



## MEMORANDUM

Date: November 14, 2024

To: Travis Johnson, PE  
PLS Engineering  
604 West Evergreen Blvd  
Vancouver WA 98660

From: Frank Charbonneau, PE, PTOE

Subject: Traffic Response to Public Comments (Exhibit #108) FL2491  
**Camas Gas Station**  
NE 13<sup>th</sup> Street, Camas

Attached is Charbonneau Engineering's response to the public review comments contained in Exhibit #108 (Haines).

If you should have any questions, please contact Frank Charbonneau, PE, PTOE at 971.322.8003 or email [Frank@CharbonneauEngineer.com](mailto:Frank@CharbonneauEngineer.com).

11/14/24

FL2490

**Charbonneau Engineering Responses to Haines Public Comments - #108****Neighborhood Review Comment**

TIS report does not follow format requirements specified by City of Camas which is as follows:

EXECUTIVE SUMMARY

INTRODUCTION &amp; SUMMARY

EXISTING CONDITIONS

IMPACTS

MITIGATION

**Charbonneau Response to comment**

1. The traffic report contains all the pertinent documentation to satisfy the City's engineering and planning departments and is formatted in a way that has been acceptable to the City on previous traffic studies. The TIA Guidelines outline the required contents, however the order is not specified.

**Neighborhood Review Comment**

The existing zoning is 'Business Park'. Does a gas station fit into that zoning? Does the proposed use require a zoning change or is it a conditional use? The City of Camas TIS guidelines have extra trip generation requirements if either of those conditions exist.

**Charbonneau Response to comment**

2. The trip generation applied in the analysis followed ITE's guidelines for determining the site's trips for the weekday and AM & PM peak hours. The proposed development is a permitted outright use(s) so trip generation comparisons to other land use categories was not necessary.

**Neighborhood Review Comment**

City of Camas TIS Guidelines require the preparer to discuss the scope of the study prior to beginning the study. This report mentions a pre-application staff report and file number, but it is not included as an appendix within the report itself - unable to verify if the report meets these requirements.

**Charbonneau Response to comment**

3. The pre-app staff report is not typically attached to the traffic report. It is available through the City's website. Having conducted numerous TIA's within Camas we are very familiar with the City's traffic study guidelines and specifications. This traffic report has met the scoping requirements.

**Neighborhood Review Comment**

City of Camas TIS guidelines require a section on mitigation measures for site access and transportation system improvements. This report lacks a narrative of mitigations entirely. If no mitigations are recommended, it should still acknowledge this. However, this development is not currently meeting two City of Camas requirements:

1. The need for a left turn lane due to access directly from a collector/arterial street, and

2. The access point being hundreds of feet short of the minimum access spacing requirements mandated by the city.

At the very least, some mitigation measures should be proposed to address these two shortcomings.

#### **Charbonneau Response to comment**

4. A specific mitigation section was not included in the report mainly because there were no major mitigation measures recommended. Mitigation for intersection sight distance was discussed on page six of the report and within the summary section on page 12. No study intersections required mitigation as discussed on page five and within the summary on page 12.

The need for a westbound left turn lane at the site's access on NE 13<sup>th</sup> Street was not originally proposed in the traffic report due to not meeting the left turn lane warrant. However, the condition was later reversed for safety purposes as documented in the 4/9/24 Charbonneau memo.

Access spacing was discussed on page seven of the traffic report. It was documented that the intersection spacing would not meet the standard. The supporting reasons to allow the access location are presented on page 7.

#### **Neighborhood Review Comment**

City of Camas TIS requirements state that 24-hour traffic volume and speed data must be collected near proposed access points. If such a study was conducted, it was neither mentioned in the report narrative nor included in the report appendices.

#### **Charbonneau Response to comment**

5. Yes, the City's TIA Guidelines state that a 24-hour volume count and speed data will be conducted. It does not state the surveys are a requirement. We elected to not collect a 24-hour traffic count on NE 13<sup>th</sup> Street because there was absolutely no need for the information in determining the development's impacts on the transportation system (the traffic analysis is based on peak hour volumes and not ADT's). No speed survey was conducted as it was decided to use the posted speed on NE 13<sup>th</sup> Avenue in determining the required intersection sight distance. If the sightlines were questionable due to the street's alignment, then perhaps a speed survey would have been conducted.

#### **Neighborhood Review Comment**

The description of the roadway and intersections within the study area appear to be inadequate. City of Camas TIS guidelines require an array of traffic parameters be described. The report appears to be missing quite a few of these parameters, including roadway classifications, some posted speed limits, the widths of each roadway, a full description of existing bike/pedestrian facilities, parking conditions, and a list of existing geometric deficiencies.

**Charbonneau Response to comment**

6. Page two of the traffic report presents a detailed description of the street network and study intersections and references Figure `c` in the report's appendix. This figure illustrates the lane configurations and traffic control to the level necessary for the study. Additionally, page 2 documents additional details for the critical street (NE 13<sup>th</sup> Street) including the posted speed, street classification, lane configuration, street and shoulder surfacing, and alignment description.

**Neighborhood Review Comment**

One geometric deficiency along the site frontage is the lack of an eastbound left turn lane at 202nd Ave. Compounding this is the yellow trap condition that exists at the traffic signal that has been mitigated by an overhead warning sign ONCOMING TRAFFIC HAS EXTENDED GREEN. Yellow trap conditions have been shown to be a significant crash risk.

**Charbonneau Response to comment**

7. There was no evidence this condition has contributed to a traffic safety issue based on further research of the crash history (see Response #17, all reported crashes were single-vehicle accidents).

**Neighborhood Review Comment**

City of Camas TIS says left-turn storage required on all... collector streets. NE 13th at the site location is considered a collector C-2cb in the Clark County Arterial Atlas. Additionally, "Direct lot access to collector... streets is subject to approval... and is discouraged..."

**Charbonneau Response to comment**

8. A westbound left turn lane will be added on NE 13<sup>th</sup> Street at the site's access in conjunction with the proposed development. Although direct access to NE 13<sup>th</sup> Street may be discouraged, the developer has no other options to serve the property.

**Neighborhood Review Comment**

It appears a signal warrant analysis was conducted, but the written report makes no mention of it. It does not appear that an all-way stop analysis was conducted. Though an all-way stop would not be appropriate in this context, the report should acknowledge this given is a required component of the TIS per City of Camas guidelines.

**Charbonneau Response to comment**

9. A discussion of the traffic signal warrant performed for NE 13<sup>th</sup> Street at the site access was unintentionally omitted from the report's main text section. However, the warrant findings were documented in the report's summary section on page 12. The report's appendix includes the actual warrant plot and volume data. The signal warrant was not met.

**Neighborhood Review Comment**

This is technically reasonable, though it would be best to confirm this data with actual counts during school activity.

**Charbonneau Response to comment**

10. This comment is in reference to using modeled school data in the analysis. To confirm the modeled school traffic was appropriate a supplemental traffic count at NE 13<sup>th</sup> Street and NW Friberg-Strunk Street was conducted in May 2024 when Union High School was in session. The Charbonneau memo dated 6/12/24 documented that the modeled data was accurate as the with-school traffic counts were within one percent of the modeled data.

**Neighborhood Review Comment**

Where did 2% come from? There is no reference that justifies using this number. If there is evidence that 2% is accurate, that should be included in the report. It does not seem to account for the development in the area, and recent changes to local business uses (i.e. Interstate Batteries warehouse).

**Charbonneau Response to comment**

11. Several of the local agencies including Vancouver and Clark County typically accept a 2%/year traffic growth rate. Camas normally doesn't use a growth rate and instead depends on in-process traffic to cover for the future conditions. However, in this case the growth rate was applied to satisfy the City of Vancouver's standard since one of the study intersections (NE 13<sup>th</sup> Street at 192<sup>nd</sup> Avenue) is located within their jurisdiction. In-process traffic was also included in the study.

**Neighborhood Review Comment**

It would be helpful to understand the basis of these estimates in notes 3 & 4.

**Charbonneau Response to comment**

12. The comment is in regards to the Trip Generation – Table 1 on page 4 of the traffic report. Several footnotes are used. Footnote #3 estimates the site's ADT trip generation as 10 times the PM peak hour number of generated trips. This rate was used only for the car wash use as it is common practice when the ITE Trip Generation manual does not provide a daily trip rate for a specific land use. Again, for the car wash use, ITE does not provide an AM peak hour trip rate. The City of Vancouver specifies using 70% times the PM peak hour rate, which is a reasonable assumption.

**Neighborhood Review Comment**

The report lists "engineering judgment" behind trip distribution and trip assignment, but provides no explanation or documentation of how these values were determined. This is inadequate given City of Camas TIS guidelines which require all assumptions and data sources to be documented.

**Charbonneau Response to comment**

13. The City's TIA Guidelines state that the site trips should be logically distributed and assigned, and based on recently collected traffic data taking into account the surrounding land use patterns. These parameters were applied to the analysis. The guidelines did not specify that travel demand model information such as RTC select zone projections must be applied.

**Neighborhood Review Comment**

The report neglects to mention how eastbound queuing on NE 13th St will interact with the proposed driveway. If queues extend near to or through this driveway, it could negatively impact traffic operations and safety. This is especially important considering the proposed driveway is well below the minimum access spacing specified by the City. This information is critical in helping determine if additional mitigation measures such as left turn lanes or access management are prudent.

This queuing may be only considering vehicles attempting to get into the site and seem to ignore the drivers behind the queued vehicle as this is a one lane approach. Additionally, it does not appear to take into account the queuing at the signal in the eastbound direction.

**Charbonneau Response to comment**

14. Charbonneau's memorandum dated 6/12/24 presents documentation and discussion regarding the eastbound queuing on NE 13<sup>th</sup> Street within the 7-9 AM & 4-6 PM peak hour periods. A queuing survey was conducted in May 2024. The findings confirmed that the proposed access was blocked by traffic only twice during the two-hour AM period and once during the two-hour PM period. These frequencies were not considered problematic for traffic accessing the site. The addition of a westbound left turn lane will provide an added safety benefit.

**Neighborhood Review Comment**

This analysis should include 85th and 95th percentile speeds. Additionally, a decision sight distance study should be completed based on the speed and curvature of the roadway.

Documentation should be provided for evidence of this assessment. Sight distance to the east appears to have a finite distance closet to 500 feet given the horizontal curvature and large trees. This limitation should be documented per AASHTO requirements as required by the City of Camas TIS guidelines.

**Charbonneau Response to comment**

15. Upon review of the conditions in the field, including the NE 13<sup>th</sup> Street alignment and posted speed it was determined that conducting speed studies were not necessary. The sightlines at the access to the east exceeds the ASHTO standard of 390 feet, and to the west (upon moderate frontage vegetation control/maintenance) will also exceed the 390 foot standard.

**Neighborhood Review Comment**

This analysis appears to be using the WSDOT design manual instead of the required AASHTO green book according to Camas TIS guidance. The left turn lane seems to be warranted under AASHTO guidance.

City of Camas TIS guidelines state that direct lot access to a collector or arterial is subject to approval by the city and is discouraged where reasonable alternatives exist. This lot does not appear to have a reasonable alternative unless major site changes are made. The applicant should be required to mitigate any risks of the access point by widening for a left turn lane and/or adding access management.

**Charbonneau Response to comment**

16. Regardless of the appropriate left turn lane warrant standard, a westbound left turn lane is proposed on NE 13<sup>th</sup> Street at the site's access. Reference the Charbonneau memo dated 4/9/24.

**Neighborhood Review Comment**

The collision history analysis seems inadequate. The analysis mentions only total crashes and calculates a crash rate, but that leaves out important specifics such as what types of crashes are occurring and if there are any patterns to the crashes that could be indicative of a problem that could be exacerbated by additional traffic volume. There should be additional detail provided as part of this analysis including any mitigations to address increased safety risks associated with the site development.

**Charbonneau Response to comment**

17. Upon further research of the crash data provided by WSDOT and contained in the original traffic study, it has been determined that of the three reported crashes, all of them were single-vehicle related and included the vehicles striking fixed objects. Two crashes involved striking a roadside metal sign post and one crash involved hitting a tree stump. Therefore, other than constructing the proposed westbound left turn lane at the site's access no, other mitigation measures are recommended.

**Neighborhood Review Comment**

There is an eastbound bike lane along 13th street within 300 feet of the Friberg St intersection. Queuing in the eastbound direction along the site frontage could introduce an increased risk to people biking and walking near the access point of the development.

**Charbonneau Response to comment**

18. The proposed street improvements on the south side of NE 13<sup>th</sup> Street will construct sidewalk along the property frontage. A five-foot wide bike lane will be incorporated into the design to account for continuation of bicycle flow in the eastbound direction. The improvements are illustrated on the PLS Engineering site plan.

**Neighborhood Review Comments - Queuing**

This analysis does not include any drivers entering the site in the westbound or eastbound directions.

It seems highly unlikely that only one vehicle will leave the site in the entire AM peak hour

This analysis assumes only one driver will enter the site from NE 13th in the EB direction. It also assumes no other vehicles will enter/exit the site during the PM peak hour (Westbound left, Northbound left/right)

Similar comment from above - the demand numbers here are not an adequate representation of the actual impact of the site development.

**Charbonneau Response to comments**

19. Unfortunately the reviewer was looking at the Synchro queuing results for the traffic scenarios (Existing & Background traffic) pertaining to the existing house and driveway volumes, and not the total traffic scenarios that included the development's site trips. Therefore, the traffic volumes shown on the related Synchro printouts are indeed correct.