

APPENDIX G

ALTERNATIVES TRAFFIC ASSESSMENT

December 22, 2016

Ms. Stephanie Ocasio
City Planner
City of Newman
P.O. Box 787
Newman, CA 95360

Subject: *Northwest Newman Master Plan – Alternative Analysis*

Dear Ms. Ocasio -

On behalf of KD Anderson & Associates (KDA), I am pleased to submit this letter report presenting our analysis of an alternative to the Northwest Newman Master Plan. This letter report has been prepared at the request of, and in consultation with, you and Ms. Rebecca Auld of Lamphier-Gregory. The following is:

- an executive summary of the analysis,
- a brief description of the approach used in the analysis, and
- a description of the results of the analysis.

Executive Summary

As described in the Draft Environmental Impact Report (DEIR) on the Northwest Newman Master Plan, the plan would have significant project-specific traffic-related impacts on four intersections and one roadway segment. KDA has estimated that an alternative to the plan that would reduce land use intensities by 20 percent would avoid the significant impact on the roadway segment. KDA has also estimated that the 20 percent reduction would not avoid significant impacts to the intersections.

Analysis Approach

The DEIR on the Northwest Newman Master Plan and the *Northwest Newman Master Plan Traffic Impact Study* (TIS) present detailed descriptions of the plan, and the methods and assumptions used to analyze the traffic-related impacts of the plan. KDA has been asked to conceptually identify an alternative to the plan that would reduce traffic-related impacts. More

specifically, KDA was asked to determine the percent reduction in land use intensity that would avoid one or more traffic-related impacts of the plan.

As requested by Ms. Auld during telephone conversations on December 14 and 15, 2016, this assessment of an alternative to the Northwest Newman Master Plan focuses on project-specific impacts. In the DEIR and TIS, project-specific impacts are identified in the analysis of the Existing Plus Project scenario and, therefore, the analysis presented in this letter report focuses on the Existing Plus Project scenario.

As described in the DEIR and TIS, the Northwest Newman Master Plan would have significant project-specific impacts on four intersections and one roadway segment. The DEIR and TIS identifies mitigation measures that would reduce these impacts to less than significant levels. Therefore, none of the impacts under the Existing Plus Project scenario are considered significant and unavoidable.

KDA conducted a screening-level assessment of the project-specific impacts of the Northwest Newman Master Plan. The assessment was conducted by:

- examining level of service (LOS) under the background Existing no-project scenario,
- examining LOS under the Existing Plus Project scenario,
- comparing LOS under the two scenarios to identify the magnitude of the change in LOS related to the project,
- identifying the amount of change in LOS that could occur and still result in acceptable LOS, and
- comparing the magnitude of project-related change in LOS to the amount of change that could occur and still result in acceptable LOS.

The steps described above resulted in an assessment of the reduction in land use intensity that would be needed to avoid a significant traffic-related impact.

As described in the DEIR and TIS, different analysis methods are used to analyze intersections and roadway segments. At a conceptual level, the steps described above were applied to both intersections and roadway segments. However, the specific assessments for intersections and roadway segments were somewhat different.

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Analysis Results

The following describes the analysis results for study intersections and study roadway segments.

Intersections. As noted above, the DEIR and TIS identifies four intersections that would experience significant project-specific impacts. As shown in Table 4 of the TIS, under the Existing Plus Project scenario, the following four intersections would operate at unacceptable LOS:

- 2 State Route (SR) 33 & Jensen Road/Sherman Parkway,
- 3 SR 33 & Yolo Street,
- 7 Fig Lane/Q Street & Yolo Street, and
- 11 SR 33 & North Commercial Access.

The intersection of SR 33 & Jensen Road/Sherman Parkway operates at LOS D with 30.7 seconds of delay during the p.m. peak hour under Existing Conditions. Under the Existing Plus Project scenario, this intersection would operate at LOS F with 174.1 seconds of delay during the p.m. peak hour. The project-related increment would be a 143.4 seconds increase in delay ($174.1 - 30.7 = 143.3$). Acceptable LOS at this intersection is LOS D with 55 seconds of delay. Therefore, for an alternative to avoid a significant impact at this intersection, land use intensities would need to be reduced enough to result in the 174.1 seconds of delay being reduced to 55 seconds of delay. KDA has not quantified the percent reduction in land use intensities needed to achieve 55 seconds of delay. However, it is likely the required percent reduction in land use intensities would be substantial.

The intersection of SR 33 & Yolo Street operates at LOS C with 22.7 seconds of delay during the a.m. peak hour under Existing Conditions. Under the Existing Plus Project scenario, this intersection would operate at LOS F with overflow* conditions during both peak hours. Acceptable LOS at this intersection is LOS D with 35 seconds of delay. Therefore, for an alternative to avoid a significant impact at this intersection, land use intensities would need to be reduced enough to result in the overflow conditions delay being reduced to 35 seconds of delay. KDA has not quantified the percent reduction in land use intensities needed to achieve 35 seconds of delay. However, it is likely the required percent reduction in land use intensities would be substantial.

The intersection of Fig Lane/Q Street & Yolo Street operates at LOS B with 10.2 seconds of delay during the p.m. peak hour under Existing Conditions. Under the Existing Plus Project scenario, this intersection would operate at LOS F with 60.9 seconds of delay during the p.m. peak hour. The project-related increase would be 50.7 seconds of delay ($60.9 - 10.2 = 50.7$).

* "Overflow" conditions occur when demand exceeds the capacity of the intersection. The amount of delay is unstable and, therefore, not measurable. But, the amount of delay is typically quite large.

Acceptable LOS at this intersection is LOS C with 25 seconds of delay. Therefore, for an alternative to avoid a significant impact at this intersection, land use intensities would need to be reduced enough to result in the 60.9 seconds of delay being reduced to 25 seconds of delay. KDA has not quantified the percent reduction in land use intensities needed to achieve 25 seconds of delay. However, it is likely the required percent reduction in land use intensities would be substantial.

The intersection of SR 33 & North Commercial Access is not present under Existing Conditions. Under the Existing Plus Project scenario, this intersection would operate at LOS F with 300.3 seconds of delay during the p.m. peak hour. Acceptable LOS at this intersection is LOS D with 35 seconds of delay. Therefore, for an alternative to avoid a significant impact at this intersection, land use intensities would need to be reduced enough to result in the 300.3 seconds of delay being reduced to 35 seconds of delay. KDA has not quantified the percent reduction in land use intensities needed to achieve 35 seconds of delay. However, it is likely the required percent reduction in land use intensities would be substantial.

In summary, at all four study intersections described above, the percent reduction in land use intensities required to achieve acceptable LOS would be substantial, perhaps too substantial to consider as a viable alternative.

Roadway Segments. As noted above, the DEIR and TIS identifies one roadway segment that would experience a significant project-specific impact. As shown in Table 1 of the TIS, under the Existing Plus Project scenario, SR 33 from Jensen Road to Yolo Street would operate at unacceptable LOS F with 20,814 vehicles per day. 6,300 of the 20,814 vehicles per day would be background non-project traffic, while 14,514 of the 20,814 vehicles would be project-related traffic ($6,300 + 14,514 = 20,814$).

Acceptable LOS on SR 33 from Jensen Road to Yolo Street is LOS D. As shown in Table 3 of the TIS, up to 18,000 vehicles per day could use this roadway segment under LOS D conditions. With 6,300 vehicles per day being background non-project traffic, 11,700 project-related vehicles could travel on this roadway segment and still maintain LOS D with the maximum 18,000 vehicles per day ($6,300 + 11,700 = 18,000$).

For an alternative to avoid a significant impact on SR 33 from Jensen Road to Yolo Street, land use intensities would need to be reduced enough to result in 11,700 project-related vehicles per day on this roadway segment. 11,700 project-related vehicles would be 80.6 percent of the 14,514 vehicles with the project as proposed ($11,700 \div 14,514 = 0.806 = 80.6\%$). 80.6 percent of the project as proposed would be a reduction of 19.4 percent ($100\% - 80.6\% = 19.4\%$). Therefore, for an alternative to avoid a significant impact on SR 33 from Jensen Road to Yolo Street, land use intensities would need to be reduced by 19.4 percent.

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Because the analysis presented above is a screening-level assessment, KDA recommends rounding up the 19.4 percent reduction to a 20 percent reduction. Based on this assessment, KDA has concluded an alternative with land use intensities 20 percent below the Northwest Newman Master Plan as proposed would avoid the significant impact on the SR 33 from Jensen Road to Yolo Street roadway segment.

Closing

I hope this letter report is useful and contributes to the DEIR on the Northwest Newman Master Plan. If you have any questions, please contact me via E-mail at wshijo@kdanderson.com, or call me at 916/205-7032.

Sincerely,

KD Anderson & Associates, Inc.

A handwritten signature in blue ink, appearing to read "Wayne Shijo". The signature is fluid and cursive, with the first name "Wayne" being larger and more prominent than the last name "Shijo".

Wayne Shijo
Project Manager

cc: Rebecca Auld

KDA