



# OPTIONS COMPARISON

	Advantage of Diverging Diamond Interchange (DDI)	Advantage of Tight Diamond Interchange (TDI)	No Significant Difference for Either Option	Comments
<b>Engineering</b>				
Roadway		✓		Slight advantage for TDI based on crossing street alignment. PA 851 roadway curves through the interchange in the DDI option,
Structure			✓	Bridge replaced with two-span structure in both options
Traffic Control			✓	Similar construction staging for both options
Drainage / Stormwater			✓	
Constructability			✓	
Bicycle / Pedestrian Access			✓	
<b>Operations and Safety</b>				
Operations	✓			<p><b>Diverging Diamond (DDI)</b></p> <ul style="list-style-type: none"> <li>• Acceptable traffic operations through year 2060</li> <li>• 2 signal phases per light cycle increases green light time</li> </ul> <p><b>Tight Diamond Interchange (TDI)</b></p> <ul style="list-style-type: none"> <li>• Acceptable traffic operations through year 2050</li> <li>• 3 signal phases per light cycle</li> <li>• Limited vehicle storage on left-turn lanes on PA 851 due to the locations of the ramp intersections.</li> </ul>
Safety	✓			<p>Advantage for DDI based on anticipated reduction in crash rate and severity:</p> <p>DDI: Less conflict points: 14      Less left-turn conflicts: 2                      TDI: More conflict points: 26      More left-turn conflicts: 8</p>
<b>Environmental Impacts</b>				
Wetlands			✓	Very minor impacts for both options
Streams	✓			<p>Slight advantage to DDI due to TDI impacts along the southbound off-ramp.</p> <p>Stream impacts length for DDI Option: 460 ft.                      Stream impacts length for TDI Option: 600 ft.</p>
Potential Contaminated Sites			✓	
Threatened and Endangered Species			✓	No known impacts
Groundwater			✓	
Right-of-Way			✓	Case & Keg is likely a displacement & driveway closure impacts Tom's truck circulation in both options
Utilities			✓	
Cost			✓	<p>Estimated construction cost of the TDI is \$16,500,000.                      Estimated construction cost of the DDI is \$16,900,000</p>

**Project Team Recommendation:**  
**Construct Diverging Diamond Interchange**