

Selecting the Most Feasible Construction Phasing Plans for Urban Highway Rehabilitation Projects Dataset

Dataset available at: <https://doi.org/10.5281/zenodo.4270586>

(This dataset supports report **Selecting the Most Feasible Construction Phasing Plans for Urban Highway Rehabilitation Projects**, <https://doi.org/10.5281/zenodo.4270584>)

This U.S. Department of Transportation-funded dataset is preserved in the Zenodo Repository (<https://zenodo.org/>), and is available at <https://doi.org/10.5281/zenodo.4270586>

The related final report **Selecting the Most Feasible Construction Phasing Plans for Urban Highway Rehabilitation Projects**, is available from the National Transportation Library's Digital Repository at <https://rosap.ntl.bts.gov/view/dot/58932>.

Metadata from the Zenodo Repository record:

Title: Selecting the Most Feasible Construction Phasing Plans for Urban Highway Rehabilitation Projects

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Description: Despite the abundance of research that has aimed to understand the effects of highway work zones, very little definitive information is available concerning the determination of work zone length (WZL). Quantitative studies that holistically model WZL are very rare. To fill this gap, this study identifies critical factors affecting WZL and develops decision support models that determine the optimal WZL in a balanced tradeoff between motorists' inconvenience due to traffic disruption and their opportunity cost. A high-confidence dataset was created by conducting a series of scheduling and traffic simulations and analyses. The results revealed that traffic loading and work zone duration are critical factors, with traffic loading at approximately 41,000 vehicles-per-day being an important benchmarking point. Based on these findings, a decision support model was developed to determine the most feasible WZL. As the first of its kind, this study will help state transportation agencies devise sounder construction phasing plans by providing a point of reference when establishing WZL in a viable way to minimize traffic disruption during construction.

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Keywords: Construction phasing, work zone length, road user cost, traffic simulation, construction schedule, production rate

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Dataset description:

This dataset contains 1 file described below.

19ITSLSU07_Data.xlsx:

The .xlsx and .xls file types are Microsoft Excel files, which can be opened with Excel, and other free available software, such as OpenRefine.

National Transportation Library (NTL) Curation Note:

As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (<https://ntl.bts.gov/public-access>) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset. NTL staff last accessed this dataset at <https://doi.org/10.5281/zenodo.4270586> on 2022-05-05. If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.