



## MEETING SUMMARY

### TPR MODELING AND ANALYSIS GUIDES UPDATE

#### APM USER GROUP MEETING #4

MAY 15, 2024; 9:00 AM – 11:30 AM

VIRTUAL MEETING

#### 1. PROJECT TEAM INTRODUCTIONS/ AGENDA OVERVIEW

9:00

- Project team introductions
  - Garth Appanaitis, DKS Associates
  - Zachary Horowitz, ODOT
  - Peter Schuytema, ODOT
  - Susan Wright, Kittelson & Associates
- Review agenda and meeting purpose

#### 2. OVERVIEW OF TM#10 PERFORMANCE MEASURE AND PERFORMANCE STANDARD APPLICATION GUIDANCE

9:05

- Susie Wright (KAI) provided an overview of TM#10, noting that the general content was previewed in the prior meeting.
  - Zachary Horowitz - Wants to be sure people understand the concepts and terminology of performance measures, standards, and thresholds. Performance measures are included in both rule 0215 and in rule 0905. As Susie mentioned in rule 0215 it applies to local roadways for cities and counties to evaluate the transportation system as part of the long-range plan and development review. The term in rule 0905 is to provide a linkage to the GHG reduction goals and targets in Division 44. Vision Eval is used in scenario planning to set the targets, the travel demand model is used to measure the VMT reduction in Division 12.

- Zachary - these performance standards would apply to local roads. For now, the OHP still identifies V/C as the standard. An additional measure(s) will be added through the OHP update.
- Martin Mann - Are the two or more measurements to be under each of the 8 objective areas (therefore 16+ measures) or is it two or more measurements out of all the 8 objective measures (therefore 2+ measures in total)?
  - Susie - two measures total, covering at least two of the objective areas.
- Zachary - Recognizes that this is a lot to wrap head around related to implementation. Feel free to reach out to staff and team with any additional questions.
  - Andrew Mortensen - Similar to VMT per capita (reduction), shouldn't VHT measure be on a per capita basis?
    - Susie - good comment. It could be done both ways and will look at amending that.
  - Andrew Mortensen - Also VHT per capita on uncongested streets is less an issue than VHT per capita on heavily congested/slow freeways that more significantly create Greenhouse gases. Perhaps some stratification of the measure? Years ago, Metro tested and debated many of these same measures and the conclusion was, as a best single area measure was VMT per capita reduction over the planning period. Have to leave meeting. Would like to see stronger pedestrian connectivity measures that focus more on the local street system, than arterial/collector. Level of Stress. Be happy to share thoughts later.
  - Andrew Bastash - One of the things that caught up the tolling process was not only the measure itself, but the threshold. There has been some flexibility with the V/C (0.03) and similar buffer zones may be needed with the other standards. If there is a way to bake in a buffer zone that might be something to consider.
    - David Boyd - moving to a zone is just changing the standard. Also The 0.03 applies to the mitigation and not to the analysis that says something is exceeding the standard.
- Zachary Horowitz – see Table below

Highway Category	Land Use Type/Speed Limits				
	Inside Urban Growth Boundary			Outside Urban Growth Boundary	
	STAs	MPO	Non-MPO outside of STAs where non-freeway speed limit <= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways and Statewide (SHS) Expressways	N/A	0.75	0.70	0.65	0.60
Statewide (SHS) Freight Routes	0.85	0.75	0.70	0.70	0.60
Statewide (SHS) Non-Freight Routes and Regional or District Expressways	0.90	0.80	0.75	0.70	0.60
Regional Highways	0.95	0.85	0.75	0.75	0.65
District/Local Interest Roads	0.95	0.85	0.80	0.75	0.70

- Remember this Table 10-2 from the HDM? Easy to use, straightforward, looks at different geographies, etc.
  - Current challenge is how to get something like this (ease of use, etc.) for a different (non v/c ratio) standard. Not an easy thing to do
  - For a moment, think about what an equivalent table would look like for a safety standard, or a bicycle (BLTS) standard
- William Fitzgerald - RITIS could be used for the "before" speed or congestion measure.
  - Chi Mai - ODOT is developing a threshold to identify threshold for congestion on freeways. The memo would give guidance for access-controlled facilities. One thing we don't have is how to define congestion for arterials. Is it a certain percentage of free flow congested speed? As someone noted we have speed and travel time from RITIS. Important to be consistent in how we define our work.
  - Zachary - the use of duration of congestion may be more difficult for development purposes. Might more applicable to a longer range plan.
  - Theresa Rohlf - Wanted to comment on duration of congestion being applied on a corridor with signals. The duration of congestion would likely be based on the through movements. By looking at those and not taking into consideration turning movements or side streets may be tempted to increase the green time and/or cycle length. This could lead to unintended consequences related to safety or other impacts.
  - William Fitzgerald - Seeing that driveways are being impacted with spillback from the driveway windows. Have seen cases where the left turn storage is not adequate, but since V/C standard was met it made it difficult to get the additional storage. If you exceed the queue storage that could be the measure. That idea has

been applied to the Exit 27 IAMP. A site in Grants Pass went from RV storage to several fast food restaurants that caused a queue problem.

- Joseph Auth - Critical to avoid speed differential crashes, so any overflow of turn lanes are critical. Similar to ODOT's policy on exist ramps. Spillback queues are also important and can also include a domino effect. Not as concerned with a through queue that blocks a turn lane. Feels that either V/C or LOS or delay need to be included in a measure in tandem with queuing.
- William Fitzgerald - the problem with using V/C or delay is that the south Medford interchange is a SPUI and the analysis showed excess capacity. However, the downstream intersection created queuing that blocked the intersection (1,800 feet downstream).
- Joseph - Both delay and V/C are not perfect, so as engineers need to apply combinations of tools where there are limitations. Needs to be flexible with the standards. There are cases when you have to calculate V/C but there might be limitations in the analysis methods that could introduce concerns.
- David Boyd - Need to consider that if there are upstream or downstream intersections that impact a point, need to take a broader view and identify the other factors. Need to analyze what is not there that we are actually seeing, not a perfect condition.
  - William - There are also challenges with the peak hour factor since there may be a quick influx, but looks fine over the hour. The workaround was using a measured queue rather than a modeled queue.
- Zachary - Personally, I don't want to wait a long time for my tasty burger. That could be a threshold: 95<sup>th</sup> percentile queue does not extend outside the development site. Great conversation - and applying these sorts of standards to ODOT facilities will be part of the OHP update. Are there specific issues using queuing as a standard for local streets other than what has been stated so far in the call?
- William Fitzgerald - With the Example 3 it looks like there is a high potential for crashes, so may look to the HSM to identify a measurable threshold, even if there are no crashes at the time. Predictive methodology could be a good starting point.
- Joseph Auth - Example 3 seems like more of an operational issue. Fatal crashes may not be likely. Is the queuing causing issues upstream? Could maybe look at alternative designs. Would there be available ROW for a roundabout - that is usually the limiting factor. Roundabout may have limited capacity too.

- William Fitzgerald - there was a residential neighborhood on one side of a state highway and a recreational use on the other side. Pedestrian safety was used to install a compact roundabout at the intersection. There was not a mainline operational issue, but there was a side street issue. The City required an improved pedestrian crossing that supported the safety improvement.
- Zachary Horowitz - Remember - the goal of this example is to apply a safety standard to a forecasted future deficiency. The willing tradeoff would be to accept a certain level of congestion...In comparison with standard practice today which would be to plan for a signalized intersection within a TSP. And that comment about "development" is important, because in many ways it's more straightforward for a city to make a decision on roundabout vs signal. I also made the example an AWSC rather than TWSC to avoid the obvious selection of AWSC as a mitigation
- David Boyd - likes using V/C and LOS in combination. The V/C on the side street may be failing but there is a delay that causes accidents.
- Zachary - With example 4, Looking at BLTS 1 would align with a Safe Routes to School strategy.
  - Joseph - BLTS feels like a qualitative measure that is trying to be quantitative. Have had challenges with industrial areas in the City. Has found that it is difficult to change the level of performance and mitigate it. Would prefer a more quantitative measure. Thinks that it works better at high level planning than for development review.
- Joseph Question - what about the 30% reduction that is required for VMT/Capita?
  - Zachary – That Division 44 requirement is at the MPO level and not the City level – and those reductions are for GHG reductions, not VMT alone.
  - Zachary - There are additional elements included in the VisionEval work to incorporate federal or statewide policies that set those that are not reflected here (such as EVs/electrification/fleet turnover/cleaner fuels/pricing policies).
  - Zachary - the VMT reduction at the TSP level is only required if a capacity added project (subject to rule 0830) is included in the financially-constrained plan.
- Joseph - How will locations demonstrate a reduction? Is it using VisionEval or the travel demand model? Are there other tools and methods that would need to be done by the local cities?

- Zachary - The Division 44 GHG targets do not apply to cities. However, for the TSP work, cities and counties will use the adopted MPO travel demand models to meet the VMT requirements of rule 0160 as applicable.
- Martin Mann - Would it be easier to understand the household VMT measure by calling it Household generated VMT rather Household based VMT since it includes non-home based trips and household based can be confused to home-based to the uninitiated

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### **3. OVERVIEW OMSC ENGAGEMENT AND CFEC MODELING FRAMEWORK** **10:25**

- Garth Appanaitis provided a high-level overview of the OMSC engagement and the CFEC case studies conducted for Ashland and Milwaukie.

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### **4. APM MISCELLANEOUS TOPICS** **11:05**

- Peter Schuytema provided several updates to the group:
  - Synchro Studio 12 updates is in progress. ODOT licenses expire July 9
  - APM Updates for CFEC - will go directly into the APM since already has been vetted by the advisory committees.
  - Internal projects to update turns post processor
  - Close to scope of work on updating Chapter 15 - Vissim protocol. Updating for all simulation programs (including Synchro/Simtraffic). Making consistent with WSDOT. Recent OSU study on truck access and roundabouts. Changing some parameters in Vissim.
  - Chapter 1 reboot - contacts and structure is obsolete.
  - Getting close to updating intersection V/C calculations.
  - Updating the seasonal trends table and future volume table to follow.

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### **5. NEXT STEPS / ADJOURN** **11:25**

- Provide comments by the end of the month