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To: [Jongenelen, Aaron M.](#)
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Subject: AMATS Community Advisory Committee Resolution 2023-02
Date: Tuesday, March 7, 2023 2:11:49 PM

[EXTERNAL EMAIL]

Hi Aaron,

Please see below for responses to CAC Resolution 2023-02 regarding comments on the Draft Travel Demand Modeling Report:

1- Their projections assume that there will be more growth in the outskirts of town and in the valley, while not really expecting significant growth downtown. If that is what they build for, that is what they will get. It is a self-fulfilling prophesy. If they turn Fairview/East Downtown into a more livable area, they will drive more people to want to live here, reducing the demand they are projecting on the highway.

The projections for growth are based on population and employment projections by the Department of Labor and Workforce Development (DOLWD). The location for where that growth is anticipated to develop is based on land use plans for Anchorage and Mat-Su and through consultations with local government planners. The modeling takes into account the housing and employment density envisioned by the Anchorage Land Use Plan map; including that in Fairview and East Downtown. To prepare the allocation, the team first prepared a travel demand modeling methodology report and consulted on that methodology with technical advisors from DOT&PF, AMATS, MOA, and Mat-Su. For more information on the assumptions and methods used to develop the model and allocation of housing and employment consult the following document.

- Travel Demand Modeling Methodology Memorandum (August 2021)

2- There is not a negative growth or a no-growth option on the projections, which would more accurately reflect the last ten years of demographics. There is a no-build model, but it uses growth projections that current demographics have not borne out.

The growth projection is based on the DOLWD population and employment projection available at the time the SGPEL analysis commenced, which is the accepted projection for Anchorage/Mat-Su planning. That DOLWD data product did not predict flat or negative growth for Anchorage/Mat-Su. However, the team used two separate forecasting traffic techniques: the traffic model approach (the subject of this resolution); and a trendline analysis. The trendline analysis did explore a flat/negative growth scenario. Persons interested in that scenario should consult the following report available on the project web site:

- Final Traffic Forecast Technical Memorandum

3- There is no accounting for increased pedestrian/bicycle/non-motorized demands on the corridor.

The travel model is a tool for predicting roadway traffic and transit volumes. Nonmotorized

demand is discussed in other reports based on the data collected for the AMATS nonmotorized plan and other sources. Persons interested in nonmotorized demand should consult the following documents on the project web site:

- System Performance memorandum (January 2023)
- Purpose and Need Statement (January 2023)
- Final – A basic Description of the Environmental Setting Report (March 2022)

4- Generally speaking, the model is all about vehicular traffic counts. There is no modeling for how transit or livability impact the traffic flows. Or how traffic counts will impact transit and livability.

As mentioned above, the travel model is a tool for predicting roadway traffic and transit volumes but the distribution of housing and employment is based on the Anchorage Land use Plan map. People Mover routes are incorporated into the model.

Impact analysis is not the subject of the report in question. How the forecast in traffic will impact transit and livability will come later in the PEL process based on multi-modal alternatives that are yet to be developed.

5- A focus on peak demand and delay times would prioritize the Airport Heights end of the Glenn, and the Fireweed-16th part of Ingra and Gambell. We want modeling and goals that prioritize Gambell and Ingra in the corridor.

Modeling completed for the project does not “focus on peak demand or delay.” The modeling report includes a number of other metrics including Vehicle Miles Traveled, Vehicle Hours Traveled, Traffic Volumes, Screenline Volume/Capacity, and Transit Performance.

Both the model results in this report and the trendline analysis predict considerably lower traffic volumes on 5th and 6th and Gambell, and Ingra compared to past modeling completed for the Highway-to-Highway EIS and past Metropolitan Transportation Plans. Based on the modeling, relieving congestion was not identified as a need in the purpose and need statement.

Metrics for evaluating alternatives also include criteria for Safety, Pedestrian and Bicycle Mobility and Livability, Consistency with Plans, Reduction in Vehicle Miles Traveled, Impacts to Parks and Historic Properties, Right-of-Way impacts and changes in truck volumes.

6- There is no access to the airport from the Seward Highway. Modeling should include that as an option to consider, as it would impact traffic going from the Glenn through downtown to the Minnesota bypass (Walter J. Hickel Pkwy)

Modeling of build alternatives will include all projects that are in the adopted AMATS Metropolitan Plan. Currently such a connection to the airport is not in the adopted plan. Consideration of such a connection is outside the Seward-Glenn PEL study area and is beyond the scope of this study.

7- The report says land use data is consistent with adopted land use plans. Page 1. But this appears to refer to 2019 and not future years. Seems a bit of mid-direction as people could infer it is consistent with future land uses. I do not see evidence where the MOA Planning has produced future projections of dwelling units and employment by TAZ for future years.

Base year land use assumptions are based on the population and employment distribution that was in place in 2019. 2050 assumptions are based on the 2050 DOLWD population and employment forecast and the distribution of that forecast is based on the Adopted Land Use Plan Map. The project modeling effort started with the adopted AMATS model (which has a distribution of dwelling units and employment per TAZ based on the adopted land use plan map). The project modeling updated and calibrated the base year traffic to 2019 to be reflective of the Alaska recession and subsequent slower traffic growth experienced since the previous 2013 base year. 2019 was also selected to be pre-pandemic (since traffic patterns and levels during the pandemic were not representative of more normal travel conditions).

8- This is a regional model application while the Seward to Glenn PEL is a Sub-Area Study. It does not appear to explain how it adequately models sub-area characteristics.

First, the SG PEL model is based on the regional model because travel within the study area—especially the Glenn and Seward highways and the Ingra-Gambell couplet—is heavily influenced by demand from the entire modeled region. For example, the accompanying *SG PEL Origin-Destination Study Report* points out that in 2019 observed travel from the Anchorage downtown area comprised at most about 20% of the travel on chosen “select links” (specific road segments) on the Seward and Glenn highways under study. In other words, a very large proportion of the travel using the Ingra-Gambell couplet and the Seward and Glenn highways directly connecting to that couplet comes from or goes to places outside the defined Project Area. Indeed, about 7% of the selected link travel came from as far as the Mat Su Borough.

Second, the SG PEL model was validated for application to a corridor study using accepted guidance and best practices in the field (which also recommend a sufficiently wide geography to encompass all demand for the corridor, as discussed above). As stated on p. 27 of the *SG PEL Draft Travel Demand Modeling Report*, the consultant team “...adopted the Florida DOT Florida State Urban Transportation Model System (FSUTMS) validation guidelines for *corridor*-level forecasting to assist in the determination of a properly validated model” (emphasis added). That guidance applies more-stringent validation targets to the roadway groupings by volume and functional class plus consideration of the specific roadways under study. As the model report also mentions, the team carefully “...balanced the desire to achieve validated corridor level link flows with having a properly specified travel model at the regional level.” The purpose of looking at the corridor area links (road segments) is to ensure relatively more accuracy in the immediate Project Area balanced with the need to sustain the model’s ability to reasonably estimate demand.

In summary, using a regional model geography is both appropriate and necessary, and the SG PEL model was specifically validated for a corridor-level, not regional, application.

9- Given the Study Area encompasses the dense urban core where a significant number of trips are non-vehicular it is odd they state on page 4 under Vehicle Assignment that the model does not assign walk and bike trips.

As mentioned above, the travel model is a tool for predicting roadway traffic volumes. Biking and walking needs are incorporated into the study through other means.

10- They have developed a sub-model for trucks. They have the ability to develop a sub-model for non-motorized trips but do not.

As mentioned above, the travel model is a tool for predicting roadway traffic volumes and truck traffic using the roadways. Bike and walking needs are incorporated into the study through other means. For this project improving truck access to the Port of Alaska is a component of the study so understanding truck movements is particularly relevant.

11- They state in page 7 that the model does not represent safety improvements, sidewalks, bicycle lanes, pedestrian crossings, and non-capacity enhancements. This is like taking a sledge hammer to tap in a nail for hanging a picture.

This report is targeted at predicting vehicle movement on the roadway network. Safety improvements, sidewalks, bicycle lanes, pedestrian crossings, and non-roadway-capacity improvement are expressly part of the project. The travel model, however, it not the tool for directly estimating or evaluating those needs. For information on how safety and non-motorized travel will be evaluated see the following report on the project web sites.

- Recommended Alternatives Selection Criteria (January 2023)

12- They also state on same page that their System Performance summary statistics use vehicle metrics. This is despite the FHWA Final Rule on System Performance requiring the use of person trips as the key performance metric for the National Highway System.

FHWA regulations at 23 CFR 490.507 suggest “person miles traveled” as a means of measuring travel time reliability on the National Highway System. Travel time reliability means “the consistency or dependability of travel times from day to day or across different times of the day.” Current travel forecasts for the Seward and Glenn Highways do not suggest that congestion levels will be such that travel time reliability will be an issue and therefore computing “person miles traveled that are reliable” will not yield meaningful analysis related to the purpose and need for the project. Furthermore, AMATS staff specifically recommended that travel time be removed as a screening metric for alternatives. Based on the comment, however, DOT&PF will check the information available in the National Performance Management Research Data Set (NPMRDS) and report the available information on travel time reliability.

13- The report describes the use of a regional travel model whose application is best suited for

regional planning. The Seward to Glenn PEL is a sub-Area Study that warrants use of a micro-simulation modeling effort that accurately assesses the unique characteristics of the urban core. This means building out a pedestrian and bicycle sub-model and modeling a more disaggregated assignment of person trips appropriate for our downtown area.

DOT&PF has determined that at this planning level of analysis the current TransCad model will be sufficient. See the response above regarding its validation for a corridor application. When proposed alternatives move forward for more detailed design, The team will decide at that time if microsimulation modeling is warranted.

14- The approach focuses on efficient regional movement of vehicles and ignores the non-motorized trips so prevalent in the urban core study area. The Ingra/Gambell corridor is as much a pedestrian corridor as it is a vehicle corridor. The failure to measure pedestrian use in previous documents precludes modeling that shows this use of the corridor.

As mentioned above, the travel model is a tool for predicting roadway traffic volumes. Biking and walking needs are incorporated into the study through other means.

15- The model splits the neighborhood of Fairview into two separate areas, and then counts cross-neighborhood traffic as cross-area traffic in the modeling.

The model is based on traffic analysis zones (TAZs) from the adopted AMATS model. The zones are sized to support reasonable estimates of travel demand given the density of the roadway and transit networks plus the land use density, all with the purpose of ensuring that traffic and transit forecasts are reasonably precise. There are more than two traffic analysis zones covering Fairview, indeed there are dozens of TAZs used to estimate Fairview traffic movements.

Please let me know if you have any questions.

Thanks.

Kevin Jackson, P.E.

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