

**Morgantown Monongalia MPO**  
**2025 Metropolitan Transportation Plan Update**

**Appendix J**

**Travel Demand Model Modification Memo**

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## Overview

In 2025, the Morgantown Monongalia Metropolitan Planning Organization (MMMPO) conducted a minor update to its Metropolitan Transportation Plan (MTP). This minor update served as a critical "mid-cycle" recalibration, ensuring that the region's long-range planning remains aligned with changing community needs and legislative requirements.

To support these updates with data-driven evidence, the MPO staff performed technical modifications to the regional Travel Demand Model (TDM), a computerized representation of the region's transportation system. The modifications were split into two parts: Network Updates and Scenario Evaluation.

### Previous Updates

The network updates were based on the model validated during the Morgantown Downtown Microsimulation Study, utilizing observed 2024 traffic volumes. A summary of previous major model developments and calibrations is provided in the table below.

Year	Related Study	Consultant
2024	Morgantown Downtown Microsimulation Study	Kimley Horn / ACECOM
2022	West Ridge/Harmonty Groove Development	HDR
2021	2050 MTP	Stentec
2017	I-79 Access Study	HDR
2013	2013 Long Range Plan Update	Burgess - Niple
2010	TDM Conversion from QRSII	URS

### TDM Network Updates

The existing model network was updated to reflect "committed" infrastructure—projects that are either under construction or fully funded for the near future. The changes include:

- **Harmony Grove Interchange (I-79):** The model now accounts for the new interchange, which is expected to impact regional freight on the western side of the Monongahela River.
- **New Monongahela River Bridge & Connecting Roads:** This addition provides a new link in the southern part of the region. The model was adjusted to analyze how this bridge redistributes traffic away from existing river crossings.
- **Revised Travel Analysis Zones (TAZs):** TAZs are the geographical "building blocks" of the model. Staff updated or added new TAZs, centroids, and connectors to better reflect new development of the Morgantown Industrial Park and its adjacent land use.

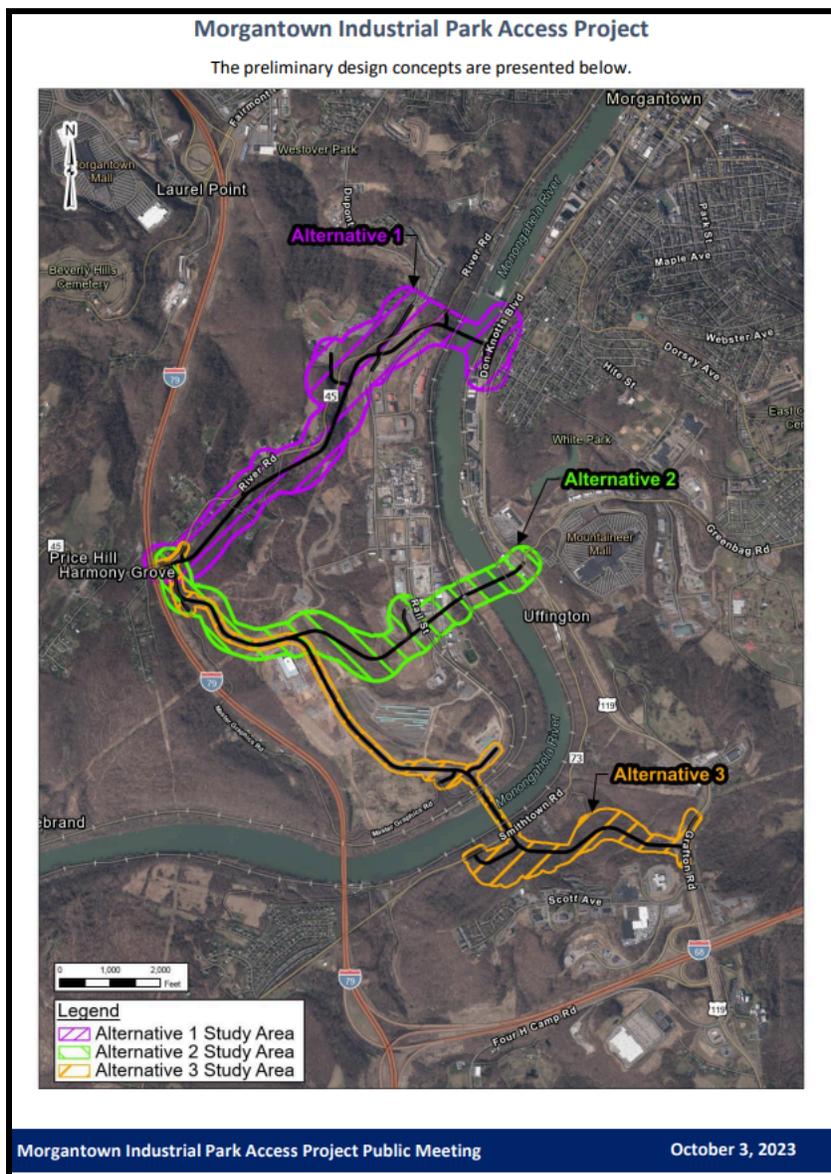
## Scenario Evaluation

With the network updated, the MPO conducted scenario evaluations to assess the impact of Willey Street Connector and Greimbein's Island Closure.

## Modification Details

### TDM Network Updates

TDM Network Updates focused on the committed projects from the I-79 Harmony Grove Interchange project and the New Monongahela River Bridge & Connecting Roads. The project locations are shown on the map below as alternative 3.



The following table summarizes the changes made to the TDM during this update cycle:

Type	ID	Description	AB/BA Time	AB/BA Hourly Cap (Daily Cap)
Segment	2721	Connector in the Morgantown Industrial Park	1.3644	800 (8,000)
Segment	2723	Connector in the Morgantown Industrial Park and the Bridge	1.3781	800 (8,000)
Segment	2722	Connector between Smithtown Rd and Grafton Rd	0.9096	800 (8,000)
Centroid Connector	2724	Connect TAZ 142 to Node 3239 on Mon River Bridge access road in the Morgantown Industrial Park	–	–
Node	3044	Connect Smithtown Rd and Mon River Bridge	Intersection without Deploy	
Node	3045	Connect Grafton Rd and Mon River Bridge	Intersection without Deploy	
Node	3239	Connect TAZ 142 to access rd (Rail Rd) through Centroid Connector 2724	Intersection without Deploy	

Notes:

The speed (AB/BA Time) was calculated based the unit rate of River Rd (Link# 1634)

The AB/BA Hourly Cap and Daily Cap were set in consistency with that of Smithtown Rd (Link# 1779)

## Scenario Evaluation

The scenario evaluates the potential impact of the proposed Willey Street Connector and the closure of University Ave at Greimbein’s Island.

Two separate model files were created:

- 1) Willey Street Connector Only
- 2) Willey Street Connector + Greimbein’s Island Closure

The following table shows the modification made to the model:

Link ID	Street Name	Hourly Cap	Daily Cap	Notes
2727	Willey St	1200	12,000	New connection to Beechurst Ave
2725	Willey St Connector	850	8,500	New connection between Willey St and Falling Run Rd
1180	Willey St	1200	12,000	Increase capacity. Alignment adjustment
1207	Willey St	1200	12,000	Increase capacity
1208	Willey St	1200	12,000	Increase capacity
1210	Willey St	1200	12,000	Increase capacity
1211	Willey St	1200	12,000	Increase capacity
1212	Willey St	1200	12,000	Increase capacity
1209	Willey St	1200	12,000	Increase capacity
1225	Willey St	1200	12,000	Increase capacity
1222	Richwood Ave	850	8,500	Increase capacity
1220	Snider St	850	8,500	Increase capacity
1101	Snider St	850	8,500	Increase capacity
1111	Snider St	850	8,500	Increase capacity
1219	Willey St	10	100	Reduce capacity
1102	Willey St	10	100	Reduce capacity
1099	Willey St	10	100	Reduce capacity
1097	Willey St	10	100	Reduce capacity
2344	Willey St	10	100	Reduce capacity
1095	Willey St	10	100	Reduce capacity
1105	Willey St	10	100	Reduce capacity
1107	Willey St	10	100	Reduce capacity
1078	University Ave	650	6,500	Remove
1075	University Ave	650	6,500	Remove

## Projects Excluded from the Scenario Evaluation

The following projects proposed for the MTP update are excluded from the TDM scenario evaluation, along with the reasons:

Project Name	Reason for Exclusion
Downtown Morgantown Traffic Study Recommendations	These projects have already been evaluated using the TDM during the Downtown Morgantown Traffic Study. Their impacts are documented in model runs.
University Avenue Pedestrian Improvements	As a pedestrian-focused project, its influence on regional vehicle travel patterns is minimal and not expected to affect TDM results.
West Run Rd–Riddle Ave Area Conceptual Connectivity	The current model already includes a link on St. Clair Hill Road that captures similar connectivity.
Valley View Conceptual Pedestrian/Bike Network	This project focuses on non-motorized travel (e.g., a proposed multi-use path on Valley View Avenue). The impact area is expected to be limited to the WVU Medical School–Chestnut Ridge Road–Suncrest Town Centre area and is not anticipated to significantly affect regional travel patterns.
Brookhaven Rd Improvement	This project includes safety and operational improvements along Brookhaven Road. The improvement is not expected to significantly affect regional travel patterns.