

## Smart Multi-modal Transportation Solutions for North Huntingdon Township in Response to Roadway Construction Project on Route 30

**Purpose:** To provide strategies to better manage traffic flow and congestion along the busy Route 30 corridor in North Huntingdon Township during a major upcoming construction project.

**Approach:** The team started by simulating cars and trucks that currently travel through the area, as well as those in the southwest Pennsylvania region, and then considered their route choice and travel time. Taking into account external factors, the model was set up to predict the impact on traffic conditions that would result from the upcoming construction on Route 30. The team divided this project into three tasks to evaluate the best solutions: identify various data sources for in-depth data analytics, establish a dynamic network model for the North Huntingdon Township region, and model construction projects and multi-modal solutions to mitigate impacts.

### Key Findings:

- The team was able to consider various strategies to mitigate the impacts of the planned construction, including:
  - ✓ Better information provision
  - ✓ Residents working from home
  - ✓ Flexible working hours
  - ✓ Increasing transit services
  - ✓ Mixed strategies
- To mitigate the impact of the construction project:
  - ✓ Increase percentage of travelers choosing alternative routes by 10%
  - ✓ Encourage 5% of travelers to work from home and 10-15% of travelers to use flexible work hours
  - ✓ Increase transit usage by 50-100%
  - ✓ A combination of the above methods

**Conclusion:** By utilizing suggested strategies such as adjusting traffic signal timing, analyzing turning phases and adjusting them to alleviate bottlenecks, use real-time traffic information to adjust signal timings, and avoiding concurrent construction projects, along with the above strategies to mitigate traffic, North Huntingdon Township could better manage the traffic situations that could occur from the planned construction project.

*“This could well serve as a case study for numerous other similar projects, if not in its detailed analysis and specific numbers, but in its conclusions and strategies.”*

*Mike Turley  
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### Project Record:

- <https://ppms.cit.cmu.edu/projects/detail/306>

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