




Memorandum

To: Woodburn Development Review: Chris Kerr, Community Development Director

From: Chuck Green, PE 

Copies: File

Date: May 18, 2022

Subject: Review of US Market Traffic Impact Study (CU 21-02)

Otak Project #: 40141

This memo serves as my review of the August 13, 2021 traffic impact analysis report prepared by Transight Consulting. Based on the Applicant's submittal and the staff report for this project, there are two options being considered:

1. Option 1 would build a fueling station, a 5,000 square foot office building, an a mixed-use building containing 4,110 square feet of "store" and 1,863 square feet of office;
2. Option 2 would build a fueling station, a 4,314 square foot store, and a 3,849 square foot office.

The TIA analyzed what is approximately Option 1: a 12-position gas station, a 4,500 square-foot convenience market with 1,500 square-feet of attached office space, and a 5,000 square-foot office building.

This TIA was reviewed with input from the following documents:

- Oregon Department of Transportation (ODOT) Analysis Procedures Manual (APM), Version 2 as Revised, November 2020 with new Appendix 3E, "Traffic Volume Development During Disruptive Events" including the effects of the COVID-19 Pandemic
- City of Woodburn's Comprehensive Plan (September 2019)
- City of Woodburn's Transportation System Plan (September 2019)
- City of Woodburn's Transit Plan Update (November 2010)
- Institute of Transportation Engineers' Trip Generation Manual 10th Edition. The 11th Edition of the ITE manual was released a month after this TIA was developed.
- Woodburn Development Ordinance (WDO), as revised in April 2020, including Section 2.05.02 Interchange Management Area Overlay District, and Section 3.04.05 Traffic Impact Analysis.
- Recent development traffic impact analyses in the site vicinity.

ODOT Comments

There is a critical comment received from ODOT:

“The site has frontage on Hillsboro-Silverton Highway, No. 140 (OR-214), and is subject to state laws administered by ODOT. The site comprises two different tax lots, each with access restrictions recorded in the property deeds. Tax lot 3700 (2600 Newberg Hwy) has one access reservation at MP 37.09 that can serve tax lot 3700 only. This corresponds with the existing driveway on the highway. Tax lot 3600 (2540 Newberg Hwy) has no access rights to the highway and no access rights to a portion of Oregon Way between the highway intersection and a point 191 feet south of the highway intersection center.

This leaves a 36-foot window along Oregon Way adjacent to the southern property line where all vehicular access must occur for tax lot 3600. This corresponds with the existing driveway on Oregon Way... Both site plans allow for vehicles to enter tax lot 3600 (2540 Newberg Hwy) via tax lot 3700 (2600 Newberg Hwy) which is in violation of the access rights listed in the deeds. The additional driveway on Oregon Way falls in the area of access control (outside the 36-foot window), and would also be in violation of the access rights listed in the deeds.

There is a process for modifying or lifting access rights, called a Grant of Access. The applicant would need to apply to the state for a Grant of Access, and demonstrate that the changes to the access rights would benefit the highway. If the application is approved, the deeds would be modified and re-recorded with the county clerk to reflect the change. If the city approves this land use proposal with either of the site plan options, there must be a condition of approval that the applicant shall obtain the proper access rights for both tax lots prior to any construction, so as to not violate their own deeds.”

Public Comments

A public comment was received on May 6, 2022 from Ms. Rebecca L Hayes with two items related to Transportation:

- “Having a charging station for Hybrid Auto leaves the question, where would the travelers go while their vehicles are charging? The traffic flow according to the diagram in Option 2 does not clearly indicate the flow of ALL traffic. Will all traffic be directed to go around the convenience store? Having this occur will definitely increase noise volume next to our property line.
- Before this project is approved at location of 2540 & 2600 Newburg Hwy (Tax Lots 052W12SB03600 & 3700) we submit that serious evaluation of changes to traffic flow and safety crossovers be completed. If ODOT does not give serious consideration to the increase volume of traffic this will bring, more accidents occurring around the site is of deep concern.”

The first comment relates to the EV charging station which is a requirement of City code for off-street parking. I'm not sure how a TIA could be scoped to address Ms. Hayes' concern about what people would do while their vehicle is charging. Given the office, gas station and commercial uses proposed, they could easily work or shop for the 20 minutes or so their vehicle would be charging. This should be addressed in the land use narrative rather than an updated TIA.

Regarding the second Transportation item and safety concerns of the driveway onto OR 214, I believe these concerns can be addressed as part of the revised TIA which is recommended below.

Comments from Kittelson and Associates' Letter

A letter dated May 11, 2022 was received from Wayne Kittelson of Kittelson and Associates. There were four points made by Mr. Kittelson which I would like to address below.

- *The US Market TIA did not include trips associated with Project Basie.* The US Market TIA scoping memo and date were not available for this review. I do note that the date of the TIA was August 13, 2021, which predated the final approval for Project Basie/Amazon, which was in September 2021. It appears that the US Market TIA was not scoped to include in-process trips associated with Project Basie, nor does it appear that Project Basie received final site plan approval before the US Market TIA was scoped. An updated TIA can include Project Basie's in-process trips into the analysis.
- *The US Market TIA relied on traffic counts from 2019; recent (2021) counts conducted at the I-5/Woodburn interchange are 15-25% higher than 2019.* The TIA is confusing in this regard. While the narrative discusses counts taken on June 30, 2019, the count data sheets in the appendix are dated June 30, 2021. I'm assuming that the appendix is reporting the date and time of pulling the data from the previous 2019 count.

Nevertheless, the question here is whether using 2019 counts and relating them as representative of 2021 counts is a valid question. To analyze this, I pulled 2016, 2019 and 2021 counts from previous studies for the two I-5 ramp intersections. The 2016 and 2021 counts were from Kittelson and Associates' TIA for Project Basie. The 2019 counts were from the Allison Way Apartments TIA. All counts were seasonally adjusted.

The table below compares growth rates from 2016-2019 and 2019-2021. It appears that there was a slight decrease in traffic at the interchange from 2016-2019, but an increase from 2019-2021. The average increase from 2019-2021 was 14.2%. Although lower than the 15-25% stated by Mr. Kittelson, it does indicate that to adequately reflect 2021 existing conditions volumes based on 2019 counts needs an adjustment factor to bring them in line with that growth. The revised TIA recommended here should include a 2019-2021 traffic growth factor with which to form a baseline for the analysis.

Seasonally Adjusted Counts, Total Entering Vehicles				Growth (Pcts)	
	2016	2019	2021	2016-2019	2019-2021
I-5 SB Ramps, AM Peak	1,549	1353	1,583	-12.7%	17.0%
I-5 SB Ramps, PM Peak	2,648	2975	3,152	12.3%	5.9%
I-5 NB Ramps, AM Peak	2,180	1954	2,392	-10.4%	22.4%
I-5 NB Ramps, PM Peak	2,903	2978	3,315	2.6%	11.3%
Average				-2.0%	14.2%

- *No queuing analysis was performed at critical intersections, including OR 214 at Oregon Way.* I concur that no queuing analysis was performed at critical intersections. I also note that ODOT in their comments did not comment on this. However, I do have a concern about the operational and safety implications of the right-in/right-out driveway from the site onto OR 214 and the weaving maneuvers to get from the outbound driveway to the left turn lane at the Oregon Way intersection to make a u-turn to head west. This is included in my recommendation to request a revised TIA.
- *The TIA found operational issues at the OR 219 (sic) at Evergreen Road intersection.* This has confirmed a consistent finding from other recent TIAs. I also address this in the findings below.

Summary of Findings

It is recommended that the Applicant submit for review a revised traffic impact analysis (TIA).

This is due to the following issues.

- First, the TIA did not analyze the two options presented for the site for the Conditional Use Permit consideration, just roughly Option 1 although the square footages by use are moderately different.
- The TIA did not analyze a new northern driveway north of the existing driveway from tax lot 3600 that is referenced by ODOT. This new driveway does not appear in either of the options presented in the May 5, 2022 staff report, and also does not appear in the conditions of approval in the staff report. Thus, the second driveway issue on Oregon Way appears to be moot.
- The TIA analyzed the site with a public accessway easement between the two parcels. This requires an ODOT approval to do so based on their condition referenced. The TIA did not address a scenario in the event that ODOT would deny this request. In that event, all of the Lot 3600 trips needing to either head north on Oregon Way or west on OR 214 would need to turn right, cross multiple lanes of OR 214 to the left turn lane in a short multi-lane weave maneuver, and then turn left or make a u-turn at the Oregon Way intersection. This could increase the risk of collisions due to such a maneuver. The TIA did not include a queuing analysis to indicate if this would increase the risk of collisions, especially if there was a pronounced queue in the eastbound left-turn lane. The TIA should update its analysis of this intersection to include recent signalization changes (see below) and include a queuing analysis for the OR 214/Oregon Way intersection.
- As noted in my response to Mr. Kittelson's comments and concerns, the updated TIA will need to address traffic growth from 2019-2021 in order to develop a defensible "2021 existing conditions" baseline with which to conduct the operational analysis.
- Additionally, it appears that the TIA for this site was conducted without an approved scoping from the City. The updated TIA recommended herein should include a revised set of in-process trips, including Project Basie.
- Finally, the TIA did not analyze any intersections east of the OR 214/Oregon Way/ Country Club intersection. The City has been requiring and collecting proportionate shares at intersections along OR 214, including east of Oregon Way, due to existing high crash rates or mobility threshold exceedances.

Mitigation for Impacts to Intersections With Elevated Crash Rates or Mobility Threshold Exceedances

The TIA identified the intersection of OR 214 and Oregon Way/ Country Club Road as having an existing elevated crash rate that exceeds ODOT's 90th percentile crash rate for these types of intersections. Potentially adding trips could exacerbate this condition. However, within the past month ODOT has converted the east-west left turn signal from flashing yellow arrow to protected left turns, which should alleviate the elevated crash rate condition. Thus, with this signal modification in place, no mitigation requirement would be placed on US Market to contribute toward mitigating the elevated crash rate condition.

Should the Applicant be successful in achieving ODOT approval of a shared, public access easement between the two tax lots and thus provide for on-site circulation that provides access for both lots to the right-in/right-out driveway on OR 214 as well as the full access onto Oregon Way, the driveway onto OR 214 should be designed and signed so as to discourage vehicles turning right onto OR 214 and then crossing over traffic lanes to turn left onto northbound County Club Road (a multi-lane weaving maneuver over a short distance). These vehicles should be directed to the Oregon Way exit to turn left to go north toward Country Club Road from the site.

The following discussion provides for mitigation conditions for other intersections along OR 214:

OR-214 and I-5 northbound ramps – elevated crash rate

The TIA indicated this intersection has an existing elevated crash rate, which has been confirmed by other recent TIAs in the vicinity. Project Basie was conditioned to provide a proportionate share contribution of \$10,000 toward a future safety improvement project at this location. Based on a comparison of trip impacts, the US Market share of a signal study and signal timing improvements to alleviate the crash rate issue at the interchange is a reasonable minimum share of \$1,000.

OR-214 and Evergreen Road – elevated crash rate

Allison Way Apts. was conditioned to provide a proportionate share contribution (fee-in-lieu) of \$15,000 toward a signal/intersection study and improvement to alleviate the crash condition for the 67 additional PM peak hour trips added to that intersection. Project Basie should be conditioned similarly, based on the following calculations:

US Market would add 229 trips to that intersection, a factor of 3.4 compared to Allison Way. The proportionate share calculation then is $\$15,000 * 3.4 = \$50,000$.

OR-214 and Settlemier – mobility threshold exceeded in 2040

The TIA indicates that the site will add 22 PM peak hour trips east of the Oregon Way intersection. Prior traffic impact analyses indicate that the 2040 background trips result in this intersection exceeding ODOT's volume-to-capacity and the City's level-of-service thresholds. The with-site trips from US Market will exacerbate the future condition. There is no current TSP project. Based on a proportionate share contribution precedent established with Project Basie, the US Market project should contribute \$10,000 as their proportionate share contribution toward an intersection study and eventual project to resolve this deficiency.

OR-214 and OR 99E – mobility threshold exceeded in 2040; elevated crash rate today

The with-site trips incorporated into 2040 background traffic based on previous traffic impact analyses will result in this intersection exceeding ODOT's volume-to-capacity and the City's level-of-service ODOT thresholds.

There is a current TSP project and a different mitigation project contained in the Woodburn Eastside Apartments development traffic impact analysis, each of which are estimated to cost approximately \$1,100,000.

Woodburn Eastside Apartments was conditioned to contribute an approximate 10.1% share of the cost of the mitigation project as a condition of approval, or approximately \$111,000. This was based on the site generating an additional 84 PM peak hour trips through the intersection.

This intersection was not analyzed in the US Market TIA. I estimate this site would contribute an additional 15 PM trips to this intersection. Based on proportionate share calculations for other projects, US Market's mitigation share is approximately \$21,000.