Miller, Forrest

From: Miller, Forrest
Sent: Tuesday, December 13, 2016 12:54 PM
To: Miller, Forrest
Subject: FW: NESNR Public Hearing Follow-up
Attachments: NESNR TENW Memo to Hearing Examiner 12-12-16.pdf

Importance: High

From: Chris Forster [mailto:forster@tenw.com]
Sent: Tuesday, December 13, 2016 11:03 AM
To: Miller, Forrest <FMiller@lwsd.org>; Buck, Brian <bbuck@lwsd.org>; Denise Stiffarm <Denise.Stiffarm@pacificalawgroup.com>
Cc: Chandler, Dan <c-dchandler@lwsd.org>; Sahl, Andrew <c-asahl@lwsd.org>; Sprague, Patrick <c-psprague@lwsd.org>; Amy Wasserman <amy@tenw.com>; Jeff Haynie <haynie@tenw.com>
Subject: RE: NESNR Public Hearing Follow-up
Importance: High

Forrest,
As requested for the record, attached is PDF copy of my queue storage memo to the Examiner.

Chris Forster, P.E. | Sr. Project Manager

TENW 11400 SE 8th Street, Suite 200, Bellevue, WA 98004
forster@tenw.com | Cell: 206-498-5897

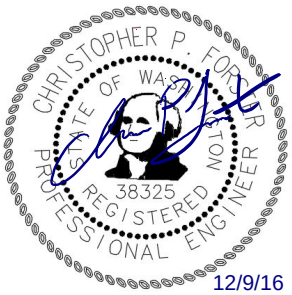
MEMORANDUM

DATE: December 12, 2016

TO: City of Redmond Hearing Examiner

FROM: Chris Forster, P.E.
TENW

SUBJECT: Clarification of Vehicle Queue Storage Recommendations
New Elementary School in North Redmond
TENW Project No. 5224



12/9/16

This memorandum provides clarification and additional explanation of the parent drop-off/pick-up queue storage recommendations in our October 28, 2016 *Updated Transportation Impact Study* for the New Elementary School in North Redmond.

As outlined in our 10/28/16 Traffic Study, TENW made two sets of vehicle queue storage recommendations depending on which scenario was assumed: Scenario 1 assumed typical bus service is provided, and Scenario 2 assumed minimal bus service is provided (requested by the City as a "worst case"). Under the worst case scenario, one could expect an increase in parent drop-off/pick-up activity requiring the recommended larger queue space. We also summarized the amount of queue storage required for "year of opening" conditions (550 students), and for a future condition assuming full occupancy of the school and 5 portable classrooms (665 students). Table 1 provides a summary of our recommended queue storage for each scenario.

Table 1
Summary of Queue Storage Recommendations

Scenario	YEAR OF OPENING (550 STUDENTS)	POTENTIAL FUTURE WITH 5 PORTABLES (665 STUDENTS)
Storage Recommendation for Scenario 1 (Typical Bus Service) =	**1,115 ft**	**1,230 ft**
Storage Recommendation for Scenario 2 (Minimal Bus Service) =	**1,420 ft**	**1,560 ft**

It is important to note that our recommendations specify the amount of queue storage, not where the queues should store (on-site or off-site). Storage could feasibly occur off-site in an on-street queuing lane that is designated and signed for drop-off/pick-up queuing during peak times. A nearby example of this is the southern parking lane on NE 104th Street that was recently converted to a drop-off/pick-up queuing lane for Horace Mann Elementary. This lane has improved traffic operations at the school during drop-off/pick-up times, while maintaining space for on-street parking at non-peak times. A similar on-street queuing lane was initially proposed for the New Elementary School in North Redmond, but the City did not accept it. In our opinion, these lanes serve as an extension of the on-site queue storage, making efficient use of existing pavement that would already exist thus reducing the need for additional pavement on-site.

We do not know of any school that accommodates all parent drop-off/pick-up queuing on-site. In our professional experience observing operations at numerous schools in Redmond and other cities, drop-off/pick-up queues extend out onto the adjacent streets at most schools. This happens for relatively short periods of time (15 minutes in the morning and 15 minutes in the afternoon) on school days. Cities typically manage this queuing on a case-by-case basis as issues arise.

As documented in our 10/28/16 Traffic Study, the amount of on-site storage shown on the current site plan (1,600 lineal feet) is unprecedented. LWSD is providing approximately 3 to 6 times the amount provided at 5 other local schools (Einstein, Rosa Parks, Horace Mann, Audubon, Redmond Elementary). This amount of on-site storage is more than we've ever seen in our professional experience working on elementary schools in other parts of Washington. Thus, this amount of on-site storage is untested. The on-site storage is also supplemented by a significant amount of on-street parking that is required to be constructed along the project frontage (560 lineal feet), which is also more on-street parking than is available at most other local schools. We believe that some parents will choose to use this on-street parking to drop-off their children or to walk them into the school, rather than wait in line in the on-site queue lane. Accounting for this, the amount of on-site queue storage provided is likely conservative.

We hope this provides clarification of our drop-off/pick-up vehicle queue storage recommendations. I would happy to answer any questions you have at the hearing on December 12. I can also be reached at (206) 498-5897 or forster@tenw.com.

cc: Dan Chandler, LWSD
Jeff Haynie, P.E., Principal, TENW