

TECHNICAL MEMORANDUM

Project: Tukwila Elementary Site Improvements

Subject: Traffic and Access Review

Date: December 16, 2018

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The Tukwila School District is evaluating options to improve internal circulation as well as school bus and passenger vehicle load/unload facilities as part of a site renovation effort for Tukwila Elementary School, located at 5939 S 149th Street, in Tukwila, Washington. Heffron Transportation reviewed the preliminary improvement plans prepared by Rolluda Architects and conducted on-site observations of morning arrival and afternoon dismissal on Thursday, November 29, 2018. This memorandum summarizes the observations and review of the proposed plans.

1. On-Site Observations

1.1. Morning Arrival

Passenger-vehicle Drop-off and Parking: The majority of the family-drivers dropped off their child(ren) in the designated load zone, which is approximately 140 feet in length. Although there are signs prohibiting parking in the load zone, several drivers parked there and walked into the school. During the busiest portion of the arrival period (around 8:55 A.M.), there were five unoccupied vehicles parked in the load zone for five minutes or more. Since the majority of the load zone was occupied by these parked vehicles, many drivers stopped and dropped off students in the drive-lane. Morning operations could be improved with an aide present to discourage drivers from parking in the load zone.

Queues: The longest observed queue totaled 12 vehicles, which extended into S 149th Street. During the morning arrival, there were several short periods (less than a minute) when the queue extended back to the street. Family drivers also parked on S 149th Street or in open stalls on-site to drop off students, which helped reduce queuing.

School-Bus Loop: According to the school secretary, three regular-sized buses and two small buses serve the school. However, during the morning observation, there were five regular-sized buses that utilized the bus loop. Two of the five buses dropped off fewer than three students. Two small buses used the drop-off location in the school parking lot. These buses arrived prior to formation of automobile queues.

Pedestrians: Student patrols (two students in each patrol) controlled the crosswalks at S 147th Street / 59th Avenue S and across S 149th Street. A total of 18 pedestrians were observed using the crosswalk on S 149th Street. These included students walking alone and with adults. Family vehicles parked on the north side of S 149th Street between the two school driveways to drop off students, and these drivers and students crossed S 149th Street midblock. Some families entered the site using the pedestrian path at the northwest corner of the property that connects to 58th Avenue S to the bus loop.

Figure 1 provides additional information recorded during the morning observation.

1.2. Afternoon Dismissal

Passenger-vehicle Loading and Parking: Along the passenger-vehicle load area, three designated locations by last name. Parking is prohibited in these locations until the students are dismissed. Drivers must circulate either on site or on street (though limited circulation was observed onto the street) until they locate their child(ren). Children line up at the designated locations with a staff person. On the day of observation, staff waited at the three pick-up points with the students. The Principal assisted by encouraging drivers to circulate until their child(ren) were standing at their designated locations. He stated that when he does not assist, drivers do not follow the rules and will double park in the load zone. No drivers were observed parking in the lot to pick up students. Approximately 27 drivers parked on S 149th Street / 59th Avenue S and walked onto the school property. As in morning, several of the drivers who parked on S 149th Street crossed the street midblock. No illegal parking was observed.

Queues: With the loading procedure described above, the queues were primarily contained on-site. The longest observed queue included approximately eight vehicles (two of these vehicles were on S 149th Street), but the on-street spillover lasted for less than a minute.

Bus Loop: Three regular buses picked up students at the loop and all buses were full. Two small buses used the parking lot for pick-up. Three family vehicle drivers parked in the bus loop prior to the end of school. These vehicles were gone before buses departed.

Pedestrians: We were unable to quantify pedestrian volumes in the afternoon due to the volumes and dispersed patterns. Student patrols assisting crossings at S 147th Street / 59th Avenue S and across S 149th Street.

Figure 2 provides additional information recorded during the afternoon observations.

2. Review of Proposed Site Improvements

The following review comments refer to the plan set provided by Rolluda Architects titled *TUK DD 20181107* (see Figure 3). The proposal would add a new northern bay of parking with a new drive aisle. It would also enlarge the school-bus loop to the west and considers adding staff parking to the bus loop that would be loaded from the north.

Parking and Load/Unload: The existing lot is small and was approximately 80% utilized outside of the peak arrival and dismissal periods. The additional parking could provide more on-site space for drivers to use for student drop-off/pick-up and reduce use of the on-street spaces. With the additional northern segment of parking, drivers could more easily circulate within the site while waiting for their child(ren).

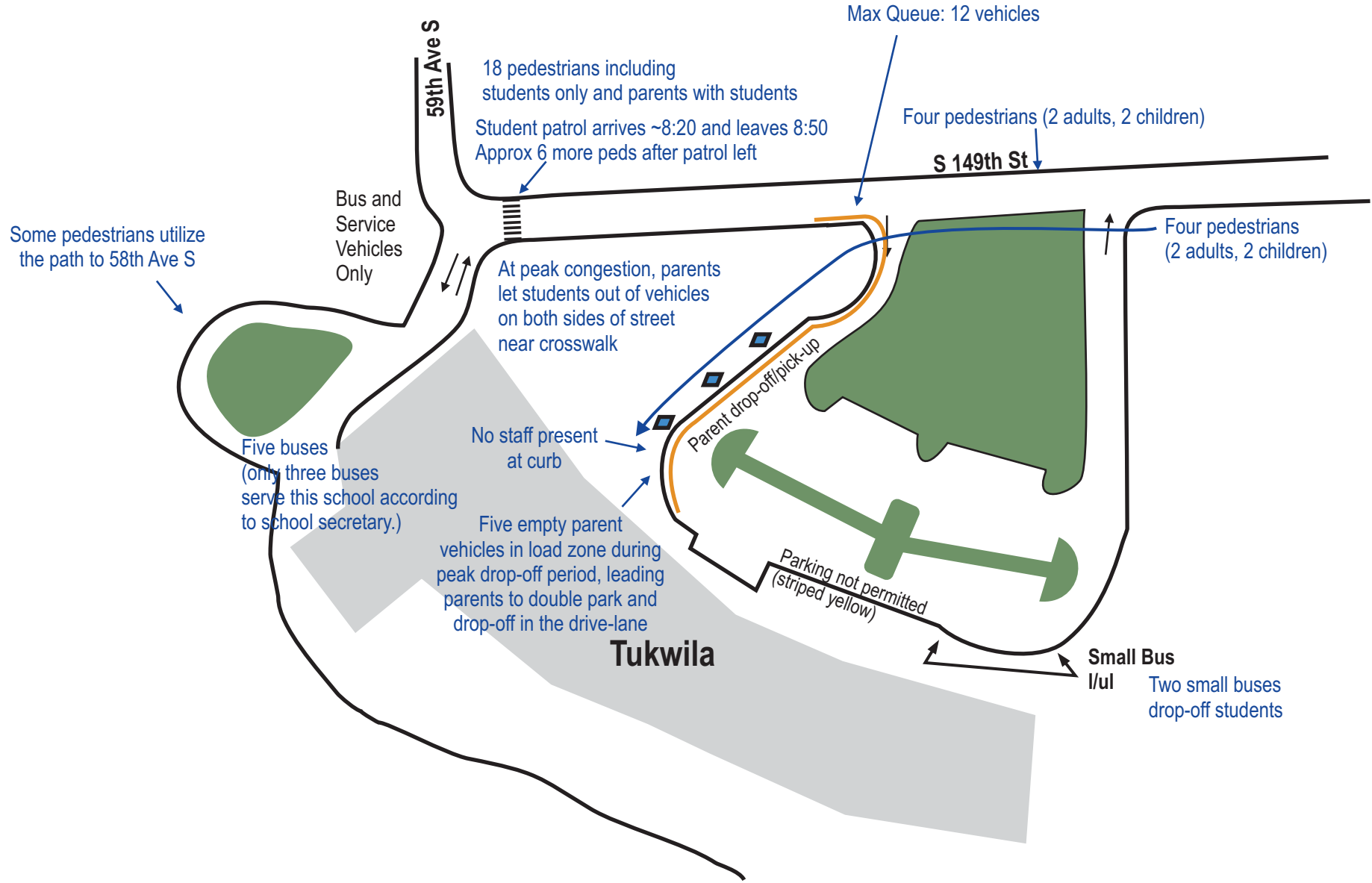
The option to add parking within the school-bus loop could provide additional parking spaces in the main lot to accommodate load/unload activities. However, this would only be useful if staff were relocated to the new stalls. Since overall operations were generally good, the benefit of the additional parking stalls may be marginal unless there is staff demand to park on that side of the building.

Pedestrians: The proposed changes are not expected to negatively impact pedestrian operations. Added parking in the main lot with a drive aisle would better accommodate on-site vehicular circulation and could reduce vehicle trips in and out of the access driveways, in turn reducing the number of vehicle trips crossing pedestrian paths at the driveways.

Attachments: Figure 1 - Morning Observations
Figure 2 – Afternoon Observations
Figure 3 – Proposed Improvements

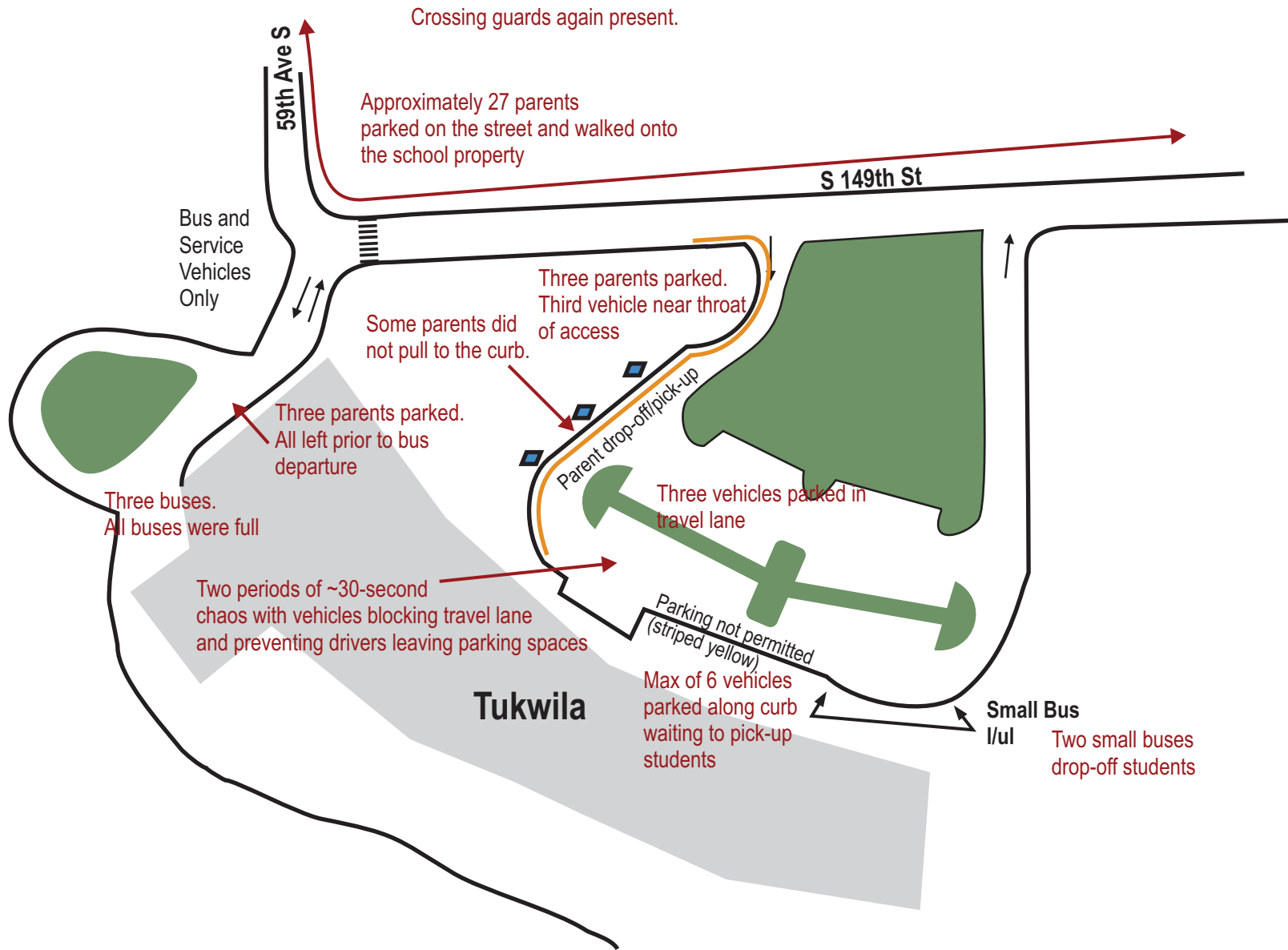


Student patrol at intersection of 59th / 147th



■ Signs designating pick-up point by last name

Figure 1
TUKWILA ELEMENTARY
Morning Observation



■ Signs designating pick-up point by last name

Figure 2
TUKWILA ELEMENTARY
Afternoon Observation

Figure 3 - Proposed Improvements

