

Jan Coppola

From: Robert Maul
Sent: Thursday, April 13, 2017 3:42 PM
To: Curleigh (Jim) Carothers; Wes Heigh
Cc: Rosenberg, Heidi (Heidi.Rosenberg@camas.wednet.edu); Jan Coppola
Subject: FW: Lacamas Heights Elementary CUP 16-02
Attachments: 3869_001.pdf; 3870_001.pdf

From: Kurt Stonex [mailto:kurt@olsonengr.com]
Sent: Thursday, April 13, 2017 3:34 PM
To: Sarah Fox; Robert Maul; Steve Wall
Cc: Randy Rutherford
Subject: Lacamas Heights Elementary CUP 16-02

I apologize for the last minute email concerning the CUP hearing for Lacamas Heights but we just became aware of the hearing and just reviewed the staff report. We represent the developer of the Green Mountain Estates project and are requesting to be parties of record for the hearing tonight.

The traffic study in the record indicates that the intersection of NE 28th St and NE 232nd Ave is failing in the 2018 background scenario (Level of service F). I've attached the summary and conclusions to this email. The staff report and decision doesn't appear to address this directly or condition any mitigation.

The approval of Green Mountain Estates (June 24, 2016) requires mitigation at this intersection to a Level of Service D prior to the construction of the home on the 181st lot. (condition is attached).

While our client is very supportive of the school, it seems appropriate and consistent with the prior approval and conditions and City concurrency code that a condition of approval regarding mitigation at this intersection be part of the approval.

Again I apologize for the last minute comment. Thank you,

Kurt Stonex, PE, PLS
Principal
Olson Engineering, Inc.
222 E. Evergreen Blvd.
Vancouver, WA 98660
360-695-1385 WA
503-289-9936 OR
360-695-8117 FAX
kurt@olsonengr.com
www.olsonengr.com



- a. Should it later be determined that a water booster station has previously been installed by other developers or is no longer needed to provide adequate domestic and fire flows to lots above the 370 foot elevation, this area could be converted back to a residential lot.
 - b. The booster station shall require Site Plan and Design Review permits. The design of the booster station shall be similar to that of the adjacent residential structures in style (exterior materials, roofing, roof pitch, windows) and landscaping.
 - c. Any tract needed for the booster station shall not reduce the available open space on the site.
22. Prior to construction of the 181st house, or upon documented failure of the Goodwin and Ingle intersection based on GML's monitoring, whichever is earlier, the applicant shall identify, design and construct corrective measures to mitigate the following intersections to Level of Service (LOS) D or better and receive concurrence from the City of Camas and Clark County, as applicable:
 - a. NE Goodwin & Camas Meadows Drive
 - b. NE Goodwin & Alexandra Lane
 - c. NE 28th Street & NE 232nd Avenue
23. The traffic signal at NE Goodwin Road and NE Ingle Road shall be installed prior to construction of the 181st lot. If at any time monitoring of the intersection indicates that signal warrants are met prior to the construction of the 181st house, the applicant shall construct the signal at that time.
24. The applicant shall pay to the City of Vancouver a proportionate share contribution towards the construction of a northbound right turn lane on NE 192nd Avenue and a westbound right turn lane on 13th Avenue. The timing of payments shall be determined with the City of Vancouver prior to final plat approval of any phase.
25. Prior to final engineering the City and the applicant will determine the sizing and location of water facilities and any needed land for dedication for a reservoir.

Planning Division

26. Five (5) phases are approved with this decision. Modifications to the phasing plan will require approval of a modification pursuant to CMC§18.55.270-Plat amendments and plat alterations.
27. The applicant shall revise the preliminary plat to ensure that side lot lines are at right angles to the street (or radial to a curve) as practical per CMC§17.19.030 (D)(2) and (3).
28. The applicant will revise lot areas to meet the dimensional requirements of the respective zoning unless specifically modified in these conditions. An exception is not granted to exceed the dimensional standards of the zone for Lots 110 to 115, or Lots 44 to 56. Lot 26 shall be modified to provide 7,200 square feet of area as required by CMC 17.19.040.B(10)(c)

The crash rates are presented in Table 3 and are based on the number of accidents per million entering vehicles (MEV) per year. Typically, an intersection is not considered unsafe unless the accident rate exceeds the threshold of 1.0 accident per MEV.

None of the study intersections have experienced a crash rate of greater than 0.46 MEV and as a result no safety mitigation is necessary.

Table 3 Intersection Crash Rate Summary

Intersection	Accident History (Years)	Number of Accidents	Accidents per year	Annual Traffic Entering (veh/yr)	Accident rate per M.E.V.*
NE 28th Street & NE 232nd Avenue	5	1	0.2	1654537	0.12
NE 9th Street & NE 232nd Avenue	5	1	0.2	430983	0.46
NE 242nd Avenue & NE 28th St/Dresser Rd	5	0	0.0	1614361	0.00
NE 19th Street and NE 267th Avenue	5	0	0.0	2038039	0.00

* M.E.V. - million entering vehicles.

SUMMARY AND RECOMMENDATIONS

The development plan for Lacamas Heights Elementary School will construct a new 70,000 square foot building providing for a total of 600 students. The traffic impact area as defined based on input received from City of Camas transportation staff included the school's immediate frontage area and analysis of several off-site intersections including NE 232nd Avenue at the future site access points and at 28th Street, and 242nd Avenue at 28th Street, and 267th Avenue at 19th Street. The site location is shown on Figure 'a' in the report's appendix. Traffic access to the school will be provided on 232nd Avenue and is illustrated on the site plan (Figures 'b').

The new elementary school is projected to generate 774 trips per day. A total of 270 trips will be generated in the AM peak hour, 168 trips generated in the mid-afternoon peak hour, and 90 trips generated in the PM peak hour. Table 1 in the report exhibits the project trip generation.

The traffic analysis documented the impacts to the existing street system. Traffic scenarios included the weekday peak traffic hours occurring during the AM, mid-afternoon, and PM periods. Year 2015 existing traffic, year 2018 background traffic, and year 2018 total traffic scenarios were evaluated in the study.

The proposed site access on 232nd Avenue for non-bus traffic (north access) will operate at LOS 'B' or better through the year 2018 total traffic scenario. It will be necessary to install a stop sign on the proposed site access approaches to 232nd Avenue for traffic control and safety purposes. A stop bar pavement marking shall also be installed at each location.

With exception of the intersection at 28th Street and 232nd Avenue the other study intersections will operate at acceptable LOS 'D' or better during the peak hours for the existing, year 2018 background, and year 2018 total traffic scenarios. At these locations no mitigation is proposed.

For the intersection at 28th Street and 232nd Avenue the northbound stop controlled movement currently operates at LOS 'B'. In the year 2018 background scenario it will experience LOS 'E' due to

the addition of in-process traffic. For the year 2018 total traffic scenario the intersection is projected to operate at LOS 'F' in the AM and PM peak hours. The recommended mitigation includes adding a second northbound lane to create separate left and combination through/right lanes. Although the improvement will still result in LOS 'F' for the left turn movement the v/c ratio will equate to 0.88 on the stop controlled approach in the PM peak hour (year 2018 total traffic scenario, worst case). The v/c ratio combining both northbound lanes equates to a value of 0.34 at buildout. Additional improvements are not recommended because a future east-west collector street extending Ingle Road from 28th Street to 232nd Avenue includes a roundabout at the 232nd Avenue intersection (City of Camas TIF Project Locations, May 2012). When the future collector is constructed it is anticipated that the traffic volumes at 28th Street and 232nd Avenue will significantly decrease negating the need to make significant improvements as confirmed in the City's TIF Update report (May 2012, DKS) for the year 2035 scenario

The analyses determined that a westbound left turn lane is warranted for the year 2018 total traffic scenario at the intersection of 28th Street at 232nd Avenue. Installation of the westbound left turn lane is not recommended considering the LOS and queuing results (WB approach LOS 'A', 95th percentile queue of one vehicle). It is also noted that with the future Ingle Road extension between 28th Street and 232nd Avenue eastbound traffic at 232nd Avenue/28th Street will decrease benefiting the westbound to southbound movement.

Southbound left turn lanes are recommended on 232nd Avenue at the two site access locations based on the street's functional classification as an arterial, travel speed (posted 40 MPH), and safety reasons. For the non-bus (north) access the storage length will need to accommodate sufficient stacking distance for eight vehicles or 200 feet. At the south site access (bus entrance) the stacking distance should accommodate a minimum of three busses in the AM peak hour (worst case peak period) with the recommended storage length of 200 feet.

Peak hour signal warrants were determined for the study intersections.

At 28th Street and 232nd Avenue the warrant is met for the year 2018 background and total traffic scenarios. A signal installation is not recommended as the intersection will be mitigated by adding a separate northbound left turn lane.

At 28th Street and 242nd Avenue the signal warrant is met for the year 2018 total traffic scenario. The signal need has also been identified by the City as a future TIF project. However, signalization is not recommended in conjunction with new elementary school development as the intersection will experience LOS 'D' or better through the year 2018 total traffic periods and no reported crashes have been reported within the last five years.

At 19th Street and 267nd Avenue the signal warrant is met for the year 2018 total traffic scenario. However, signalization is not recommended in conjunction with new elementary school development as the intersection will experience LOS 'D' or better through the year 2018 total traffic periods and no reported crashes have been reported within the last five years.