

## Edmonds School District Maintenance & Transportation Facility

Addendum to Conditional Use Permit Application (CUP-002063-2014)

December 10, 2021



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Prepared for:

Edmonds School District #15

Prepared by:

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## 1. Project Legal Description

Section 21 Township 27 Range 4 Quarter SE - YOSTS 5 ACRE TRACTS BLK 000 D-02 - LOTS 1,2,7 & 8 EXC ANY PTN WHN RAILWAYS & EXC TH PTN CNVYD TO CITY OF LYN FOR RD PER QCD REC AFN 200810150545 & 201004200690 TGW TH PTN VAC 208TH ST SW LY E OF E MGN 52ND AVE W & LY W OF W MGN 60TH AVE W TGW TH PTN VAC 48TH AVE W LY S OF S MGN 204TH ST SW & N OF N MGN PAC NW TRACTION CO R/W (AKA SEA- EV INTERURBAN RR) TGW TH PTN VAC 204TH ST SW LY W OF ELY MGN 48TH AVE W & LY E OF FOL DESC PTA: COM AT MON AT INT OF 204TH ST SW & 52ND AVE W TH S88'10 08E ALG C/L SD 204TH ST SW & ALG N LN SE1/4 SD SEC 834.05FT TO SD PT A TGW TH PTN N1/2 NE1/4 SE1/4 SD SEC LY N OF NLY BDR PAC NW TRACTION CO R/W EXC TH PTN CNVYD TO CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY BY DEED REC AFN 200211044017 PER CITY OF LYN 09BLA0002 REC AFN 20090811027 & ROS REC AFN 200908115001.

## 2. Vicinity Map



Figure 2-1: Vicinity Map

## 3. Proposal Summary

The Conditional Use Permit (CUP) for the Edmonds School District Maintenance & Transportation Facility project (CUP-002063-2014) was approved in 2014 and included the development of a two-story building, site utilities, and several parking lots. This CUP addendum is for the expansion of the existing parking lot on the western side of the project site and will include additional personal vehicle and short bus stalls, landscape planters, street lighting, a new water quality treatment, and an expanded detention pond for flow control.

Additional bus parking and associated personal vehicle parking is due to anticipated growth within the district. In addition, temporary changes were made to the site to accommodate construction by Sound Transit. These temporary changes will be restored to the conditions approved in the 2014 CUP addendum, except for the site changes described in this proposed addendum.

The total amount of parking currently proposed is less than the total parking originally permitted in the site's 2007 CUP.

The proposed CUP addendum will not be injurious to the neighborhood or otherwise detrimental to the public welfare and will be in harmony with the general purpose of LMC Title 21 – Zoning.

## **CIVIL NARRATIVE**

## **Approved Site Conditions**

- The overall project site permitted under the CUP-002063-2014 is approximately 19 acres. The area that is being revised as part of this CUP addendum is approximately 5 acres, on the western half of the property.
- Grading: The approved parking lot sheet flows into two landscape planters that run north-south along the length of the parking lot. Adjacent to the western planter strip is a grass mound that slopes from north to south with a grade difference of approximately 9 feet.
- Stormwater: The approved parking is graded to direct stormwater from pollution-generating impervious surfaces into landscape planters that provide basic water quality treatment. Treated stormwater is then routed from the north end of the planters to an existing detention pond for flow control that meets the 2005 Department of Ecology (DOE) standard.

## **Proposed Site Preparation**

- Because the proposed development encompasses more than 1 acre, erosion control measures will
  comply with the requirements of the National Pollution Discharge Elimination System (NPDES) permit
  administered by the DOE.
- The NPDES requires the development of a stormwater pollution prevention plan (SWPPP) for the period of excavation and construction. This plan will depict measures aimed at mitigating adverse stormwater impacts from construction activities. As appropriate and as necessary, the plan may include, but not be limited to: stabilized construction entrances, dust control, interceptor swales, check dams, filter fabric silt fencing, compost berms, hydro-seeding, storm drain inlet protection, straw bale barriers, a settling tank, and construction sequencing.

## **Proposed Site Improvements - Paving**

Paving will be limited as much as possible to maximize pervious groundcover. Approximately 54,600 square feet of new paving is required beyond what was shown in the original CUP in order to meet the site's needs.

- Vehicular paving will be asphalt concrete, and pedestrian paving will be portland cement concrete.
- The existing fire lane location will not be changed.

## **Proposed Grading and Drainage**

- Stormwater from the parking lot's existing and proposed pollution-generating impervious surfaces will generally be routed into stormwater planters for conveyance and collection. Stormwater that bypasses the planters will be collected by catch basins.
- Stormwater from the planters and catch basins will be routed to an enlarged detention pond. The
  enlarged detention pond meets current City of Lynnwood flow control requirements and provides flow
  control for all of Stormwater Basin 1.
- Stormwater from pollution-generating surfaces in Stormwater Basin 1 are also routed through an enhanced water quality treatment train consisting of a wet pond and cartridge treatment vault.
- The wet pond is combined with the detention pond.
- The cartridge system is downstream of the detention pond's flow control structure and uses Contech StormTech cartridges.
- Stormwater Basins 2 and 3 are not affected by this CUP addendum.

## LANDSCAPE NARRATIVE

The landscape design of the revised parking lot reinforces the native landscape character of the site, retaining as much of the existing vegetation as possible. New planting complements the existing vegetation and surrounding natural context with a combination of native and drought-tolerant plant materials. A constructed wetland is located along the north property line.

Planting areas within the parking lot's landscape islands and in other disturbed areas of the project site will meet required codes and City-wide guidelines. Temporary irrigation will be provided until the planting has been established. All planting areas will be maintained through a one-year plant establishment by the Contractor and then by the district staff in the long-term.

## **USE OF THE SITE**

The revised parking lot will be used for the same purpose as the parking lot approved in CUP-002063-2014 (to serve those associated with school bus operations, vehicle maintenance, and shop work supporting district facilities).

See the below table for a summary of the parking counts that were previously approved and currently proposed.

**Table 3-1: Approved and Proposed Parking Counts** 

	Buses	Maintenance Vehicles	Personal Vehicles	Total
2007 CUP	152	116	488	756
2014 CUP Addendum	158	59	262	479
2021 CUP Addendum	229	59	267	555

Table 3-2: List of Uses/Gross Floor Areas/Gross Lot Area

Category	Quantity
Gross Floor Area of Transportation Department	21,300 SF
Gross Floor Area Maintenance	17,100 SF
Grounds Maintenance and Storage Area	4,000 SF
Gross Lot Area	865,713 SF
Bus Parking Area	201,100 SF
Support Vehicle Parking Area	191,200 SF
Support Vehicle Parking Area	191,200 SF
Staff/Visitor Parking Area	85,400 SF
Fuel/Bus and Wash Island	7,893 SF

Table 3-3: List of Uses/Gross Floor Areas/Gross Lot Area

Category	Quantity
Site Area – Total	865,713 SF (19.78 acres)
a) Area with 50th Avenue and 48th Avenue Vacation	834,933 SF
b) 204 Street and 206 Street Vacation	30,780 SF
Building Coverage – Total	74,185 SF
Support Center Coverage	57,192 SF
Fuel Island and Wash Island Coverage	7,893 SF
Grounds Equipment Storage Sheds	4,000 SF
Covered Parking	3,900 SF
Outdoor Covered Maintenance Bay	1,200 SF
Other Impervious Surface - Total	493,100 SF
Bus Parking Paving Area	201,100 SF
Support Parking/Maintenance Yard	191,200 SF
Car Parking Paving Area	85,400 SF
Paved Walkway/Outdoor Plaza	15,400 SF
Pervious Surface/Landscaping – Total	267,648 SF
Wetland/Buffer	16,848 SF (Excludes Wetland Area)
Perimeter Landscape Buffer	43,737 SF
Area to Remain Undeveloped	93,110 SF
Landscape Planter	16,000 SF
Development Outside of Property	29,478 SF (204th Street)
Required Personal Vehicle Parking	202 Stalls
Max. Allowed Personal Vehicle Parking (per 2007 Approved CUP)	488 Stalls
Proposed Personal Vehicle Parking	267 Stalls

## 4. Lynnwood Municipal Code Review

## 21.50.150 PERFORMANCE STANDARDS - LIGHT INDUSTRIAL ZONE

All environmental or operational characteristics of a permitted use shall comply with the standards established in this section.

## A. Noise

The addition of short bus parking and personal vehicle parking to the western parking lot will have a non-significant increase to the on-site and off-site sound levels, even during the peak early morning activities between 6 and 7 AM, when a stricter noise limit applies. For the residences along 52<sup>nd</sup> Avenue West, anticipated noise levels generated on-site will remain below 50 dBA and anticipated noise levels generated off-site will remain below 65 dBA.

No changes in noise levels due to building or maintenance vehicle operation is anticipated from the approved use in CUP-002063-2014.

A noise study is included in Appendix A.

## **B.** Lighting

Industrial and exterior lighting shall not be used in such a manner that produces glare on public highways and neighboring property. Arc welding, acetylene torch cutting or similar processes shall be performed so as not to be seen from any point beyond the outside of the property.

Additional luminaires proposed as part of this CUP addendum will match the existing lights. The luminaires will be 30 feet in height and of the cut-off variety so as to eliminate light spill and glare. The parking area is not adjacent to other developable properties and is visually buffered. These lights would be in use from dusk to dawn.

## C. Fire and Safety Hazards

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## D. Electrical Interference

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## E. Odors

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## F. Smoke and Particulate Matter

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## G. Liquid and Solid Wastes

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## G. Open Storage

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## 21.50.210 ADDITIONAL DEVELOPMENT STANDARDS

## A. Building Height

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014 because no new structures or modifications to the existing structure are proposed.

## B. Setbacks for Fences

All setbacks in subsection (A) of this section shall also apply to fences, walls and hedges up to six feet high may be located in any portion of an industrial-zoned lot as long as they are not located within intersection and driveway sight distance triangles, do not obstruct driver and pedestrian visibility, comply with applicable Lynnwood Citywide Design Guidelines, as adopted by reference in LMC 21.25.145(B) (3), and are approved through project design review (Chapter 21.25 LMC).

Relocated fences will placed per the LMC.

## C. Landscaping Requirements for Sites in the Light Industrial Zone

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## D. Parking Requirements

1. Required Number of Stalls

The total project site after the proposed CUP addendum would include 267 parking spaces for personal vehicles, parking for up to 229 buses, and 59 District maintenance vehicles. The number and allocation of parking was determined based on a detailed review of the District's needs and operational requirements. The total number of parking stalls is less than what was approved in the site's original 2007 CUP. See Table 3-1 for a comparison of proposed and previously approved parking quantities.

## 2. Landscaping in Parking Areas

a. Planting at Street Frontages

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

b. Landscaping in Right-of-Way

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

- c. Coverage Ten percent of the parking areas located between buildings or between buildings and interior property lines, and single-aisles, double-loading parking areas located between buildings and the street, and 15 percent of multi-aisle parking areas located between buildings and street shall be in landscaping (exclusive of landscaping on the street frontage and required landscape buffers), provided, that:
  - No landscaping area shall be less than 100 square feet in an area or less than five feed width,
  - ii. No parking stall shall be located more than 45 feet from a landscaped area, and
  - iii. All landscaping must be located between parking stalls or between parking stalls and the property lines.

Adequate parking lot landscaping will be provided in the expanded personal vehicle parking area. The bus and maintenance vehicle parking stalls will adhere to the relaxed landscaping requirements approved in the CUP-002063-2014.

d. Landscaping Adjacent to Parking Stalls – Where landscaping areas which fulfill City standards are adjoined by angular or perpendicular parking stalls, landscaping in the form of groundcover materials or plants may be installed in that portion of any parking stall which will be ahead of the wheels and adjacent to the landscaped area, provided that curbing or wheel stops are installed in a portion which will protect the plants from damage. Such landscaping shall not be constructed to be part of the percentage of landscaped are required by this chapter nor a reduction in the parking stall.

Landscape islands are propped in the personal vehicle parking areas. Wheel stops will be provided to protect the proposed landscaping. The bus and maintenance vehicle parking stalls will adhere to the relaxed landscaping requirements approved in the CUP-002063-2014.

e. Additional Landscaping Along Specified Streets

Not applicable.

## E. Surface Water Management.

Each industrial area shall have adequate facilities for management of surface water.

The existing property consists of three stormwater basins. Only stormwater basin 1 will be affected by this proposed CUP addendum.

Stormwater basin 1 flow control will be provided to meet the current City of Lynnwood standards by enlarging the existing detention vault and installing a new flow control standpipe structure.

Water quality will be provided for the pollution-generating surfaces in stormwater basin 1 by a treatment train consisting of a wetpond and cartridge vault.

## F. Screening of Service Yards

The CUP addendum is not anticipated to significantly change the site's condition from the approved use in CUP-002063-2014.

## G. Development Standards - Cooperative Programs

Not applicable.

## LIST OF OTHER REQUIRED PERMITS

- Preliminary Design Review (PDR)
- Grading Permit

## Appendix A





Mr. Nick Chou Edmonds School District 20420 68<sup>th</sup> Avenue W Lynnwood, WA 98036

Subject: Noise Study Update for ESD Maintenance and Transportation Facility

Dear Nick,

This letter describes the updated environmental noise assessment conducted by Ramboll US Consulting (Ramboll) to consider changes to the Edmonds School District's (ESD) Maintenance and Transportation Facility in Lynnwood, Washington. Ramboll previously evaluated potential noise impacts associated with an addition of school bus parking in the western half of the facility and with a greater overall volume of school bus trips than previously assessed. This assessment considers the noise implications of the addition of 22 small or medium buses to the western parking lot.

This letter discusses the regulatory criteria applicable to the project, the methods used in the updated analysis, and the resulting conclusions.

## **Noise Standards**

### **Lynnwood Noise Regulations**

The project site is located in and regulated by the City of Lynnwood. Chapter 10.12 of the Lynnwood Municipal Code (LMC 10.12) establishes limits on the levels and durations of noise crossing property boundaries. Allowable maximum sound levels depend on the Environmental Designation of Noise Abatement (EDNA) of the source of the noise and the receiving property. Class A EDNAs are typically lands where human beings reside and sleep (e.g., residences), Class B EDNAs are lands involving uses requiring protection against noise interference with speech, including most commercial establishments, and Class C EDNAs are lands involving economic activities of such a nature that higher noise levels than experienced in other areas is normally to be anticipated (e.g., industrial uses). The applicable noise limits for each EDNA source and receiver combination are displayed in **Table 1**.

Date December 10, 2021

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Table 1. Lynnwood Maximum Environmental Noise Levels (dBA)

	EDNA of Receiving Property				
EDNA of Noise Source	Class A Day/Night	Class B	Class C		
Class A	55/45	57	60		
Class B	57/47	60	65		
Class C	60/50	65	70		
	60/50	65	70		

The limits in Class A EDNAs are reduced by 10 dBA during nighttime hours (10 PM to 7 AM). Source: LMC 10.12.500

The noise criteria in **Table 1** can be exceeded by a total of not more than 15 minutes in any one-hour period when comprised of one or any combination of the following: 5 dBA for no more than 15 minutes in any hour, or 10 dBA for no more than 5 minutes of any hour, or 15 dBA for no more than 1.5 minutes of any hour. These exceptions can be described in terms of the percentage of time a certain level is exceeded. For example, L25 represents a sound level that is exceeded 25 percent of the time, or 15 minutes in an hour. Similarly, L8.3 and L2.5 are the sound levels that are exceeded 5 and 1.5 minutes in an hour, respectively. At no time can the allowable sound level be exceeded by more than 15 dBA, represented by an Lmax noise limit. In summary, the City of Lynnwood noise limits can be represented by the L25, L8.3, L2.5, and Lmax noise descriptors.

LMC 10-12-500 identifies a number of noise sources or activities that are exempt from the noise limits shown in **Table 1**. The following sources are among those exempt:

- sounds created by motor vehicles traveling on public roads when regulated by LMC 10.12.600 (noise limits for individual vehicles)
- sounds created by warning devices (such as back-up alarms on vehicles) not operated continuously for more than five minutes

## Federal Highway Administration (FHWA)/Washington State Department of Transportation (WSDOT)

Noise from motor vehicles traveling on public roadways is exempt from the noise limits established by the City of Lynnwood. In spite of this exemption, noise from off-site vehicles has the potential to cause noise impacts. Therefore, Ramboll used federal noise impact criteria to assess the potential for impacts at residences along the primary access route to the site. Federal criteria are based on the hourly equivalent sound level (Leq), which is the level of a constant sound that has the same sound energy as the actual fluctuating sound and can be considered an energy-average sound level.

The U.S. Federal Highway Administration (FHWA) has adopted noise standards that apply to traffic noise associated with its facilities. These standards do not apply to this proposal because they are intended for use along roads controlled by state or federal agencies. However, the FHWA traffic noise limits, and the Washington state implementation of these rules through state policies, are included here to provide readers a perspective on the noise levels discussed.

The FHWA defines a traffic noise impact as a predicted traffic noise level approaching or exceeding its noise abatement criteria (e.g., 67 dBA hourly Leq for residential receivers), or when the predicted traffic noise levels substantially exceed the existing noise levels. FHWA leaves the definition of "approach" and "substantially exceed" to the states. The Washington State Department of



Transportation (WSDOT) defines "approaching" the FHWA limits as sound levels within 1 dBA of the criterion level (i.e., 66 dBA for residences). WSDOT defines "substantially exceeding" existing noise levels as an increase of 10 dBA or more.

## **Zoning and Land Use**

Land uses in the project area vary. West of the site are primarily residential uses zoned RS8 (Residential 8400 Sq Ft). North of the site across 204th Street SW is an office building zoned BTP (Business /Technical Park) and further east is the Lynnwood Park and Ride. South of the site are light industrial uses (zoned LI) and the Interurban Trail (zoned P1). Further south is I-5.

The project site is zoned LI (Light Industrial) and is a Class C EDNA noise source. Residences west of the site are considered Class A receiving properties. The applicable noise limit for a Class C EDNA noise source affecting Class A receiving properties is 60 dBA during daytime hours and 50 dBA at night, with the allowed short-term increases.

The other surrounding properties do not contain sensitive uses and would not be expected to be impacted by noise from the project and are, therefore, not considered in this assessment.

## **Existing Noise Environment**

Ramboll staff (then working as Geomatrix Consultants, Inc.) measured existing sound levels in July 2006 at a location representing the residences on 52nd Avenue W nearest the support services facility. The sound level meter captured sound levels in consecutive 1-hour intervals over a 24-hour period; it was not attended for much of the measurement period. The measurement used a Type I sound level meter placed on a tripod 5 feet above the ground. The results of the sound level measurement (SLM) are summarized in **Table 2**.

Table 2. Measured Existing Sound Levels (dBA)

SLM Location	Date	Time	Range of Hourly Levels				
	Date	Time	Leq	Lmax	L2	L8	L25
SLM1 7/26- 7/27/06		6 – 7 AM	60	82	69	65	57
		4 – 5 PM	61	81	69	66	62
		Day	59 - 62	76-85	67-71	64-67	58-63
		Night	50 - 60	70-82	60-69	51-65	47-57
Noise	, .	Day	NA	75	70	65	60
Limits		Night	NA	65	60	55	50

SLM 1 was taken at 20430 52<sup>nd</sup> Avenue W, 50 feet west of the centerline of this roadway and across 52<sup>nd</sup> Avenue from the Edmonds School District property. Noise sources noted during meter setup and retrieval included traffic along 52<sup>nd</sup> Ave W (when present) and noise from other nearby roadways, including I-5. The measured sound levels are representative of residences nearest the project site.

Source: Sound level measurements by Geomatrix Consultants, Inc. 2006

## **On-site Operational Noise Impacts**

The noisiest hours of on-site activity at the new support services facility are anticipated to be during the peak morning and afternoon school bus departures and arrivals, typically occurring between 6-7



AM and 4-5 PM, weekdays. The morning departure occurs during an hour when the stricter nighttime noise limits apply. Therefore, the operational noise assessment focused on activities between 6 and 7 AM including the following:

- Morning bus departure consisting of start-up, idling, and exiting of buses
- Morning staff arrival on-site
- Bus maintenance activities
- Operation of a compressor to support maintenance activities

These activities/equipment are described in more detail below.

## **Morning Bus Departure and Staff Arrival**

To assess bus start-up noise, Ramboll used previously measured sound levels of a school bus storage facility morning departure procedure. During the hour-long measurement in our previous study, approximately 34 buses exited the site. Sound level measurements of morning bus departure revealed an L25 of 64 dBA at 50 feet from the end of a row of buses and an Lmax of 78 dBA at 50 feet from a passing bus. Note that the measurements were of large school buses. For this assessment, we estimated that small to medium buses would be at least 1-dBA quieter than large buses during this startup and morning departure procedure.

The ESD provided Ramboll with bus traffic volumes for small, medium, and large buses exiting the site between 6 and 7 AM. Ramboll assessed 33 small to medium buses completing the morning pre-trip routine in the west parking lot and 72 large buses in the east. Ramboll also assessed 125 staff vehicles driving on the west side of the facility to their assumed parking spots and 21 staff entering and parking to the east. The previous analysis completed in 2014 considered 90 buses all located to the east of the facility and did not include on-site staff vehicles.

## **Maintenance Activities**

Routine bus maintenance would occur inside the maintenance building during times when buses are not needed for service. Therefore, most maintenance would occur between the morning and afternoon runs or in the evening. Occasionally, a bus getting ready for departure will need a lightbulb changed or will need a jump start. These are not particularly noisy activities and are not included in this analysis of maintenance noise.

The amount of noise generated by vehicle maintenance is highly variable. Most servicing generates very little noise and would not be audible in the neighborhood. Occasionally, however, operations that generate noise are necessary. The noisiest activities include fast idling of buses and work requiring the use of pneumatic tools/impact drivers (e.g., air wrenches).

The proposed location of the bus maintenance facility is near the middle of the site, approximately 700 feet from the nearest residences west of 52nd Avenue W. The maintenance bays would face north and south and would be at an oblique angle to the residences along 52nd Avenue W. Maintenance activities would occur inside of the building. Even with the maintenance bay doors open, the building would provide some noise reduction from these activities, and the bay doors are typically closed during use of the louder tools. Therefore, noise from these activities is not expected to be audible at nearby residences and is not included in this assessment.



## Compressor

A screw compressor is proposed to be installed to support maintenance activities. The compressor would be installed outside adjacent to the east wall of the maintenance building. The sound level identified for the compressor is 69 dBA at a distance of approximately 3 feet.

### **Modeled Sound Levels**

Ramboll conducted noise modeling of the on-site sources using the CadnaA noise model, which estimates sound levels at distant receptors based on ISO 9613-2 calculation methods. CadnaA considers frequency-specific sound level data, topography, intervening buildings, barriers, atmospheric conditions, and other factors. The model allows the user to input frequency-specific sound level data based on measurements or manufacturer specifications.

Using CadnaA, project-related sound levels were calculated at four model receptor locations representative of the nearest residences west of the site (see attached **Figure 1**). As shown in **Table 3**, the model-calculated sound levels of the primary on-site noise-producing activities are 50 dBA or less at the nearest residences to the site. This complies with the City of Lynnwood's nighttime noise limit of 50 dBA applicable before 7 AM and also falls far below the measured existing sound level of 57 dBA. Therefore, the changes to the on-site bus parking and site access are not expected to result in any noise impacts.

Table 3. Model-Calculated Sound Levels of On-site Activities/Equipment (L25, dBA)

Source	R1	R2	R3	R4
Morning Bus Departure	42	47	50	43
Compressor	6	4	0	0
Total	42	47	50	43
Lynnwood Noise Limit (6 – 7 AM)	50			

## **Off-site Traffic Noise Impacts**

The proposed facility would result in increased traffic volumes on the primary access routes to the site, particularly on 52nd Avenue W. To assess the potential for traffic noise impacts at residences on 52nd Avenue W, Ramboll predicted future sound levels using CadnaA's TNM module.<sup>1</sup>

Traffic data provided by Heffron Transportation, Inc. (Heffron) for the initial project in 2006 included existing (2006) traffic volumes on area roadways and a detailed breakdown of project-related trip distribution percentages for buses and automobiles. Ramboll estimated existing traffic volumes for 2021 using Heffron's 2006 traffic volumes and Lynnwood's estimated traffic growth of 2% a year. ESD provided Ramboll with the project-related traffic volumes during morning departure, and that hour is considered for the off-site traffic noise assessment.

Except for the traffic directly attributable to the proposed project, the existing and future traffic vehicle mix (i.e., the breakdown of traffic into passenger vehicles, medium and heavy-duty trucks, buses, and motorcycles) was not provided by Heffron. Instead, the vehicle mix was captured by traffic counts taken by Ramboll personnel. This vehicle mix was applied to the base traffic volumes used for the future modeled scenarios.

<sup>&</sup>lt;sup>1</sup> The CadnaA TNM module used in this analysis applies the same algorithms and vehicle noise emission data used by the FHWA Traffic Noise Model (TNM).



Ramboll predicted traffic noise levels at locations representing residences on 52<sup>nd</sup> Avenue W, north of 204<sup>th</sup> Street SW, between 204<sup>th</sup> and 206<sup>th</sup> Streets W, and south of 206<sup>th</sup> Street SW. **Table 4** displays the results of noise calculations for the existing conditions and with the Project.

Table 4. Predicted Off-site Traffic Sound Levels AM Peak Hour (Leq, dBA)

At Residences on 52 <sup>nd</sup>	Baseline	\	With ESD Facility			
Avenue W	(2021)	Project	Increase	Impact?		
North of 204 <sup>th</sup> Street SW	61	65	4	No		
Between 204th and 206 <sup>th</sup> Streets SW	60	64	4	No		
South of 206 <sup>th</sup> Street SW	59	63	3	No		

Note: Apparent discrepancies in calculated increases in sound levels are due to rounding to the nearest whole number and not to incorrect arithmetic.

**Table 4** shows that the model-calculated sound levels of traffic on 52<sup>nd</sup> Avenue W and on 204<sup>th</sup> Street SW as received at the receptor locations fall below the 66 dBA considered an impact by WSDOT for both baseline conditions (without facility traffic) and with the ESD Facility. In addition, the predicted project increase of 3 to 4 dBA at each location would not be viewed by WSDOT as "substantially exceeding" the existing sound levels and would not constitute an impact. Therefore, noise impacts from the proposed project due to an increase of traffic on off-site roadways would result in only slight impacts to nearby residences.

## Conclusion

The noise study finds that the ESD Maintenance and Transportation Facility with the proposed changes to the parking areas is expected to comply with the Lynnwood noise limits. Compliance is expected even during peak early morning activities between 6 and 7 AM, when a stricter noise limit applies. In addition, no noise impacts are expected on local roadways due to project-related increases in traffic traveling to and from the facility.

Please do not hesitate to contact me at (425.412.1807 or <a href="kwallace@ramboll.com">kwallace@ramboll.com</a>) if you have any questions or comments.

Yours sincerely,

Kristen Wallace

Kristen Wallace

Principal

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DATED: 4/29/2021 | DESIGNER: SBURF

LEGEND

Site Boundary

Receptors

East Bus Lot

West Bus Lot 500

1,000

Edmonds School District Lynnwood, WA

FIGURE 01

SENSITIVE RECEPTORS AND SITE LAYOUT MAINTENANCE AND TRANSPORTATION FACILITY

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL





Mr. Nick Chou Edmonds School District 20420 68<sup>th</sup> Avenue W Lynnwood, WA 98036

Subject: Noise Study Update for ESD Maintenance and Transportation Facility

Dear Nick,

This letter describes the updated environmental noise assessment conducted by Ramboll US Consulting (Ramboll) to consider changes to the Edmonds School District's (ESD) Maintenance and Transportation Facility in Lynnwood, Washington. Ramboll evaluated potential noise impacts associated with an addition of school bus parking in the western half of the facility and with a greater volume of school bus trips than previously assessed. In the previous assessment all school bus parking was located in the eastern half of the facility.

This letter discusses the regulatory criteria applicable to the project, the methods used in the updated analysis, and the resulting conclusions.

## **Noise Standards**

## **Lynnwood Noise Regulations**

The project site is located in and regulated by the City of Lynnwood. Chapter 10.12 of the Lynnwood Municipal Code (LMC 10.12) establishes limits on the levels and durations of noise crossing property boundaries. Allowable maximum sound levels depend on the Environmental Designation of Noise Abatement (EDNA) of the source of the noise and the receiving property. Class A EDNAs are typically lands where human beings reside and sleep (e.g., residences), Class B EDNAs are lands involving uses requiring protection against noise interference with speech, including most commercial establishments, and Class C EDNAs are lands involving economic activities of such a nature that higher noise levels than experienced in other areas is normally to be anticipated (e.g., industrial uses). The applicable noise limits for each EDNA source and receiver combination are displayed in **Table 1**.

Date April 25, 2021

Ramboll 19020 33rd Avenue West Suite 580 Lynnwood, WA 98036 USA

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Table 1. Lynnwood Maximum Environmental Noise Levels (dBA)

	EDNA of Receiving Property			
EDNA of Noise Source	Class A Day/Night	Class B	Class C	
Class A	55/45	57	60	
Class B	57/47	60	65	
Class C	60/50	65	70	

The limits in Class A EDNAs are reduced by 10 dBA during nighttime hours (10 PM to 7 AM). Source: LMC 10.12.500

The noise criteria in **Table 1** can be exceeded by a total of not more than 15 minutes in any one-hour period when comprised of one or any combination of the following: 5 dBA for no more than 15 minutes in any hour, or 10 dBA for no more than 5 minutes of any hour, or 15 dBA for no more than 1.5 minutes of any hour. These exceptions can be described in terms of the percentage of time a certain level is exceeded. For example, L25 represents a sound level that is exceeded 25 percent of the time, or 15 minutes in an hour. Similarly, L8.3 and L2.5 are the sound levels that are exceeded 5 and 1.5 minutes in an hour, respectively. At no time can the allowable sound level be exceeded by more than 15 dBA, represented by an Lmax noise limit. In summary, the City of Lynnwood noise limits can be represented by the L25, L8.3, L2.5, and Lmax noise descriptors.

LMC 10-12-500 identifies a number of noise sources or activities that are exempt from the noise limits shown in **Table 1**. The following sources are among those exempt:

- sounds created by motor vehicles traveling on public roads when regulated by LMC 10.12.600 (noise limits for individual vehicles)
- sounds created by warning devices (such as back-up alarms on vehicles) not operated continuously for more than five minutes

## Federal Highway Administration (FHWA)/Washington State Department of Transportation (WSDOT)

Noise from motor vehicles traveling on public roadways is exempt from the noise limits established by the City of Lynnwood. In spite of this exemption, noise from off-site vehicles has the potential to cause noise impacts. Therefore, Ramboll used federal noise impact criteria to assess the potential for impacts at residences along the primary access route to the site. Federal criteria are based on the hourly equivalent sound level (Leq), which is the level of a constant sound that has the same sound energy as the actual fluctuating sound and can be considered an energy-average sound level.

The U.S. Federal Highway Administration (FHWA) has adopted noise standards that apply to traffic noise associated with its facilities. These standards do not apply to this proposal because they are intended for use along roads controlled by state or federal agencies. However, the FHWA traffic noise limits, and the Washington state implementation of these rules through state policies, are included here to provide readers a perspective on the noise levels discussed.

The FHWA defines a traffic noise impact as a predicted traffic noise level approaching or exceeding its noise abatement criteria (e.g., 67 dBA hourly Leq for residential receivers), or when the predicted traffic noise levels substantially exceed the existing noise levels. FHWA leaves the definition of



"approach" and "substantially exceed" to the states. The Washington State Department of Transportation (WSDOT) defines "approaching" the FHWA limits as sound levels within 1 dBA of the criterion level (i.e., 66 dBA for residences). WSDOT defines "substantially exceeding" existing noise levels as an increase of 10 dBA or more.

## **Zoning and Land Use**

Land uses in the project area vary. West of the site are primarily residential uses zoned RS8 (Residential 8400 Sq Ft). North of the site across 204th Street SW is an office building zoned BTP (Business /Technical Park) and further east is the Lynnwood Park and Ride. South of the site are light industrial uses (zoned LI) and the Interurban Trail (zoned P1). Further south is I-5.

The project site is zoned LI (Light Industrial) and is a Class C EDNA noise source. Residences west of the site are considered Class A receiving properties. The applicable noise limit for a Class C EDNA noise source affecting Class A receiving properties is 60 dBA during daytime hours and 50 dBA at night, with the allowed short-term increases.

The other surrounding properties do not contain sensitive uses and would not be expected to be impacted by noise from the project and are, therefore, not considered in this assessment.

## **Existing Noise Environment**

Ramboll staff (then working as Geomatrix Consultants, Inc.) measured existing sound levels in July 2006 at a location representing the residences on 52nd Avenue W nearest the support services facility. The sound level meter captured sound levels in consecutive 1-hour intervals over a 24-hour period; it was not attended for much of the measurement period. The measurement used a Type I sound level meter placed on a tripod 5 feet above the ground. The results of the sound level measurement (SLM) are summarized in **Table 2**.

Table 2. Measured Existing Sound Levels (dBA)

SLM Location Da	Date	Time	Range of Hourly Levels				
	Date	Time	Leq	Lmax	L2	L8	L25
SLM1 7/26- 7/27/06	6 – 7 AM	60	82	69	65	57	
	7/26-	4 – 5 PM	61	81	69	66	62
	7/27/06	Day	59 - 62	76-85	67-71	64-67	58-63
		Night	50 - 60	70-82	60-69	51-65	47-57
Noise		Day	NA	75	70	65	60
Limits		Night	NA	65	60	55	50

SLM 1 was taken at 20430 52<sup>nd</sup> Avenue W, 50 feet west of the centerline of this roadway and across 52<sup>nd</sup> Avenue from the Edmonds School District property. Noise sources noted during meter setup and retrieval included traffic along 52<sup>nd</sup> Ave W (when present) and noise from other nearby roadways, including I-5. The measured sound levels are representative of residences nearest the project site.

Source: Sound level measurements by Geomatrix Consultants, Inc. 2006



## **On-site Operational Noise Impacts**

The noisiest hours of on-site activity at the new support services facility are anticipated to be during the peak morning and afternoon school bus departures and arrivals, typically occurring between 6-7 AM and 4-5 PM, weekdays. The morning departure occurs during an hour when the stricter nighttime noise limits apply. Therefore, the operational noise assessment focused on activities between 6 and 7 AM including the following:

- Morning bus departure consisting of start-up, idling, and exiting of buses
- Morning staff arrival on-site
- Bus maintenance activities
- Operation of a compressor to support maintenance activities

These activities/equipment are described in more detail below.

## **Morning Bus Departure and Staff Arrival**

To assess bus start-up noise, Ramboll used previously measured sound levels of a school bus storage facility morning departure procedure. During the hour-long measurement in our previous study, approximately 34 buses exited the site. Sound level measurements of morning bus departure revealed an L25 of 64 dBA at 50 feet from the end of a row of buses and an Lmax of 78 dBA at 50 feet from a passing bus. Note that the measurements were of large school buses.

The ESD provided Ramboll with bus traffic volumes for small, medium, and large buses exiting the site between 6 and 7 AM. Although the smaller buses would likely have lower sound levels, Ramboll conservatively assumed that all buses were large and were represented using the previously measured sound levels. Ramboll assessed 22 buses completing the morning pre-trip routine in the west parking lot and 72 buses in the east. Ramboll also assessed 114 staff vehicles driving on the west side of the facility to their assumed parking spots and 21 staff entering and parking to the east. The previous analysis completed in 2014 considered 90 buses all located to the east of the facility and did not include on-site staff vehicles.

## **Maintenance Activities**

Routine bus maintenance would occur inside the maintenance building during times when buses are not needed for service. Therefore, most maintenance would occur between the morning and afternoon runs or in the evening. Occasionally, a bus getting ready for departure will need a lightbulb changed or will need a jump start. These are not particularly noisy activities and are not included in this analysis of maintenance noise.

The amount of noise generated by vehicle maintenance is highly variable. Most servicing generates very little noise and would not be audible in the neighborhood. Occasionally, however, operations that generate noise are necessary. The noisiest activities include fast idling of buses and work requiring the use of pneumatic tools (e.g., air wrenches). Ramboll staff reviewed sound levels of bus maintenance activities measured as part of previous noise studies and found that the loudest activity was an air wrench with a measured sound level of 74 dBA at a distance of 100 feet from an open bay. The proposed location of the bus maintenance facility is near the middle of the site, approximately 700 feet from the nearest residences west of 52nd Avenue W. The maintenance bays would face north and south and would be at an oblique angle to the residences along 52nd Avenue W. Maintenance activities would occur inside of the building. Even with the maintenance bay doors open, the building would provide some noise reduction from these activities.



## Compressor

A screw compressor is proposed to be installed to support maintenance activities. The compressor would be installed outside adjacent to the east wall of the maintenance building. The sound level identified for the compressor is 69 dBA at a distance of approximately 3 feet.

## **Modeled Sound Levels**

Ramboll conducted noise modeling of the on-site sources using the CadnaA noise model, which estimates sound levels at distant receptors based on ISO 9613-2 calculation methods. CadnaA considers frequency-specific sound level data, topography, intervening buildings, barriers, atmospheric conditions, and other factors. The model allows the user to input frequency-specific sound level data based on measurements or manufacturer specifications.

Using CadnaA, project-related sound levels were calculated at four model receptor locations representative of the nearest residences west of the site (see attached Figure 1). As shown in **Table 3**, the model-calculated sound levels of the primary on-site noise-producing activities are 49 dBA or less at the nearest residences to the site. This is below the City of Lynnwood's nighttime noise limit of 50 dBA applicable before 7 AM and also falls far below the measured existing sound level of 57 dBA. Therefore, the changes to the on-site bus parking and site access are not expected to result in any noise impacts.

Table 3. Model-Calculated Sound Levels of On-site Activities/Equipment (L25, dBA)

Source	R1	R2	R3	R4
Morning Bus Departure	41	46	48	42
Maintenance Activities (a)	46	40	42	29
Compressor	6	4	0	0
Total	47	47	49	42
Lynnwood Noise Limit (6 – 7 AM)			50	

<sup>(</sup>a) The sound level displayed is for the loudest activity, i.e. use of an air wrench. Sound levels of other maintenance-related activities are expected to be much lower.

## **Off-site Traffic Noise Impacts**

The proposed facility would result in increased traffic volumes on the primary access routes to the site, particularly on 52nd Avenue W. To assess the potential for traffic noise impacts at residences on 52nd Avenue W, Ramboll predicted future sound levels using CadnaA's TNM module.<sup>1</sup>

Traffic data provided by Heffron Transportation, Inc. (Heffron) for the initial project in 2006 included existing (2006) traffic volumes on area roadways and a detailed breakdown of project-related trip distribution percentages for buses and automobiles. Ramboll estimated existing traffic volumes for 2021 using Heffron's 2006 traffic volumes and Lynnwood's estimated traffic growth of 2% a year. ESD provided Ramboll with the project-related traffic volumes during morning departure, and that hour is considered for the off-site traffic noise assessment.

<sup>&</sup>lt;sup>1</sup> The CadnaA TNM module used in this analysis applies the same algorithms and vehicle noise emission data used by the FHWA Traffic Noise Model (TNM).



Except for the traffic directly attributable to the proposed project, the existing and future traffic vehicle mix (i.e., the breakdown of traffic into passenger vehicles, medium and heavy-duty trucks, buses, and motorcycles) was not provided by Heffron. Instead, the vehicle mix was captured by traffic counts taken by Ramboll personnel. This vehicle mix was applied to the base traffic volumes used for the future modeled scenarios.

Ramboll predicted traffic noise levels at locations representing residences on 52<sup>nd</sup> Avenue W, north of 204<sup>th</sup> Street SW, between 204<sup>th</sup> and 206<sup>th</sup> Streets W, and south of 206<sup>th</sup> Street SW. **Table 4** displays the results of noise calculations for the existing conditions and with the Project.

Table 4. Predicted Off-site Traffic Sound Levels AM Peak Hour (Leq, dBA)

At Residences on 52 <sup>nd</sup>	Baseline	With ESD Facility			
Avenue W	(2021)	Project	Increase	Impact?	
North of 204 <sup>th</sup> Street SW	61	64	3	No	
Between 204th and 206 <sup>th</sup> Streets SW	60	63	3	No	
South of 206 <sup>th</sup> Street SW	59	62	3	No	

**Table 4** shows that the model-calculated sound levels of traffic on 52<sup>nd</sup> Avenue W and on 204<sup>th</sup> Street SW as received at the receptor locations fall below the 66 dBA considered an impact by WSDOT for both baseline conditions (without facility traffic) and with the ESD Facility. In addition, the predicted project increase of 3 dBA at each location would not be viewed by WSDOT as "substantially exceeding" the existing sound levels and would not constitute an impact. Therefore, noise impacts from the proposed project due to an increase of traffic on off-site roadways would result in only slight impacts to nearby residences.

## Conclusion

The noise study finds that the ESD Maintenance and Transportation Facility with the proposed changes to the parking areas is expected to comply with the Lynnwood noise limits. Compliance is expected even during peak early morning activities between 6 and 7 AM, when a stricter noise limit applies. In addition, no noise impacts are expected on local roadways due to projectrelated increases in traffic traveling to and from the facility.

Please do not hesitate to contact me at (425.412.1807 or <a href="kwallace@ramboll.com">kwallace@ramboll.com</a>) if you have any questions or comments.

Yours sincerely,

Kristen Wallace

Kristen Wallace

Principal

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LEGEND

Site Boundary

Receptors

West Bus Lot

East Bus Lot

500

Edmonds School District Lynnwood, WA

MAINTENANCE AND TRANSPORTATION FACILITY

FIGURE 01

RAMBOLL

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

## Appendix B 2019 CUP Letter



December 18, 2019

Ms. Ashley Winchell, AICP City of Lynnwood Planning & Zoning P.O. Box 5008 Lynnwood, WA 98046

Subject: Edmonds School District Maintenance & Transportation Facility

L300 Phase 1 Construction Parking – Conditional Use Permit Amendment

File Number: CUP-002063-2014

## Dear Ashley:

The purpose of this letter is to provide notice of Sound Transit's intent to construct parking lot improvements on behalf of Edmonds School District (ESD) at their Maintenance & Transportation Facility (M&TF), located at 20525 52nd Avenue West in the City of Lynnwood, Washington.

As a result of the Sound Transit Lynnwood Link Extension L300 project, the eastern half of the ESD M&TF property is needed for construction staging to allow installation of the light rail aerial guideway. Currently, the affected property serves as parking for the ESD school bus fleet. During construction of L300, bus parking will need to shift to the west portion of the M&TF site.

The parking modification will occur in two phases: Phase 1 "Construction Phase" and Phase 2 "Final Configuration."

Phase 1 will be the condition at M&TF during the time that Sound Transit is constructing L300. This phase consists of constructing bus and car parking lots on the west half of the District property. The impacted site area is approximately 4 acres, with the goal of providing a total of 81 small bus stalls, 100 large bus stalls, 160 passenger vehicle stalls and 7 accessible stalls through either new paving or restriping existing paving. Phase 1 also includes site demolition, removal of the existing 7,030-cubic-yard dirt stockpile, lighting and utility infrastructure, and installation of a drainage collection and conveyance system tying into the L300 construction drainage system. The bus parking lot will be paved with asphalt and the car parking lot would be paved with gravel. Construction phase improvements will be in place and in use until summer of 2023.

Once the construction phase comes to an end, Phase 2 work will commence, which will generally consist of:

- 1. Removing the gravel passenger vehicle parking lot and restoring the area to the preconstruction conditions of soil and hydroseed.
- 2. Modifying the paved bus parking lot into a passenger vehicle parking lot conforming to current City of Lynnwood development and drainage codes.

Ms. Ashley Winchell, AICP December 18, 2019 Page 2

We anticipate that Phase 2 improvements will be complete no later than summer of 2024 so the final lot can be opened for the start of fall semester of the 2024 school year.

As discussed previously, we understand that since Phase 1 improvements are part of the construction phase of the larger L300 project, no amendment to the Conditional Use Permit (CUP) is required at this time. A CUP amendment and a Project Design Review Application may be required as part of the permitting for Phase 2 work depending on extent of improvements proposed at that time.

Thank you for your attention to this matter. If you have any questions or comments, please contact me at (206) 926-0412 or at marty.chase@kpff.com.

Sincerely,

Martin F. Chase, PE

Principal

MFC:heh

1900272

# Appendix C **SEPA Status**

Land Use Environmental Analysis Permitting Public Policy 2716 Colby Avenue Everett, WA 98201

f: 425.259.4448 www.shockevplanning.com Celebrating service excellence since 1980!

December 3, 2021

Planner Community Development Department City of Lynnwood 20816 44<sup>th</sup> Avenue West, Suite 230 Lynnwood, WA 98036

## RE: Edmonds School District No. 15 Maintenance and Transportation Facility CUP Addendum SEPA Compliance

Dear Planner,

Shockey Planning Group represents the Edmonds School District in their role as "lead agency" under SEPA. This site/project has been the subject to previous SEPA reviews. The proposal being submitted for a conditional use permit and project design review differs from that which was originally analyzed in 2019 and was the subject of a SEPA addendum; therefore, our office is working with the District on an addendum. We anticipate issuing the addendum in the coming weeks and will ensure that the City of Lynnwood receives a copy for their records. We acknowledge that SEPA must be addressed prior to a formal decision by the City on the application.

If you have any questions regarding SEPA, please do not hesitate to call me at 425-258-9308 or by email at canderson@shockeyplanning.com.

Sincerely,

SHOCKEY PLANNING GROUP, INC.

and Isl

Camie Anderson

Principal

Cc: Nick Chou, ESD

Cano Li