crashes and rear-end crashes on Morgan Street</p> <p>Would increase crashes on Hillside Avenue</p> <p>Would introduce high volumes of through traffic into residential area and school zone</p>
<b>Alternative 11</b> Northern Bypass	<p>Would reduce angle crashes and rear-end crashes on Morgan Street</p> <p>Would create additional intersections where crashes may occur</p>
<b>Alternative 12</b> Southern Bypass	<p>Would reduce angle crashes and rear-end crashes on Morgan Street</p> <p>Would create additional intersections where crashes may occur</p>
<b>Alternative 13</b> Combined Access Management & Upgrade Geometrics	<p>Would eliminate left turn crashes at driveways converted to right-in/right-out (or more restrictive) access</p> <p>Would eliminate all crashes at driveways proposed for elimination/consolidation</p> <p>Would improve some substandard intersection designs</p> <p>Would improve corridor efficiency by having fewer locations for vehicles to enter/exit Morgan Street</p> <p>Would likely reduce sideswipe crashes, which are already low in frequency</p> <p>Would allow for median construction to aid in access management</p>

**Table 2: Evaluation Matrix - Roadway Geometrics**

	Two-Way Left-Turn Lane Width	Curb Offset	Drainage	Comments
<b>Alternative 1</b> No Action	NO	NO	Occasional water ponding resulting in lane blockages	
<b>Alternative 5</b> Access Management	NO	NO	Occasional water ponding resulting in lane blockages	
<b>Alternative 6</b> Upgrade Morgan Street Roadway Geometrics	YES	YES	Improved drainage	
<b>Alternative 7</b> Widen Morgan Street for Additional Travel Lanes	YES	YES	Improved drainage	
<b>Alternative 8</b> Morgan-Franklin One-Way Pair with Railroad Relocation	n / a	YES	Occasional water ponding resulting in lane blockages	Vertical profile and width of Franklin Street would be improved to meet INDOT standards
<b>Alternative 9</b> Morgan-Franklin One-Way Pair without Railroad Relocation	n / a	YES	Occasional water ponding resulting in lane blockages	Franklin Street (which would carry eastbound state route traffic) has numerous vertical deficiencies that are unable to be improved due to presence of railroad
<b>Alternative 10</b> Morgan-Hillside One-Way Pair	n / a	YES	Occasional water ponding resulting in lane blockages	
<b>Alternative 11</b> Northern Bypass	NO	YES	Occasional water ponding resulting in lane blockages	Bypass would be constructed to meet all INDOT standards
<b>Alternative 12</b> Southern Bypass	NO	YES	Occasional water ponding resulting in lane blockages	Bypass would be constructed to meet all INDOT standards
<b>Alternative 13</b> Combine Access Management and Upgrade Geometrics	YES	YES	Improved drainage	

**Table 4: Evaluation Matrix - Community Impacts**

	Right-of-Way	Economic Impact	Circulation/Connectivity
<b>Alternative 1</b> No Action	No impact	No impact	No impact
<b>Alternative 5</b> Access Management	Minor right-of-way acquisitions may be necessary near Vandalia/Lincoln and Fifth/Franklin intersections	No impact	Most private driveways on Morgan Street would be either closed or converted to right-in/right-out operation. Traffic would have to access these properties via side streets.
<b>Alternative 6</b> Upgrade Morgan Street Roadway Geometrics	Minor right-of-way acquisitions may be necessary, particularly between Vandalia Street and Wolf Street.	Some businesses may lose parking spaces that have encroached into right-of-way. Will improve the visual appeal of the corridor.	No impact
<b>Alternative 7</b> Widen Morgan Street for Additional Travel Lanes	Substantial right-of-way impacts along Morgan Street. Numerous parking lots would be impacted. Would require several building takes.	Potential loss of numerous businesses. Loss of numerous parking spaces. May improve the visual appeal of the corridor	No impact
<b>Alternative 8</b> Morgan-Franklin One-Way Pair with Railroad Relocation	Substantial right-of-way impacts along relocated railroad corridor. This alternative would also involve the purchase of existing railroad right-of-way through Spencer.	Will divert eastbound vehicles onto Franklin Street and away from Morgan Street businesses.	Increased traffic on north-south side streets in between Morgan Street and Franklin Street. Increased circuitry to access eastbound state route system from Morgan Street properties. Improved connectivity south of Franklin Street with railroad relocation.
<b>Alternative 9</b> Morgan-Franklin One-Way Pair without Railroad Relocation	Possible right-of-way impacts on north side of Franklin Street for turn lanes	Will divert eastbound vehicles onto Franklin Street and away from Morgan Street businesses.	Increased traffic on north-south side streets in between Morgan Street and Franklin Street. Increased circuitry to access eastbound state route system from Morgan Street properties.
<b>Alternative 10</b> Morgan-Hillside One-Way Pair	Possible right-of-way necessary at eastern and western termini of one-way Hillside Avenue.	Will divert westbound vehicles onto Hillside Avenue and away from Morgan Street businesses.	Increased traffic on north-south side streets in between Morgan Street and Hillside Avenue. Increased circuitry to access eastbound state route system from Morgan Street properties. May encourage cut-through traffic on North Street or Franklin Street.
<b>Alternative 11</b> Northern Bypass	Substantial right-of-way impacts along bypass corridor	Will divert most through traffic out of town and away from Morgan Street businesses. May spur development along bypass corridor.	May provide improved access for local industries (Cook, Boston Scientific) and high school.
<b>Alternative 12</b> Southern Bypass	Substantial right-of-way impacts along bypass corridor	Will divert most through traffic out of town and away from Morgan Street businesses. May spur development along bypass corridor.	May provide improved access for local industries (Cook, Boston Scientific) and high school.
<b>Alternative 13</b> Combine Access Management and Upgrade Geometrics	Minor right-of-way acquisitions may be necessary near Vandalia/Lincoln and Fifth/Franklin intersections	Some businesses may lose parking spaces that have encroached into right-of-way. Will improve the visual appeal of the corridor.	Most private driveways on Morgan Street would be either closed or converted to right-in/right-out operation. Traffic would have to access these properties via side streets.

