

June 20, 2006

W.O. No. 0631

Joanna Valencia
Kittitas County Community Development Services
411 N Ruby Street, Suite 2
Ellensburg WA 98926



RE: **The Grove Traffic Impact Analysis - Phase 1**

Dear Ms. Valencia:

I have been contacted by Jamie Flynn of Campus Crest Development to complete a traffic impact analysis for The Grove, a student housing develop on the east side of Airport Road across from Killo Road. This multi-family development lies approximately one half mile north of the Central Washington University (CWU) campus. A Vicinity Map is attached as Figure 1. This letter will document the basic assumptions planned for use in the traffic impact analysis, including the trip generation characteristics of the site, the amount of pedestrian traffic anticipated to be associated with the site, and general distribution characteristics of the vehicular traffic from the site.

The site presently is a meadow with a single family home and associated outbuildings. The Grove will develop eleven buildings on the site with associated parking, drainage structures, sidewalks and other required amenities. The apartment units developed in these buildings will be set up in the modern suite-type living units popular for college age resident having several bedrooms opening on to a common area. At the present time the ten building will have 192 units and 504 total beds. In addition, many amenities will be available on-site including a fitness center, coffee house, game room, study / computer lounge, swimming pool, volleyball court, basketball court, and other gathering spaces. This complex provides more autonomy than dorm living, and is a method to transition students into life after graduation.

The trip generation characteristics of the site are expected to be represented by the characteristics found in the Institute of Transportation Engineers Manual, *Trip Generation, 7th Edition* for Apartments, Land Use Category 220. Because the suite type living arrangement is slightly different than the traditional apartment configuration, "Persons" was chosen as the independent variable rather than the more commonly used "Dwelling Units." The data collected for "Persons" did not also include directional distribution. However, it is likely to be similar to the directional distribution for "Dwelling Units." A summary of the trip generation characteristics of The Grove are shown on Table 1.



Table 1 - Trip Generation Characteristics for The Grove

Persons	A.M. Peak Hour			P.M. Peak Hour			ADT ¹
	Vol @ 0.28 Trips per Person	Directional Distribution		Vol @ 0.40 Trips per Person	Directional Distribution		Volume @ 3.35 Trips per Unit
		20% In	80% Out		65% In	35% Out	
504	141	28	113	202	131	71	1688

1. Average Daily Trip Ends (ADT)

This site will access Airport Road directly using driveways. Airport Road links to the center of the CWU campus approximately one half mile south of The Grove. Many factors are likely to influence the mode of transportation chosen by the residents of The Grove. These include proximity to a major destination (½ mile to CWU), income level (likely to be lower than the general population), and age group (18-25). All of these factors will increase the likelihood of choosing a mode of transportation other than an automobile. Pedestrian / bicycle traffic is expected to be the preferred method of transportation for residents of The Grove, especially for trips to/from CWU.

A site visit to Ellensburg revealed a strong bicycling community and heavy pedestrian traffic. Additionally, parking on-campus is limited, and parking in most lots costs money either on a daily or quarterly basis. Driving to campus also does not guarantee that the walk to class will be shorter than the walk directly from The Grove. All of these factors encourage non-motorized methods of getting to/from CWU. Other destinations will mainly be accessed using automobiles. It is anticipated that 70% of the trips in the peak hours will be to/from CWU using non-motorized methods of transportation while 30% will be to/from other destinations and use motor vehicles. The number of trips associated with each mode of transportation (motorized versus non-motorized) are shown on Table 2.

Table 2 - Mode Split of Traffic Associated with The Grove

Trip Mode	A.M. Peak Hour			P.M. Peak Hour		
	Total	In	Out	Total	In	Out
Motorized (30%)	42	8	34	61	40	21
Non-motorized (70%)	99	20	79	141	91	50

Distribution of this traffic will have the following characteristics. The non-motorized traffic will generally go to/from CWU, although trips into other parts of Ellensburg may also occur. This trip type will add no new vehicles to the transportation system, and will interact with vehicular traffic only when crossing streets.

The automobile traffic will generally have destinations other than to CWU. A detailed evaluation of likely destinations for this traffic was made during the site visit to Ellensburg. The first observation made is that there is very few destinations north of The Grove. Therefore only 5% of the automobile traffic was assigned to this route. The rest of the automobile traffic, or 95%, was assigned to destinations within Ellensburg.

The intersection of 18th Avenue / Airport Road / Walnut Street is the first intersection where traffic can disperse onto the rest of the transportation system. Based upon likely destinations, route length, and directness of route, only 15% of traffic is expected to go to/from the east on 18th Avenue. The perceived capacity on Walnut Street south of 18th Avenue is also limited, and no more than 20% of the traffic is expected to use that route. Again, at Dean Nicholson Blvd, there are limited reasons to turn east, and therefore, the traffic is expected to turn west at this point. However, most of the traffic (60%) at Airport Road / 18th Avenue, is expected to go to/from the west on 18th Avenue from Airport Road. All of this traffic is expected to turn south onto "D" Street.

At 14th Avenue / "D" Street, the choice must be made whether to proceed south on "D" Street or west on 14th Avenue. A site review of this intersection was conducted to gain insight into the route of choice. Each of these routes allows access to downtown Ellensburg, with the 14th Avenue route allowing better access to the western side, including Main Street and Fred Meyer, with "D" Street providing better access to the businesses along University Way and the eastern portion of the downtown. During the site visit an evaluation of these two route choices was made, and it was determined that the useage of these routes is nearly identical. For this reason, it is anticipated that 40% will proceeed west on 14th Avenue and 40% will proceed south on "D" Street. Overall distribution from the site is on Figure 3, Trip Distribution.

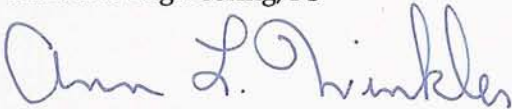
Based upon a conversation with personnel from the City of Ellensburg, five intersections were tentatively identified for inclusion in the traffic impact analysis. These are:

- Dean Nicholson Blvd / Walnut Street
- Dean Nicholson Blvd / Alder Street
- 14th Avenue / "D" Street
- 18th Avenue / Walnut Street
- 18th Avenue / Alder Street

Figure 4 shows the automobile traffic at these five intersections during the a.m. peak hour and the p.m. peak hour. It is highly unlikely that the intersection of Dean Nicholson Blvd / Walnut, Dean Nicholson Blvd / Alder or 18th / Alder will experience any impacts due to the low volume of additional traffic from this project. Also, with only 5% of the vehicular traffic going north from the site on Airport Road, it is highly unlikely that the project will impact any intersections north of the site. Therefore, if there is a concern regarding this project impacting any intersections within the area, the intersections of 18th Avenue / Airport Road and 14th Avenue / "D" Street are the two intersection which are most likely to experience capacity issues. Therefore the analysis should be limited to these two intersections.

I look forward to your review of the information in this letter, and will follow up with you later this week. Particularly, I would like to know if the assumptions regarding traffic generation, distribution of that traffic, non-motorized mode split, and intersections proposed for inclusion in the traffic impact analysis meet your needs. Please let me know if you have any questions regarding this matter.

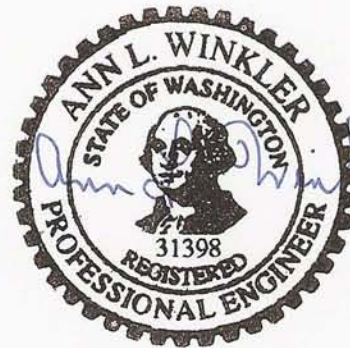
Sincerely,
Sunburst Engineering, PS



Ann L. Winkler, P.E.
Traffic Engineer

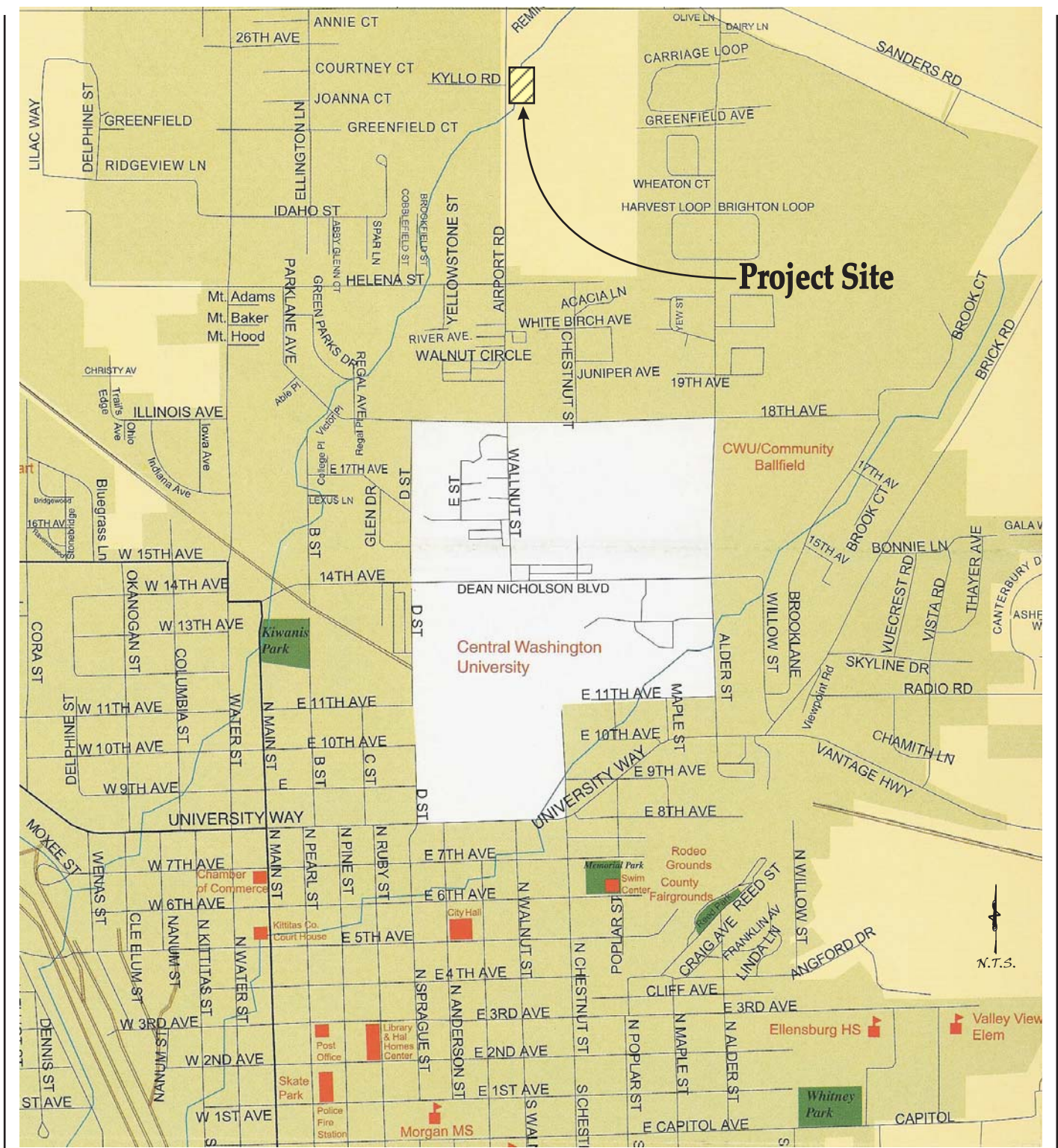
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cc: City of Ellensburg Public Works
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6/20/06

EXPIRES 5/11/07



Map Provided by Ellensburg Chamber of Commerce

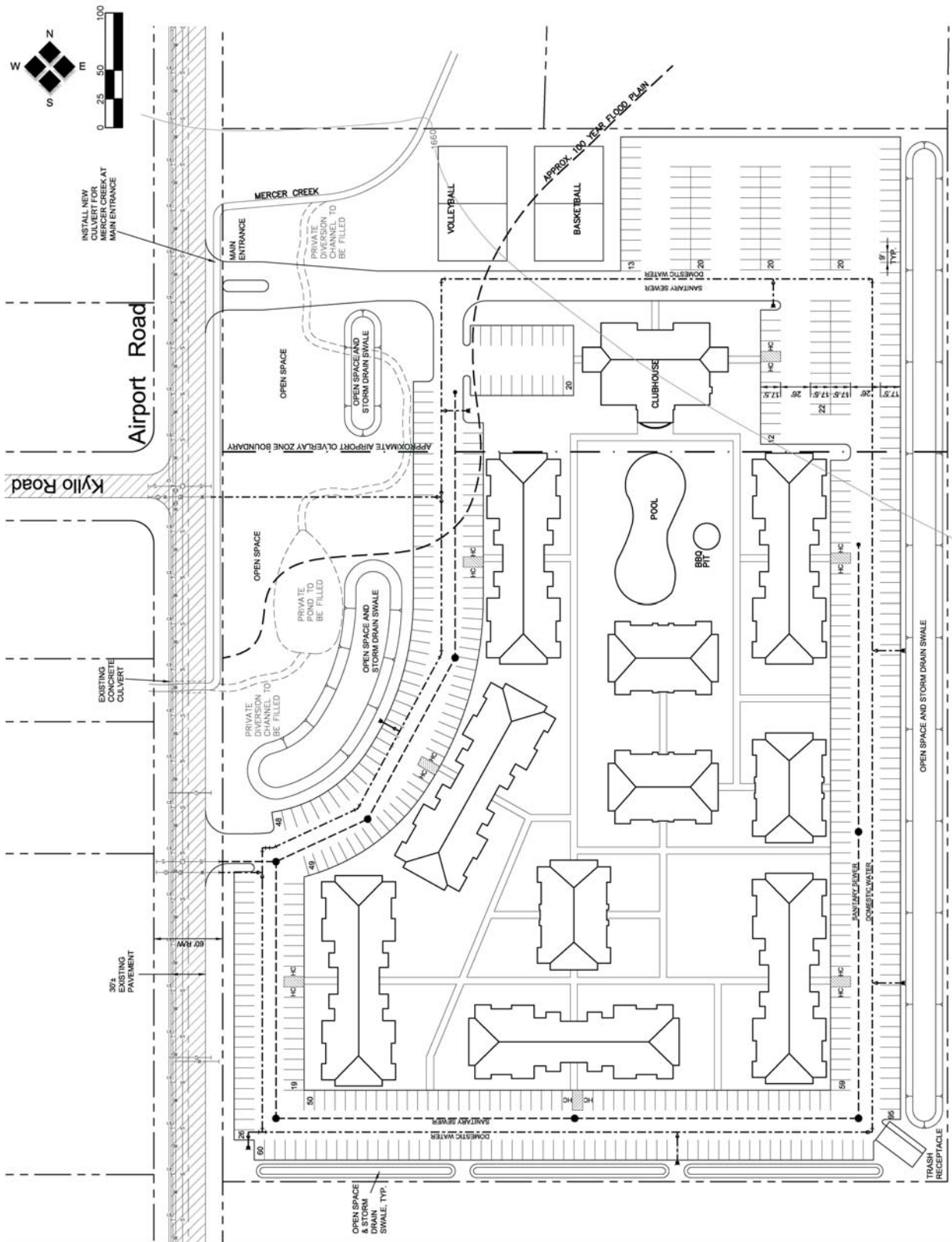


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The Grove
 Traffic Impact Analysis

Figure 1
 Vicinity Map



Site Plan Provided by Huijbregtse, Louman Associates, Inc.

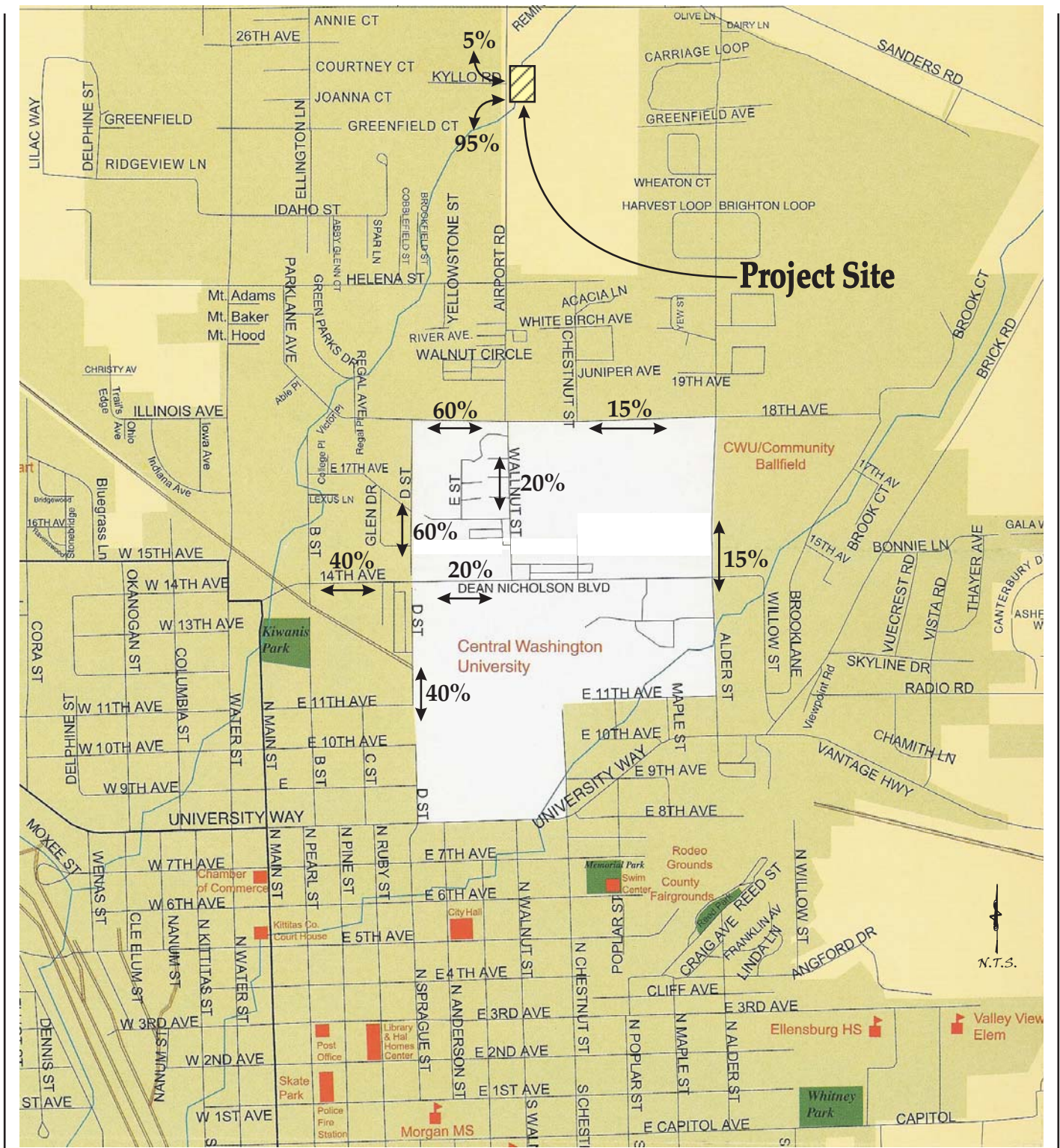


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The Grove
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Figure 2
 Site Plan



Map Provided by Ellensburg Chamber of Commerce

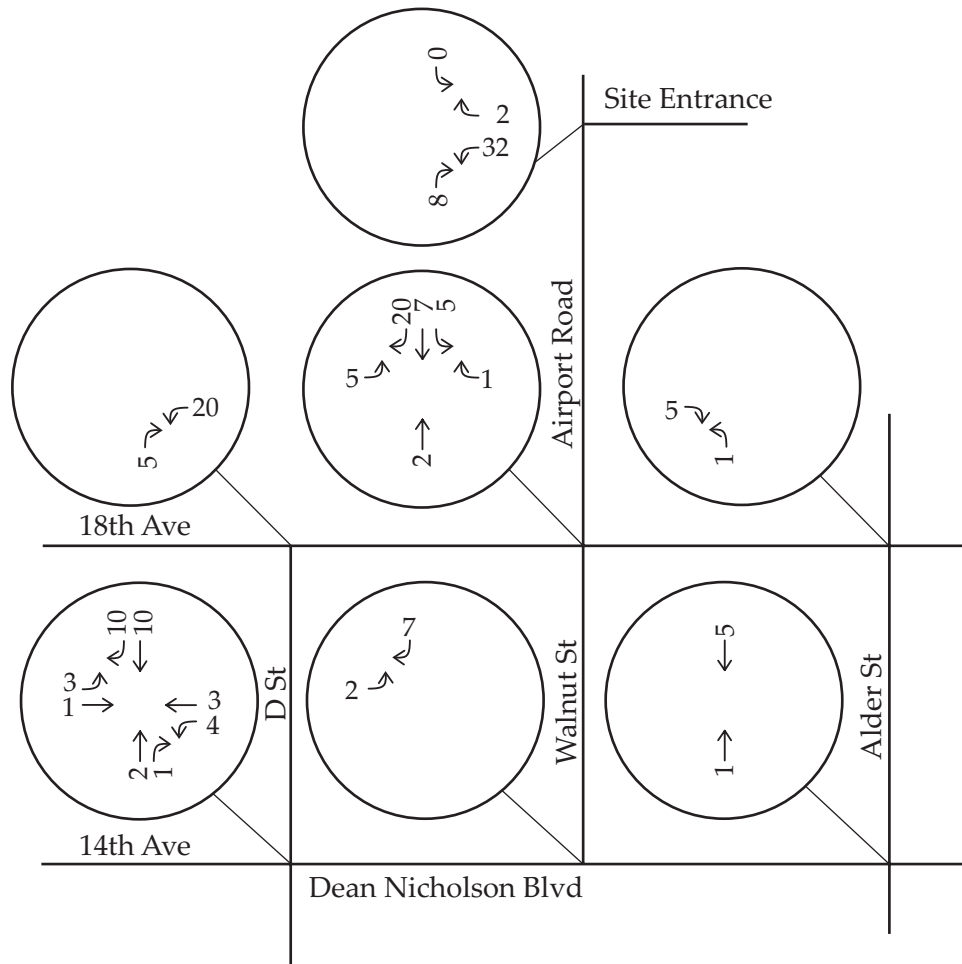


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The Grove
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Figure 3
 Distribution Map

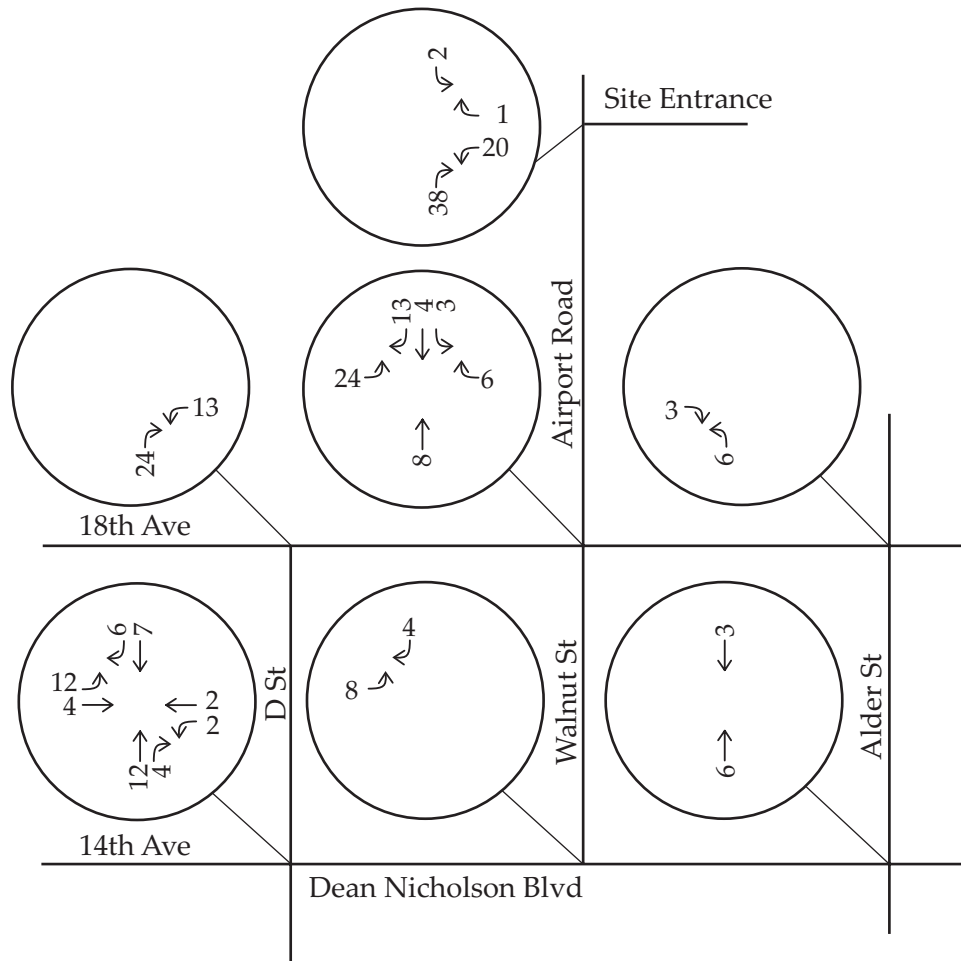


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The Grove
 Traffic Impact Analysis

Figure 4a
 Site Generated
 AM Peak
 Traffic Volumes



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The Grove
 Traffic Impact Analysis

Figure 4b
 Site Generated
 PM Peak
 Traffic Volumes