

MEMORANDUM

Date: December 15, 2015

To: Min Luo, City of Redmond

From: Michelle M. Brown, ^{MMB} Senior Transportation Engineer
Marni C. Heffron, P.E., P.T.O.E.

Project: Redmond City Center Project – Transportation Impact Analysis
RCC LAND 2013-01989 TIA

Subject: Response to Transportation Comments

This memorandum responds to comments received from Min Luo at the City of Redmond's Transportation Department in an e-mail dated December 3, 2015. The comments are restated below, followed by responses.

Response to Comments

Comment 1. On Page 6 Section 1.2, the memo mentions a Transportation Management Plan (TMP) to reduce the office trips to no more than 70% of all office trips – the City has updated the TMP and contact Kimberly H. Keeling at 425-556-2451 for questions.

Response: The goal of the latest TMP is still to ensure that the parking demand does not exceed the on-site parking supply. The text in the report is still valid as the daytime parking demand (mostly office trips) would need to be reduced to ensure the supply is not exceeded. Based on the parking demand analysis for the site; parking demand for the office component would need to be decreased by 30% (or “no more than 70% of all office trips”) compared to an average office development. The elements of the updated TMP are intended to achieve that goal.

Comment 2. Page 13 Table 3, the City's Traffic Operations believe intersection ID 5 and 6 operate worse than what are shown. Please send SYNCHRO files to Bruce Newman to cross check.

Response: The requested Synchro files were sent to the City staff on December 3, 2015 via email.

Comment 3. On Page 14 Section 2.4 Table 4, MVM for roadway segment is 4.53, how does this value compare to the similar urban minor arterial, high or low?

Response: City-wide MVM data were requested from the City of Redmond, but no data exist that could be used as a basis of comparison for collision experience along this segment. Typically, MVM is determined for longer sections of highways or arterials; MVM for the subject segment is likely elevated compared to typical segments since distance is part of the MVM equation's denominator. Therefore, the collision rate for this segment was replaced with average collisions per year and additional text was also added to the body of the report in this section.

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Comment 4. Page 16 Section 3.2 a statement of “ ... this analysis reflect conservatively high estimates of the number of employees and customers who would drive to site”. Based on the parking demand analysis and the trip generation estimated for the office, parking demand for the office in the AM peak hour is 196 vehicles while the office trips estimate after reduction are only 154 vehicles in the AM peak, which are lower than the parking demand. The trip estimates are not conservatively high.

Response: To clarify, the 196 (178 inbound and 18 outbound) AM peak hour trips are office-only person-trips. Of these it was assumed in the report that 154 of these (140 inbound and 14 outbound) AM peak hour trips would use vehicles to access the site. However, since a TMP will be imposed to reduce the number of vehicle trips and is required to be successful, it is reasonable to assume the number of office vehicle trips will be lower than what was estimated in the report. As requested by the City, the report assumes the 91% of the office trips would use vehicles. If no more than 70% of the office trips would use vehicles (as recommended) then the office AM trips are estimated at 127 (115 inbound and 12 outbound).

It is also noted that not all office vehicles that park at the site would arrive during the AM peak hour. Office trips typically arrive and depart over a three hour period, with the peak one hour arrivals or departures representing 30% to 40% of the peak parking demand. The 140 vehicle trips assumed for the traffic analysis reflect about 70% of the expected peak office parking demand of 200 vehicles. The 115 inbound vehicles assumed under the TMP condition would represent about 58% of the peak office parking demand.

By both of these measures, the analysis of transportation impacts as reported is conservatively high. Therefore, no revisions were made to the report.

Comment 5. On Page 30 Table 16, the City’s Traffic Operations believe intersection ID 5 and 6 operate worse than what are shown. Please send SYNCHRO files to Bruce Newman to cross check. For intersection 19, the intersection delay with the project is better than without project, please explain. Signal timing should not be modified.

Response: As mentioned in the response to Comment 2, Synchro files were sent to the City on December 3, 2015. The typo for the with-project level of service at NE 85th Street/166th Avenue NE was corrected to be LOS C with a delay of 22.9. There are a few locations where the with-project conditions show slightly improved delays. This can happen when traffic volumes are added to the non-critical movements of an intersection that have delays lower than the intersection average. This can reduce the overall average vehicle delay. The intersections were not re-optimized under the with-project condition.

Comment 6. Please add tables to show 95% queues and available storage, then highlight the queues that are longer than the storage lengths.

Response: A queuing analysis was completed using Trafficware’s SimTraffic model. The average of five model runs is documented in a new Table 18 within the report for all the study intersections. To provide the most helpful information, a comparison is shown between the two future conditions: without-project and with-project (including the turn restrictions at the site driveway). The queues that are longer than the storage lengths AND are increased by more than one vehicle (about 20 feet) are highlighted in the table.

Comment 7. On Page 31 Section 3.5 - Site access LOS F and mitigation. The memo proposes three mitigation measures:

- Proposes two exiting lanes – would like to see the LOS and queue results with the two exiting lanes in both AM and PM peak hours. If the right-turn lane is added, the sight distance triangle area needs to be clear of obstruction? There is also a concern that the

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vehicles will attempt to approach out to the pedestrian walkway in order to see better and wait for gaps for left-turning out and right-turning out if the two lanes at the driveway access are proposed- not good for pedestrians. Other concerns include the unfriendly feel and look of the “hugely wide” driveway access because the driveway access area include truck loading access + three-lane driveway site access + fire access on the east property.

- *Police control of driveway access – the City has no plan for that and will have no police control.*
- *Right-in/right-out during peak hours – would like to see the LOS and queue results in both the AM/PM peak hours and how the traffic shifts affect other intersections.*

Response: Subsequent to these comments, the proponent and the City have agreed to keep the driveway with one entrance lane and one exit lane with turn restrictions during peak conditions. Left-turns out of the driveway would be restricted during peak conditions. A new section in the report was added (*Section 3.6 Impact of Site Access Restriction*) to address the impacts this site access mitigation measure would have at the site driveway. Both the AM and PM peak hour conditions were included. Since the report did not include AM peak hour conditions, AM peak hour volumes along NE 85th Street were estimated using the same methodology that was used to estimate the PM peak hour volumes.

As documented, the PM peak hour is when the site would generate the most outbound trips; therefore, the study intersections were evaluated under this mitigation measure when traffic would circle the block instead of making a left-turn out of the site onto NE 85th Street. A comparison of level of service at the study intersections was added (Table 17) along with an additional figure to show the re-routed net new project trips (Figure 7). Additional information regarding on-site queuing was also added.

Comment 8. *Truck loading time –truck loading is required to occur at night, preferably between midnight and 5 AM when the traffic is at the lowest level.*

Response: A time restriction for truck loading was agreed upon between the City and the proponent to allow truck loading operations between 11:00 P.M. and 6:00 A.M. This restriction was added to the report text.

Comment 9. *Bruce Norman may have other additional comments once you send the SYNCHRO model files for him to review.*

Response: We did not receive any additional comments.

MCH/mmb