

Attachment 2.1 Traffic Model Complexity - Scoring Template

WisDOT Traffic Model Complexity - Scoring Template

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Applicable for determining the number of MOEs required for model validation and for determining the required level of peer review

**Instructions:** Fill in gray boxes to determine the model complexity, the number of MOEs needed for validation, and the level of traffic model peer review effort required. Choose appropriate project category in **Table 1: Project type**. Choose primary network type in **Table 2: Geometrics Scoring** and mark applicable categories in **Table 3: Traffic Pattern and Congestion Scoring**. Final scoring reflects the highest point value in each table (maximum of 24 points). **Table 4** shows the overall model complexity score. **Table 5** shows recommended procedure for identifying the type/number of MOEs to use for model validations and scoring the traffic model peer review. Consider existing conditions and potential future alternatives that the project/study is anticipated to cover.

WisDOT Region:	Ex: SE, SW, NE
Project:	Ex: STH __ Corridor Study
Project ID:	Ex: 1234-56-7890
Project Description:	Ex: City - City
Highway:	Ex: STH __
County:	Ex: Dane County
Traffic Conditions:	Ex: Base (Existing), Base and Future
Modeling Software:	Ex: Paramics, Vissim, SimTraffic

General Project Description:	
Ex: Limits of project (Size of Network, # of TAZs), other software used for analysis, anticipated O-D data source, assumptions on future scenarios, etc.	

Table 1: Project Type

Complete (1):	Check all that apply:						
(1) Project Type	Category	Traffic Impact Analysis (TIA), Intersection Control Evaluation (ICE), or similar (Small Influence Area)	Traffic Impact Analysis (TIA), Intersection Control Evaluation (ICE), or similar (Large Influence Area)	Corridor Study/Operational Needs Study or Standard Improvement Project (Small Network)	Corridor Study/Operational Needs Study or Standard Improvement Project (Large Network)	High Profile Project, Potential Mega/Major Project (EA, PEL, EIS)	Mega or Majors Project
	Point Total	0	1	2	3	4	4
	Applicable?	0	0	0	0	0	0

Note: Large Network category assumed to contain 20 or more Traffic Analysis Zones (TAZs).

Table 2: Geometrics Scoring

Choose (1) or (2):	Check all that apply:						
(1) Intersections and Streets/Corridors	Category	Isolated Intersection(s)	Signalized Corridor / Network (No Coordination)	Roundabout Corridor / Network	Signalized Corridor / Network (Coordinated)	Mixed Corridor / Network (Signals and Roundabouts)	Adaptive Signal Control System
	Point Total	0	1	2	2	3	4
	Applicable?	0	0	0	0	0	0
Or							
(2) Freeways	Category	Mainline and Simple Merges/Diverges Only	System Interchange with Multilane Ramps	Freeway with Interchanges and Arterials	Interchanges with Roundabout Ramp Terminals	Unconventional Interchanges (DDI, Echelon, SPUI, etc.)	Managed Lanes, Variable Message Signs, etc.
	Point Total	0	1	1	2	3	4
	Applicable?	0	0	0	0	0	0

Table 3: Traffic Pattern and Congestion Scoring

Complete (1), (2), and (3):	Check all that apply:						
(1) Routing	Category	All-or-Nothing Routing Assignment				Dynamic/Variable Routing	
		Single Routes (Intersection or Corridor)	Networks with Few (2-3) Route Options	Freeway with Parallel Lower Functional Class Streets	Grid System with Numerous Route Options	Freeway Network with Parallel Route Options	Grid System with Numerous Route Options
	Point Total	0	1	2	3	3	4
(2) OD Estimation	Category	Single Intersection(s) / No Estimation	Small Network, Few Routes	Large Network, Few Routes	Small Network, Multiple Routes	Large Network, Multiple Routes	
	Point Total	0	1	2	3	4	
	Applicable?	0	0	0	0	0	
(3) Existing/Anticipated Level of Congestion	Category	- LOS C or better operations - Minor queuing (<500') - Free flow travel speeds/times	- LOS C-D operations - Moderate queuing (500-1,000') - Minor delays in travel speeds/times	- LOS D-E operations - Moderate queuing (500-1,000') - Moderate delays in travel speeds/times	- LOS F operations (future) - Significant queuing (>1,000') - Significant delays in travel speeds/times	- LOS F operations (existing) - Significant queuing (>1,000') - Significant delays in travel speeds/times	
	Point Total	0	1	2	3	4	
	Applicable?	0	0	0	0	0	

Note: Large Network category assumed to contain 20 or more TAZs. Congestion level takes into account worst-case controlled intersections or roadway segments. Queue lengths are through lane queues.

Table 4: Scoring Results

Project Type	Total	0
Geometrics Subtotal	Intersections and Corridors	0
	Freeways	0
	<b>Total</b>	<b>0</b>
Traffic Pattern and Congestion Subtotal	Routing	0
	OD Estimation	0
	Level of Congestion	0
<b>Total Points</b>	<b>0</b>	<b>0</b>

Table 5: Recommendations

Point Scale	Minimum # of MOEs Required for Validation	Level of Peer Review Recommendations	
		Recommendation Type	Estimated Schedule for Initial Review (including data collection, coordination, etc.)
0 - 3	1 to 2 Primary MOEs	High-level WisDOT Region review.	1-2 weeks existing conditions 1-2 weeks per alternative
4 - 7	1 to 2 Primary MOEs 1 Secondary MOE	WisDOT Region conducts peer review with assistance from independent consultant or BTO as necessary.	3-4 weeks existing conditions 3-4 weeks per alternative
8 - 10	2 to 3 Primary MOEs 1 Secondary MOE	Independent consultant conducts peer review with WisDOT Region input and BTO assistance as necessary.	4-8 weeks existing conditions 4-8 weeks per alternative
11+	2 to 3 Primary MOEs 1 to 2 Secondary MOEs	Independent consultant conducts peer review with WisDOT Region, BTO, other WisDOT Bureau involvement and FHWA oversight.	2-4 months existing conditions (no FHWA) 2-4 months per alternative (no FHWA) 3-4 months existing conditions (with FHWA) 3-4 months per alternative (with FHWA)

\*Note: A minimum of 6 weeks should be allowed for Traffic Forecasting to review the existing/future volumes for all levels of peer review