FERGUSON & ASSOCIATES, INC.
Transportation Planning/Traffic Engineering

April 23, 2020
#01609

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re: Trip Generation Letter for Lucky Foods Expansion; Tualatin, Oregon

INTRODUCTION AND SUMMARY OF FINDINGS

As requested, we have performed a trip traffic study for a proposed addition to the plant for Lucky Foods, LLC. The plan is located at 11847 SW Itel St, Tualatin, OR 97062, as illustrated in Figure 1. The proposed addition is for 5,160 square feet of freezer storage. Initially, only 3,360 square feet of the addition will be freezer space, with the remaining 1,630 allocated to warehousing glass jars for the kimchi line. Eventually, all the added space will be converted to freezer space.

The addition of freezer space will not result in more space for employees (since people don't work in the freezer.) It will, however, reduce the need for off-site storage and may reduce truck trips.

City of Tualatin Staff as requested that the calculation of trip generation be addressed in 3 ways:

1. Utilizing the current user's projections of trip generation change. This forecast was approached using a first-principles assessment of trip generation and involved pivoting on anticipated changes in employees, trucking activity, etc..
2. Utilizing the ITE trip generation rates for land use 110 – General Light Industrial – based on the square footage to be constructed.
3. Utilizing another ITE category if the engineer believes it will more closely match this case. In this case, it appears that the addition is essentially warehousing space. The trip rate for warehousing was used in this third forecast.

Depending on the methodology chosen, the peak hour trip generation for the proposed project was forecast to be between 0 and 4 a.m. peak hour trips, between 0 and 3 p.m. peak hour trips, and between 0 and 26 daily trips, as shown herein.

TRIP GENERATION FORECAST – APPROACH 1 – FIRST PRINCIPLES

The proposed addition of freezer space to the facility would allow the facility to reduce of-site storage. In terms of employees, the additional space does not create any additional working space, as it would all be cold-storage.

There would be some additional truck traffic due to the fact that main deliveries would be shipped to the primary location rather than to off-site storage facilities. At the same time, there would be fewer truck-trips for shuttling goods between the off-site storage and the current operation. As a whole, it is anticipated that there would be no new net increase in truck traffic.

Based on this assessment, it was determined that the proposed addition of freezer space would not result in a net increase in vehicle-trips to and from the site.

TRIP GENERATION FORECAST – APPROACH 2 – ITE INDUSTRIAL RATES

As requested, the 10th Edition of *Trip Generation* (ITE, 2017) was used to forecast trip generation using the ITE rates for ITE Land Use Category 110, General Light Industrial. The trip generation rates for this land use category are summarized in Table 1.

Table 1 -- Trip Generation Rates -- Industrial

		Trip Ends Rate (trips per t.s.f)			In/Out Split (percent)		
ITE Land Use & Code	Ind. variable	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour	Daily
General Light Industrial 110	t.s.f.	0.70	0.63	4.96	88/12	13/87	50/50

The resulting trip forecast, as shown in Table 2, is for 4 a.m. peak hour trips, 3 p.m. peak hour trips, and 26 daily trips.

Table 2 -- Trip Generation Forecast – Industrial

	Size	AM Peak Hour Trip Ends			PM Peak Hour Trip Ends			
ITE Land Use	(units)	In	Out	Total	In	Out	Total	Daily
General Light Industrial 110	5.16 KSF2	3	0	4	0	3	3	26

TRIP GENERATION FORECAST – APPROACH 3 – ALTERNATIVE ITE CATEGORY

Given that the proposed space would be used for warehousing, and given that people only spend short durations in cold-warehousing, it was determined that it would be appropriate to consider the ITE trip generation rate for warehousing (ITE Land Use Category 150). The 10th Edition of *Trip Generation* (ITE, 2017) was also used to forecast trip generation using warehouse rates. The trip generation rates for this land use category are summarized in Table 3.

Table 3 -- Trip Generation Rates -- Warehousing

		Trip Ends Rate (trips per t.s.f)			In/Out Split (percent)		
ITE Land Use & Code	Ind. variable	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour	Daily
Warehousing 150	t.s.f.	0.17	0.19	1.74	77/23	27/73	50/50

The resulting trip forecast, as shown in Table 4, is for 1 a.m. peak hour trips, 1 p.m. peak hour trips, and 9 daily trips.

Table 4 -- Trip Generation Forecast – Warehousing

	Size	AM Peak Hour Trip Ends			PM Peak Hour Trip Ends			
ITE Land Use	(units)	In	Out	Total	In	Out	Total	Daily
Warehousing 150	5.16 t.s.f	1	0	1	0	1	1	9

SUMMARY AND CONCLUSIONS

It was requested that the trip generation for the proposed addition of freezer space be approached in three ways. Depending on the methodology chosen, the peak hour trip generation for the proposed project was forecast to be between 0 and 4 a.m. peak hour trips, between 0 and 3 p.m. peak hour trips, and between 0 and 26 daily trips. In more detail, the forecast for each methodology was:

1. First principles: no change in trip generation.
2. ITE Industrial Land Use Category 110: 4 a.m. peak hour trips, 3 p.m. peak hour trips, and 26 daily trips.
3. ITE Warehouse Land Use Category 150: 1 a.m. peak hour trips, 1 p.m. peak hour trips, and 9 daily trips.

Regardless of the forecast selected by the City, the resulting traffic impact would be insignificant.

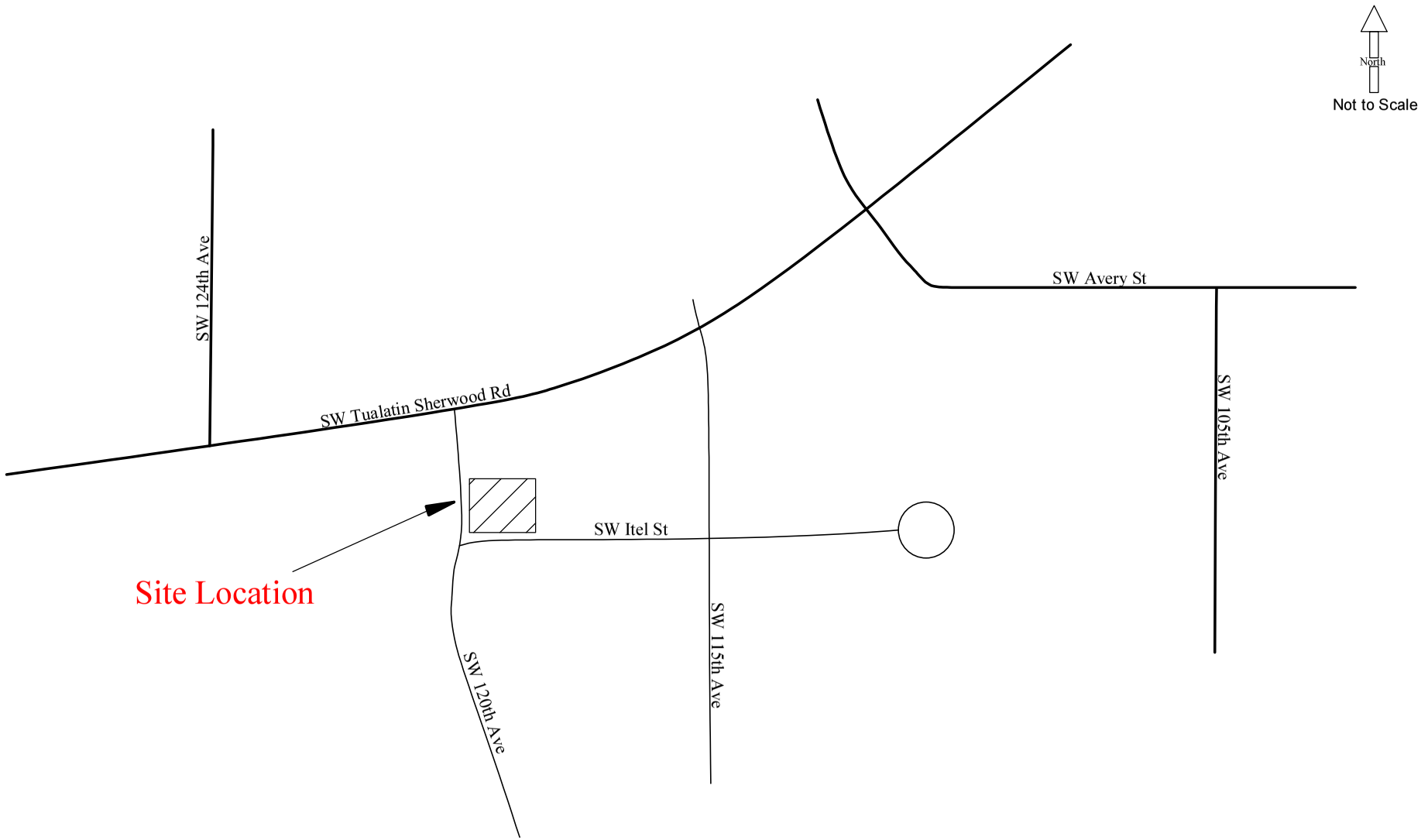
* * * * *

It is trusted that the above analysis adequately addresses your request for a trip generation forecast. Please feel free to contact us at your convenience if you would like to discuss any element of this letter-report.

Very truly yours,
FERGUSON & ASSOCIATES, INC.

Scott Ferguson, PE

Attachments: Figure 1



Site Location
Lucky Food Expansion - Tualatin, Oregon

#01609
April 21, 2020

Figure 1

Ferguson & Associates, Inc.