

October 21, 2020

City of Camas Attention: Jim (Curleigh) Carothers 616 NE Fourth Ave Camas, WA 98607

Re: CJ Dens East Subdivision Trip Update Letter Project Number 2200389.00

Dear Jim Curleigh:

Mackenzie has prepared this trip update letter for revisions to the plat for the CJ Dens Subdivision (SUB10-03), originally approved for 289 lots on September 26, 2014. The site area has been reduced to now include only the east portion of the subdivision with 152 lots. A copy of the proposed plat is attached.

With development of the site, access will be at one (1) new intersection on Leadbetter Road at N Elk Street and through the existing intersection of N Adams Street with Leadbetter Road. Two (2) stubs will be provided to undeveloped parcels to the north and east for future connectivity.

### **Trip Generation**

A Transportation Impact Analysis (TIA) dated August 18, 2010 presented trip generation for the original development proposal for 297 lots. The trip generation estimates presented in the August 2010 TIA lots were based on data from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 8th Edition for the "Single-Family Detached Housing" (LIC 210) use. That data is now superseded by data for the same use presented in ITE's *Trip Generation Manual*, 10th Edition. Table 1 presents a comparison of trip generation for the 2010 and 2020 development proposals.

TABLE 1 - TRIP GENERATION COMPARISON										
ITE Code	ITE Land Use	Scenario	Size	AM Peak Hour			PM Peak Hour			Deibi
				In	Out	Total	In	Out	Total	Dally
210	Single-Family Detached Housing	August 2010 TIA	297 DU	54	164	218	176	104	280	2,831
		2020 Proposal	152 DU	28	85	113	96	56	152	1,528
		Net Difference	-145 DU	-26	-79	-105	-80	-48	-128	-1,303

As presented in Table 1, the current proposal for 152 single-family lots is estimated to generate 105 fewer AM peak hour, 128 fewer PM peak hour, and 1,303 fewer daily trips compared with the 2010 proposal for 297 single-family lots.



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## **Trip Distribution & Assignment**

We have assumed the same distribution of trips as shown in Figure 8 of the original TIA. A copy of the distribution is attached for reference. With the updated trip generation, new assignment figures have been prepared showing trips to all intersections impacted by 25 or more AM or PM peak hour trips. These figures also reflect the change in access to the development from four (4) access points to two access points to Leadbetter Road.

### Impact and Mitigation

In order to address the City's street standards, including Neighborhood Transportation Management, we have estimated the volumes on each roadway in the subdivision at opening. Table 2 presents the highest estimated volume on internal roadways with the two (2) road connections to Leadbetter Road.

TABLE 2 – INTERNAL ROADWAY VOLUMES							
Roadway	AM Peak Hour	PM Peak Hour	Daily				
N Adams Street	69	93	938				
N Elk Street	44	59	588				
N 50th Avenue	28	37	375				
N 49th Avenue	44	60	600				
N 48th Avenue	20	27	272				

As presented in Table 2, N Adams Street is the only internal roadway that is estimated to have more than 700 daily trips.

With future connections planned at the north (N 50th Avenue) and east (N 49th Avenue), we do not anticipate any internal road segment would have more than 700 daily trips after these future connections are made.

The City's Neighborhood Traffic Management Guidelines require any neighborhood or local streets reaching the threshold of 700 vehicles per day to mitigate the impact of the new development with traffic calming strategies. Adams Street is expected to exceed the 700-daily-trip threshold with development of the proposed 152 single-family lots at opening. Adams Street is approximately 800 feet long and an additional 370 feet will be constructed with the proposed subdivision. Because most of N Adams Street is already constructed, the total length will be relatively short, and the alignment will be linear, appropriate traffic calming measures include chokers or speed cushions. Because future road connections will result in volumes below the threshold, these traffic calming measures are not recommended for the interim condition.

Everett Street is an existing two-lane roadway. The City's Six Year Transportation Improvement Program (2021-2026) includes an improvement project to widen Everett Street with bike lanes. Funding for this improvement project has not been secured. However, construction of a new roundabout at Everett Street and Lake Road is currently underway. No changes in traffic patterns for the proposed subdivision are expected with the improvements on Everett Street.

City of Camas **CJ Dens East Subdivision** Project Number 2200389.00 October 21, 2020 Page 3

The City's 2035 Comprehensive Plan presents a future east-west arterial extending west of Everett Drive and parallel to Leadbetter Road. Once this new arterial is constructed, Leadbetter Road will be converted to a public trail, and all site traffic will be diverted to the new east-west arterial.

The 2035 Comprehensive Plan also includes an extension of NE 242nd Avenue from NE 28th Street and continuing south as the new east-west arterial. With this change, traffic volumes on NE 232nd Avenue are expected to decrease as the new NE 242nd Avenue extension will serve as a more direct, parallel route to NE 232nd Avenue.

No other changes in traffic patterns are anticipated with the transportation network changes presented in the City's 2035 Comprehensive Plan.

### **Conditions of Approval**

The September 2014 decision and staff report for SUB10-03 required the installation of traffic calming features for any street with 700 or more ADT. The traffic calming features must be consistent with the City's adopted Neighborhood Traffic Management Plan. Adams Street is expected to be impacted by more than 700 daily trips with the development of 152 single-family lots in the interim. With this project, traffic calming measures on N Adams Street such as chokers or speed cushions have been identified. However, future connections will be provided to the north and east which will decrease the future average daily traffic on N Adams Street. Therefore, these traffic calming measures are not recommended for the interim condition.

Please contact me at <u>bahrend@mcknze.com</u> or 971-346-3781 if you have any questions regarding the information presented in this letter.

Sincerely,

Brent Ahrend, PE Traffic Engineer

Enclosure(s): Proposed Plat, Trip Generation Excerpt, Trip Distribution & Assignment Figures

c: Carl Lawson – CJ Dens Lacamas II, LLC John Meier, Alex Burzynski – AKS Engineering & Forestry Janet Jones – Mackenzie





CKED BY:

CJ DENS LACAMAS I LLC CAMAS, WASHINGTON

**CJ DENS EAST SUBDIVISION** 







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PA-1.2



PROPOSED PLAT (WEST) CJ DENS EAST SUBDIVISION CJ DENS LACAMAS I LLC CAMAS, WESHINGTON





ACS DRAWING FILE: 5504 20201014 PROPOSED PLATLONG | LAYOUT: 22.2



PROPOSED PLAT (NORTH) CJ DENS EAST SUBDIVISION CJ DENS LACAMAS I LLC CJ DENS, WASHINGTON







TRANSPORTATION

CJ DENS CAMAS SUBDIVISION Camas, Washington

**Prepared For** CJ Dens Land Co.

Completed On August 18, 2010

**Submittal To** City of Camas

**Project Number** 2050186.01

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# 4. SITE DEVELOPMENT

### TRIP GENERATION

Trip generation calculations were prepared using the ITE *Trip Generation* Report, 8<sup>th</sup> Edition. Trip generation estimates for the site were calculated based on fitted curve equations for Land Use Code 210, Single Family Detached Housing. The following table presents the anticipated trip generation for daily, AM peak hour of adjacent street traffic, and PM peak hour of adjacent street traffic periods based on the 297 new dwelling units proposed.

TABLE 4 – TRIP GENERATION CHARACTERISTICS									
Land Use (ITE Code)	Dwelling Units	ADT	AM Pea	ak Hour	PM Peak Hour				
Land Use (ITE Code)			Enter	Exit	Enter	Exit			
Single Family Detached Housing (210)	297	2,831	54	164	176	104			

For purposes of this analysis, all trips are assumed to be automobile trips.

# TRIP DISTRIBUTION AND ASSIGNMENT

Distribution of site trips is based on existing EMME/2 model data provided by RTC. Specifically, the trip assignment patterns from the existing model's Transportation Analysis Zone (TAZ) 483 are used. TAZ 483 includes all four subject parcels comprising the subdivision site.

From the site accesses on Leadbetter Road, it is estimated 35% of site trips will travel to and from the north/west and 65% to and from the south/east. Further distribution is estimated as follows, and as depicted on Figure 8.

- 20% to/from the west on NE Goodwin Road
- 10% to/from the northwest on NE Ingle Road
- 5% to/from the north on NE 242<sup>nd</sup> Avenue (SR 500)
- 5% to/from the northeast toward Everett Road (SR 500) via Leadbetter Road
- 10% to/from the east on NE 43<sup>rd</sup> Avenue, primarily to and from the schools
- 40% to/from the south on NE Everett Street (SR 500), between the subdivision and downtown Camas
- 5% to/from the neighborhoods southwest of NW Lake Road
- 5% to/from the west on NW Lake Road

These distribution percentages are applied to the trip generation values to yield the site trip assignments. These are presented in Figure 9.

## POST-DEVELOPMENT TRAFFIC

Post-development traffic is the sum of pre-development traffic volumes and sitegenerated traffic. Figure 10 presents 2018 post-development traffic volumes. Figure 12 presents 2030 future post-development traffic conditions, which add an additional 12 years of background growth to the 2018 post-development volumes.





