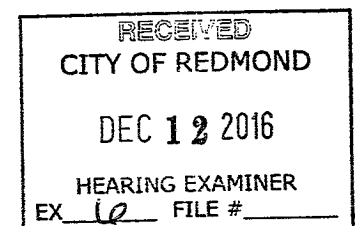


## Transportation Plan

- Good evening Hearing Examiner, ladies and gentlemen. My name is Min Luo and I am a senior transportation engineer with the City of Redmond Planning department.
- I am here to present the Transportation Plan, Onsite queuing storage and mitigation of traffic impact for the proposed North Redmond Elementary School.
- In Between, I will ask two city staff to come up to talk about some traffic issues resulting from one of the elementary schools due to inadequate queue storage space.
- First, let me start with the Transportation Plan. I am focusing on the proposed physical transportation improvements.

### **Frontage Improvements:**

- NE 122<sup>nd</sup> Street** (you can see from the plan on the right, on the north side, NE 122<sup>nd</sup> St is a local access street, the proposed improvement will include:
  - 7 foot wide on-street parking lane, curb and gutter
  - 5 foot wide planter strip
  - 6 foot wide sidewalk
- On the east side is 172<sup>nd</sup> Avenue NE**, which is classified as a collector arterial. The proposed improvements include:
  - 7 foot wide on-street parking lane, curb and gutter
  - 5 foot wide landscape strip
  - 12 foot wide bike and Ped shared path for pedestrians and bicycle users
  - 4 foot wide grave path for trail users
- Five Access Points** – The project site also proposed 5 access points. Three are on NE 122<sup>nd</sup> street and two are on 172<sup>nd</sup> Ave NE. The western one on NE 122<sup>nd</sup> St is designed as two-way access for Bus/staff/Fire vehicles. The other four access points are one-way entry or exit only to facilitate traffic in and out through two pick-up/drop off areas.
- Improvements at NE 122<sup>nd</sup> St/172<sup>nd</sup> Ave NE** – Some improvements such as widening at NW and SW corners to accommodate bus turn and crosswalk locations are also required at NE 122<sup>nd</sup> Ave St/172<sup>nd</sup> Ave NE,
- Street Lights Along both Streets** – In addition, a few street lights will be installed along both NE 122<sup>nd</sup> St and 172<sup>nd</sup> Ave NE, meeting the city's requirement.



## On-Site Queue Storage

- This slide is for the onsite queue storage, onsite traffic circulation and vehicle queue storage space are very important design elements for any elementary schools.
- ❑ Adequate Queue Storage will:
  - Prevent decrease of Street Capacity or lower street Level of service
  - ~~Minimize Blocking Street Traffic Flow~~ – Minimize blocking traffic resulting from illegal stopping, standing or parking on street or one site
  - ~~Improve Safety~~ – Improve safety for students/pedestrians and vehicles by reducing conflicts among those users
  - Improve Efficiency so pick-up/drop-off vehicles can quickly get through the site and main street traffic can pass by the school site with minimum delay
  - ~~Guidelines for Adequate Queue Storage:~~— We know adequate queue storage is important but what is considered adequate queue storage space? The applicant's traffic consultant reviewed recommendation and guidelines referenced from Institute of Transportation Engineers (or ITE)'s website. The recommendation and guidelines were based on studies conducted nationally and matrices used by other jurisdictions such as Texas Transportation institute and North Carolina Department of Transportation. Based on the guidelines, total 1,600 linear feet or approximately 70 vehicles queue storage space is proposed in the two pick-up/drop off areas, as shown on the plan.

### The City supports the proposed 1,600 linear feet queue storage for the following reasons:

- Firstly, Recommendation/guideline cited by ITE is a credible support. ITE is an international education and scientific association of more than 13,000 transportation experts and professionals, who are responsible for meeting mobility and safety needs.
- Secondly, the existing elementary schools trips rate tends to be much higher than the national average. Table 3 in the Transportation Impact Study by TENW dated October 28, 2016 shows that the trip rate per student in the AM peak hour and in the school afternoon peak hour are 85 percent higher than the ITE average trip rate, which represents more driving activity in the local elementary schools. When more driving occurs, more onsite queue storage is more likely needed.
- Thirdly, the school boundary is yet to be determined and the 1,600 linear feet queue storage is accommodated for the scenario with additional five portable classrooms and with minimum bus service and the majority of students being driven to and from school. Based on the growing population trend, the expansion to school is likely to happen and happen fast, the adequate queue storage will serve the need of school expansion and avoid redesign the site.
- Lastly, the City is taking proactive measures to prevent traffic issues present at other existing elementary schools from repeating. The proposed school is located in an existing residential neighborhood. The City needs to evaluate the potential impact closely and try our best to minimize the impacts. City staff observed and are reviewing traffic issues at Audubon Elementary school so these problems will be addressed adequately for the proposed new school.
- Next I am turning to two City staff. Rob Crittenden and Jeff Palmer from the City's traffic operations safety and engineering division are here to give you a quick overview of traffic issues at Audubon Elementary School, so you can understand the reasoning behind the required traffic mitigation for the proposed school.

- Thanks Jeff and Rob and I hope you have a better understanding the traffic problems at some other existing schools.

### Mitigation of Traffic Impact

In order to mitigate the traffic impacts, the following measures will be required:

- Frontage Improvements including curb/gutter, parking lane, landscape strip, sidewalk, street lights, crosswalk, widening at NE 122<sup>nd</sup> St/172<sup>nd</sup> Ave NE will be required.
- Potential four-way stop or two-way stop control at NE 122<sup>nd</sup> St/172<sup>nd</sup> Ave NE will be determined in the civil plan review stage.
- Traffic Operations at NE 120<sup>th</sup> Way/172<sup>nd</sup> Ave NE will be monitored for 2 years after occupancy to determine if mitigation is needed.
- Pay about one quarter of million dollars Transportation Impact Fees to help pay for signal Installation at NE 124<sup>th</sup> St/162<sup>nd</sup> PI NE in the future
- Implement active Transportation Management Program (TMP) to manage traffic on site and adjacent streets
- The public also ask when the 172<sup>nd</sup> Ave NE extension will be open in the future. There are two conditions:
  - Signal at NE 124<sup>th</sup> St/162<sup>nd</sup> PI NE has to be installed
  - Traffic Calming on NE 172<sup>nd</sup> Ave NE has to be constructed.

This concluded my presentation. Thank you!

**Why required on site queueing code cited:**

**TECHNICAL COMMITTEE REPORT**

**TO THE HEARING EXAMINER**

The conditional use is consistent with the RZC and Comprehensive Plan.

**Page 9: LU-3 Allow new development only where adequate public facilities and services can be provided.**

**Page 10**

5. The Conditional Use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.

**Response:** The proposed school will be adequately served with City approved sidewalks and safe walking conditions for students who walk to and from the school. Pedestrian and vehicular traffic will be managed by the City through a Traffic Management Plan as managed, in conjunction with information as demonstrated on the approved plan set

6. The Conditional Use will be supported by adequate public facilities or services, and will not adversely affect public services to the surrounding area or conditions are established to mitigate adverse impacts on such facilities.

**Response:** The proposed elementary school will not adversely affect public services to the surround area. Any potential impacts will be managed through the Transportation Management Plan.

## **RZC 21.52 TRANSPORTATION STANDARDS**

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### **21.52.010 Transportation Concurrency**

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A. **Purpose.** The purpose of this section is to:

1. Comply with the requirement of the Growth Management Act (GMA) that the City; “adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the Transportation Element of the Comprehensive Plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development”;