# City of Hermiston – West Park Elementary School



# **Baseline Data Evaluation Report**

#### FINAL July 27, 2022

### Introduction

This case study evaluation measures the impacts of Oregon Safe Routes to School (SRTS) 2021 Competitive Construction Grants in communities across the state. The evaluation will assess the effectiveness of individual SRTS projects, techniques, and programs designed to reduce barriers to biking and walking to and from school. Evaluation research questions include:

- What are the impacts for standalone construction grants, and combined outreach and education and construction grants?
- How do different combinations of interventions effectively address the barriers identified by communities and affect mode shift; safety; and perceptions of safety, program lifespan, and equity?

This Baseline Data Evaluation Report represents the "pre-construction" data and provides an overview of existing travel conditions and school site attributes. This report summarizes the funded improvement project, demographics of affected schools, and data from Oregon Department of Transportation (ODOT) and local roadway authority crash records, caregiver surveys, and student travel hand tallies. It is intended to contain the majority of the information needed to plan for the post-construction data collection.

#### Plan for the Final Case Study Evaluation Report

The Final Case Study Evaluation Report will represent the "post-construction" data. A draft outline for this report is included in Appendix A. For data consistency, the post-construction data will be collected as soon as possible after construction is complete, likely starting in spring 2023. This will reduce weather-related impacts and also allow time during the school year for families to establish or change their travel habits. In addition to the standard caregiver surveys and student travel hand tallies, post-construction data collection methods for the evaluation report may also include: caregiver focus groups and surveys or interviews with school staff.

The Final Case Study Evaluation Report will measure shifts using the evaluation metrics laid out in this document to identify the successes of SRTS projects and provide insight on opportunities for further improvement. SRTS performance metrics measured during this evaluation process will include:

- Mode split: Are more students walking and biking to school after a project's completion than at the time of baseline data collection?
- Access to safe infrastructure: Do students have better access to sidewalks, bike lanes, or safe crossing locations on their route to school after the completion of the project?
- Safety/perception of safety: Do caregivers and students feel safer or more comfortable walking and biking to school after the project's completion?
- Program lifespan/partnerships: Is the SRTS program functioning efficiently and providing adequate support for partner jurisdictions, schools, and districts?

• **Equity:** Are students from a diversity of ethnic/racial and socioeconomic backgrounds benefiting from the investments being made?

In addition to reporting on grant effectiveness, data presented in the Baseline Data Evaluation Report and the Final Case Study Evaluation Report could be used for a variety of transportation and program planning purposes at the local level. Having a comprehensive set of quantitative data and qualitative feedback on transportation conditions and trends around these sites could help inform decisions on school/district policy, SRTS event and program planning by schools/districts/local jurisdictions, and planning for future infrastructure projects, as well as provide supporting documentation for future grant applications.

# Baseline SRTS Snapshot: West Park Elementary

### **Summary**

West Park Elementary School is a public elementary school serving students in the City of Hermiston and rural Umatilla County. West Park Elementary is a Title 1 school, with more than 70% of students eligible for the Federal Free and Reduced-Price Lunch Program. English and Spanish are the primary languages spoken by students, and 45% of students are registered as Ever English Learners.

City staff identified West Park Elementary School as a high priority site for SRTS improvements due the absence of sidewalks. On the west side of the highway, there is no sidewalk, on the other side, there is only a small shoulder for students to use to get to the existing signalized intersections at Orchard or Highland Ave.

The Oregon SRTS 2020 Competitive Grant funded the construction of 700 feet of new sidewalk on the west side of OR207 between Orchard Ave. and Highland Ave.

In addition to these planned infrastructure improvements, the city has reached out to the Hispanic Community Advisory Committee that represents a majority of families living near the project area and has shown support for the project with a letter submitted with the Rapid Response application.

Key information from West Park Elementary Staff Interview:

Approximately 15% of students ride in a family vehicle to and from school and the same number walk to school; 69% of students take the school bus to and from school. Very few students were reported to be biking to/from school.

### **Contact Information**

JURISDICTION:	City of Hermiston
CONTACT:	Teresa Penninger, teresa.b.penninger@odot.state.or.us
SCHOOL DISTRICT:	Hermiston School District
CONTACT:	ODOT: (541) 963-1344
OTHER CONTACTS:	Tricia Mooney, Superintendent, Hermiston School District, communications@hermiston.k12.or.us

# **Enrollment and Demographics**

West Park Elementary School is a Title 1 public school enrolling 510 students in Kindergarten through 5th grade. The school serves low-income populations in the City of Hermiston, approximately 77% of students are eligible for the Free and Reduced-Price Lunch Program. English and Spanish are the primary languages spoken by students, and 45% are registered to be Ever English Learners.<sup>2</sup>

ENROLLMENT: 510 <sup>3</sup>	GRADE LEVELS SERVED AND SCHOOL TYPE: K-5 <sup>th</sup> , Public
STUDENT ETHNIC/RACIAL DEMOGRAPHICS:  American Indian/Alaska Native: >1% Asian: <1% Black/African American: <1% Hispanic/Latino: 71% Multiracial: 2% Native Hawaiian/Pacific Islander: <1% White: 26%	PREDOMINANT LANGUAGES SPOKEN IN GREATER HERMISTON PUBLIC SCHOOL DISTRICT: <sup>4</sup> English:3359 Spanish:1953 Mayan Language: 146
STUDENTS LIVING WITHIN 1 MILE OF SCHOOL: NA	TITLE 1 STATUS: Yes <sup>5</sup>
EVER ENGLISH LEARNERS: 45% <sup>6</sup>	FREE AND REDUCED-PRICE LUNCH ELIGIBILITY: 77.4% <sup>7</sup>

<sup>&</sup>lt;sup>2</sup> Unless otherwise noted below, demographic data are from the Oregon Department of Education Fall Membership Report SY2020-2021 Data, <a href="https://www.oregon.gov/ode/reports-and-data/students/Pages/Student-Enrollment-Reports.aspx">https://www.oregon.gov/ode/reports-and-data/students/Pages/Student-Enrollment-Reports.aspx</a>

<sup>&</sup>lt;sup>3</sup> Oregon Department of Education, SY 2020-2021 https://www.ode.state.or.us/data/reportcard/Media.aspx

<sup>&</sup>lt;sup>4</sup> Oregon Department of Education Language Use Survey, SY 2020-2021 https://www.oregon.gov/ode/schools-anddistricts/grants/ESEA/EL/Pages/LanguageUseSurvey.aspx

<sup>&</sup>lt;sup>5</sup> Title 1 schools are schools where 40% or more of students are enrolled in USDA's Free and Reduced-Price Meals Program. Oregon Department of Education, SY 2018-2019 https://www.oregon.gov/ode/schools-and-<u>districts/reportcards/Pages/Accountability-Measures.aspx</u>

<sup>&</sup>lt;sup>6</sup> Oregon Department of Education, SY 2020-2021 https://www.ode.state.or.us/data/reportcard/Media.aspx

<sup>&</sup>lt;sup>7</sup> Oregon Department of Education, SY 2020-2021 https://www.oregon.gov/ode/students-andfamily/childnutrition/cacfp/Documents/Site%20Eligibility%20for%20CACFP%20and%20SFSP.pdf

## Community Context and Place Type

Place type describes attributes of a built environment, including: access to destinations, density, walkability, mixing of uses, and presence of transit. The evaluation team compiled Oregon Department of Land Conservation and Development's (DLCD) measures of <u>place type</u> for each community studied.<sup>8</sup> Each attribute is rated as "Very Low, Low, Medium, or High" by block group. Place type characteristics provide important context for transportation opportunities and challenges in a community and influence the transportation decisions people make.

West Park Elementary School is located in the City of Hermiston and the County of Umatilla. According to the Place Type Tool, the area surrounding West Park Elementary School is categorized as Suburb/ Town, meaning it has lower densities of jobs and/or housing and lower accessibility to regional jobs. Lower densities decrease multi-modal access to jobs. With 754 people residing and 288 people working within the census block group, the development type is characterized as employment. The area has a medium level of access to regional employment centers and destinations, and a high mix of uses; however, the overall level of street connectivity in the area is characterized as "very low."

AREA TYPE describes the role of each neighborhood district compared to the rest of the region (regional center, close-in community, suburban/town, low density/rural)

#### Suburb/Town

- Lower densities of jobs and/or housing
- Lower accessibility to regional jobs
- Lower densities decrease multi-modal access to jobs

DEVELOPMENT TYPE describes more detailed physical characteristics of each neighborhood (transit supportive development, mixed use, employment, residential, rural/ low density):

#### **Employment**

- Land use is dominated by commercial or industrial activities
- Low diversity of land uses
- Jobs/Housing balance: mostly jobs
- Missing either the density or street design required of mixed use

JURISDICTION POPULATION (ACS 5-YEAR ESTIMATES):

City of Hermiston 574 people

CENSUS BLOCK GROUP POPULATION (2010):

NUMBER OF JOBS IN CENSUS BLOCK GROUP (2010):

ACCESS TO DESTINATIONS describes the number of regional jobs within 5 miles:

Medium

DENSITY LEVEL- jobs and households per acre within ¼ mile:

Low

DESIGN LEVEL- level of street connectivity, pedestrian-oriented street density:

Very Low

DIVERSITY LEVEL- Mix of housing and employment:

High

<sup>8</sup> More information about OLCD's Place Type Tool is available at: <a href="https://www.oregon.gov/lcd/CL/Pages/Place-Types.aspx">www.oregon.gov/lcd/CL/Pages/Place-Types.aspx</a>

# **Project Description**

A map of the project improvements from the West Park Elementary grant application is included in Appendix B.

**PROBLEM** STATEMENT: This project lies within an area that has a mix of commercial, residential homes and lowincome apartments which generate a good deal of people walking along OR207. Children living west of OR207 need to cross the highway to get school. The biggest problem is that no sidewalk exists on the west side of the highway and to make matters worse there is only one foot or less of paved shoulder for students to walk on to get to the existing signalized intersections at Orchard or Highland Ave.

**DESCRIPTION OF BARRIERS TO** WALKING AND BIKING:

There is an existing sidewalk to the west on private property that leads students from their homes to the highway. The sidewalk ends short of the highway, leaving children to find their own way to cross. Children traveling to school in this area either continue walking along the highway on a very narrow shoulder to get to the signalized intersection at Orchard or Highland or cross the highway, make their way through the sidewalk network at the Butter creek Apartments, and then access Juniper Avenue that leads to West Park Elementary on SW 7th Street or further east to Hermiston High School or south to Armand Larive Middle school.

**PROJECT DESCRIPTION:**  The primary purpose of this project is to construct 700 feet of new sidewalk on the west side of OR207 between Orchard Ave. and Highland Ave. As part of the sidewalk installation, a sixfoot paved shoulder is necessary to provide separation from the travel lane. A six-foot shoulder allows for a bicycle lane that will be striped accordingly.

**ESTIMATED** PROJECT TIMELINE:

October 2022 Completion

PRIORITY SAFETY CORRIDOR?9

Yes

**OUTREACH AND EDUCATION:** 

The proposed project was discussed with the School District and City officials. The city has reached out to the Hispanic Community Advisory Committee that represents a majority of families living near the project area and has shown support for the project with a letter submitted with the Rapid Response application.

Hermiston School District promotes walking and bicycling through education and encouragement. Classroom teachers provide general instruction regarding safety protocols that students should follow when walking and bicycling to and from school. Region 5

<sup>&</sup>lt;sup>9</sup> A road where the posted speed or 85<sup>th</sup> percentile speed of traffic is 40 mph or greater OR where two of the following apply: posted speed limit of 30 mph or greater, more than two lanes or a crossing distance greater than 30 feet, 12,000 AADT or greater, or a demonstrated history of crashes related to school traffic.

Transportation Safety Coordinator is available to facilitate, presentations, safety protocols for students who walk and bicycle to and from school as a part of the school's safety program.

## Access Analysis for Students Walking and Biking to School

The project team conducted an analysis to estimate the number of people who would gain walking and biking access to West Park Elementary School when the project improvements are constructed, shown in Table 1 and Figure 1. First, the project improvements were evaluated to understand the geographic areas that would gain safe access to the school once the funded project was constructed. Next, American Community Survey (ACS) data was combined with zoning data to estimate the number of people and the number of school-age children that live within the new access areas.

This analysis estimates that approximately 49 students, or 13% of the school-aged population living within a mile of the school, would gain safer walking or biking access to the school.

Table 1. Access Analysis Results

METRIC	VALUE
Total Population of New Access Areas	188
School Age Population of New Access Areas 10	49
Percentage of Students within the School Areas Gaining Access 11	13%

<sup>&</sup>lt;sup>10</sup> Calculated using the proportion of school-age children (5-17 years old) within the City of Hermiston.

<sup>&</sup>lt;sup>11</sup> The School Area is defined as the area within the school enrollment area that is within one mile of the school.

Figure 1. West Park Elementary New Access Area for Students Walking and Biking



West Park Elementary School Students with New Access to Walking and Biking

Estimated Number of Students: 49 Proportion of Students within 1 Mile: 13% To view the methods for this analysis, please see Appendix.







### **Baseline Data**

The following section presents pre-construction data, which will be compared against similar data collected after the project has been constructed, in order to estimate the impact of the improvements.

#### **Staff Interview**

DATA COLLECTION PROCESS: Staff interview with Christine Meyers, Attendance Secretary

#### SUMMARY OF DATA COLLECTION AND METHODOLOGY

Due to the COVID-19 pandemic and the risk in conducting in-person travel tallies at West Park Elementary, Christine Meyers, the Attendance Secretary at the school, provided the Alta Planning + Design Safe Routes to School team an account of current travel conditions at West Park Elementary. Christine Meyers answered questions about typical travel mode-share to and from West Park Elementary at the time of the interview.

#### SUMMARY OF RESULTS

West Park Elementary staff interview data from 2022 indicates that a majority of students (69%) surveyed ride the school bus in the morning and in the afternoon (see Figure 2 and Table 2). Family vehicles and riding the school bus were tied for the second most common travel mode with 15% of students traveling by each mode in the morning and in the afternoon. Only 1% of West Park students traveled by bicycle in the morning or afternoon and other travel modes such as carpool and transit were used by none of the students.

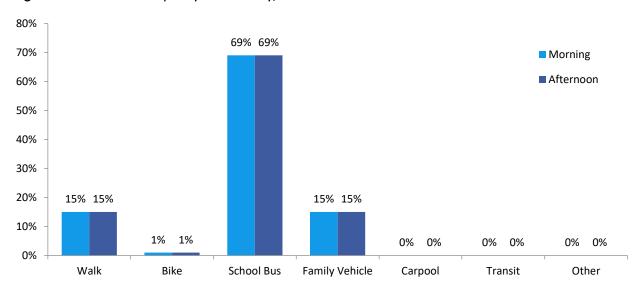


Figure 2. Student Mode Split by Time of Day, 2022 Staff Interview

Note: Percentages may not total 100% due to rounding.

### **Caregiver Surveys**

DATE COLLECTED:	April 2022
DATA COLLECTION PROCESS:	The Oregon Department of Transportation SRTS caregiver survey was distributed electronically to caregivers at West Park Elementary School to assess family perceptions about school travel options and behavior. The survey was available in English and Spanish.
NUMBER OF SURVEYS:	4 responses

#### SUMMARY OF DATA COLLECTION AND METHODOLOGY

The caregiver survey data included in this report was collected in April of 2022 from four participants with students attending West Park Elementary. Alta Planning + Design staff created a promotional flier which included details about the Safe Routes to School program, project contact information, and a link to the online survey. Caregivers who completed the survey were entered into a raffle for a walking/biking safety kit.

#### **SUMMARY OF RESULTS**

Four caregiver surveys were returned during the survey participation window, which is not a sufficient amount of data to base conclusions on; however, anecdotally, two of the surveyed caregivers indicated that "no crossing guards" was a top concern of theirs, and three indicated that "poor driving behavior on streets near school" was another concern.

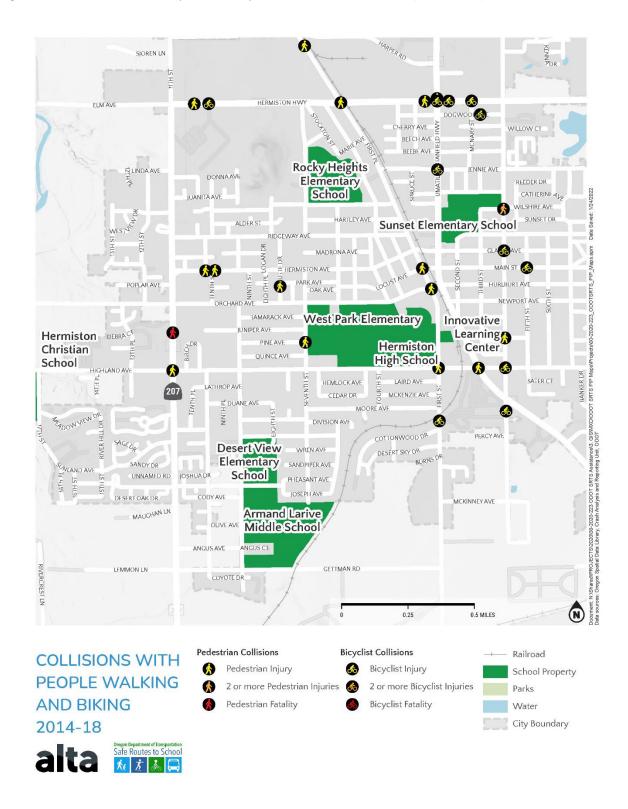
### Crash Data

DATE COLLECTED:	2014-2018
DATA COLLECTION PROCESS:	Crash data included in this report originates from relevant roadway jurisdictions, as well as the ODOT SRTS Web Map Application for the years 2014-2018. This analysis does not determine whether the grant intervention caused any change in the occurrence of crashes, due to small sample size. Additionally, due to insufficient mode split data to calculate crash rates, this report offers a count and description of reported incidents.
NUMBER OF REPORTED CRASHES INVOLVING BIKES AND PEDESTRIANS WITHIN 1 MILE OF SCHOOL:	Between 2014 and 2018, 26 crashes involving a bicyclist or pedestrian were reported within one mile of the school.
TIME OF REPORTED CRASHES INVOLVING BIKES AND PEDESTRIANS WITHIN 1 MILE OF SCHOOL*:	Twenty-two of these reported crashes occurred during school commuting hours; the rest occurred outside these hours.  * For these purposes school commuting hours were defined as 6 AM to 9 PM.
NUMBER OF REPORTED INJURIES BY SEVERITY WITHIN 1 MILE OF THE SCHOOL:	All 26 of these reported crashes involved an injury to a bicyclist or pedestrian. Nine of the reported crashes involving a bicyclist were non-fatal, one was fatal. Of the 16 reported crashes involving a pedestrian, 15 were non-fatal and one was fatal. Figure 3 illustrates the location of the crashes by type and injury severity. (Note that some crashes may be shown on the map that are not included in this total; they occurred outside a 1-mile radius from the school. Additionally, some crash icons may be beneath others if they occurred at the same location).
ADDITIONAL CRASH DATA CONSIDERATIONS:	N/A

Notes on Community Context or Other Relevant Information:

None.

Figure 3: West Park Elementary School Bicycle & Pedestrian Collisions (2042-2018)



# Follow-Up Data Collection Plan

### Timeline

Post-grant field visits to collect follow-up data will be scheduled to take place the spring following the completion of each grant intervention. The City of Hermiston estimates the project will be completed by October 2022.

### Follow-up Data Collection Process

METHOD	PLANNED AT THIS SITE?	TARGET SAMPLE SIZE	TARGET FIELD WORK DATE
STUDENT HAND TALLIES:	Yes	At least 2 classrooms per grade per school	Early spring 2023 (assuming project completion)
CAREGIVER SURVEYS:	Yes	At least 30 caregivers per school	Early spring 2023 (assuming project completion)
CAREGIVER FOCUS GROUPS:	Yes	4-10 caregivers	Early spring 2023 (assuming project completion)
STAFF SURVEYS:	Yes	1-3 school staff and administration	Early spring 2023 (assuming project completion)
COMMUNITY SURVEYS:	Yes	At least 20 community members	Early spring 2023 (assuming project completion)
CRASH DATA:	Yes	N/A	N/A
OTHER:	None	N/A	N/A

# Appendix A. Final Report DRAFT Outline

Note: The following Final Report outline is subject to change.

### **Chapter 1. Introduction**

- **Description of SRTS Construction Grant Program**
- Description of Final Report purpose and contents

#### SUMMARY OF FUNDED INFRASTRUCTURE IMPROVEMENTS

- Project description
- Map of improvements
- Project timeline

#### **BACKGROUND**

- School demographics
- Summary of Non-Infrastructure SRTS Work
- Place Type

### **Chapter 2. Data Collection and Results**

#### HAND TALLY DATA

- **Data Collection Methods**
- Change in walking and biking rates

#### **CAREGIVER SURVEY DATA**

- Data Collection Methods
- Change in mode split by distance from school
- Change in barriers to walking and biking
- Change in perceptions of walking and biking
- Other observations

### **FOCUS GROUPS**

- **Data Collection Methods**
- Change in barriers to walking and biking
- · Change in perceptions of walking and biking

#### CRASH DATA

- Data included in analysis
- Change in crash data (If available, otherwise this will provide updated baseline crash data from ODOT)

### **Chapter 3. Findings**

- Impact of Infrastructure improvements on mode split
- Impact of Infrastructure Improvements on Access to Safe Infrastructure

- Impact of improvements on safety/perception of safety
- Impact of infrastructure improvements on Program lifespan/partnerships
- Impact of infrastructure improvements on equity
- Other Findings
- Next Steps and Recommendations

# Appendix B. Competitive SRTS Infrastructure Grant Funded **Project Map**

Application did not include a Project Map.

# Appendix C. Access to SRTS Detailed Methodology

### **Purpose**

The access map analysis was designed to estimate the number of students with new or significantly improved access to school upon the implementation of a proposed walking or biking facility. While determining the number of students who benefit from a proposed project is not an exact science, this analysis provides a common approach that utilizes school district boundaries, census population data and local zoning codes to generate rough estimates. These estimates lend greater insight into the impact of a particular Safe Routes to School project, allowing facility improvements to be compared and thus aid in prioritizing investments. This memo outlines the data sources, methods, and assumptions that inform the access map analysis described in this report.

### **Data Sources**

Three primary data sources were used in this analysis in conjunction with the information provided in each project application:

Name	Source
American Community Survey (ACS) Population Estimates	<u>US Census Bureau</u>
Oregon School District Boundaries	Oregon Department of Education
2017 Oregon Statewide Zoning Map	Oregon Department of Land Conservation and Development

### **Methods**

The analysis establishes two geographical areas in which census block population data are apportioned to: 1) the school area and 2) the access area. The school area is defined as the area that is within a 1-mile radius of the applicant school or within the enrollment boundary, whichever is closer. This area covers residents within reasonable walking or biking distance of the school. The access area is the area that covers all residents who would experience new or significantly improved access to school upon the implementation of the proposed walking or biking facility.

Once both of these areas were established, the consultant team identified the census blocks that intersect each. We then apportioned the population data from the census blocks to the school area and the access area, based on the relative coverage of each census block. To account for varying residential densities in each census block, we used residential zoning data to determine the proportion of the population that should be attributed to the school area and access area.

After the estimated populations of both the school area and the access area are calculated, the local jurisdiction's youth rate is applied to each to get the number of people ages 5-17 in those areas, which we refer to as the "school age population." Finally, the school age populations of the access area and the school area are compared. The percentage of school age students with new or improved access to school represents the proportion of students impacted by the project out of all the students in the school area who could reasonably walk or bike to school.

## **Defining the Access Area**

The boundary of the school area is readily calculable using GIS and the rules described above. By contrast, the access area boundary was determined manually based on the project description and professional judgement of impact. While this method inherently includes subjective judgement, the high variability and nuance in the transportation context surrounding the proposed project makes this method more suitable for determining the residential areas apportioned that would benefit from its implementation than a purely GIS-based workflow. The following assumptions and rules of thumb were adopted in order to make the assessment of the access areas as uniform as possible:

- 1. The analysis assumes people are willing to "walk around the block" half the distance of their street in the opposite direction of school in order to utilize a safe path to school.
- 2. The analysis assumes that Google Earth Street view imagery is up to date, as this was used to determine sidewalk connectivity and condition, which informed the access areas.
- 3. Places without sidewalks, particularly in small towns, are considered walkable if the street is narrow, residential, and designed for a low volume of traffic (i.e., lacks a centerline)
- 4. The access areas consider ADA accessibility and account for those in wheelchairs or other mobility
- 5. The access areas may include residents who have to walk more than one mile to school, based on the available street network.
- 6. Even if some residents may have already had access to school, they might be included in the access area if the proposed project would significantly improve their access to school.

## **Apportioning Census Population Data**

As described above, census population data was apportioned to both the school area and the access area based on how much a census block covered them. However, to account for varying population densities across census blocks, residential zones in the census blocks were identified.

The statewide zoning data provided by the Oregon Department of Land Conservation and Development groups residential zones across all jurisdictions in the state into 13 categories of increasing density. Our team further consolidated these categories into just 4: Low Density, Medium-Low Density, Medium-High Density, and High Density. We then weighted these categories by their relative density compared to Low Density:

Residential Zone Group	Population Density Factor
Low Density	1
Medium-Low Density	2
Medium-High Density	5
High Density	15

These factors serve to more accurately distribute the population data across the residential zones within the census block. In other words, if the census block contained only Low-Density residential zones, then the population of any given area within that census block is equal to the proportion of the census block that that area covers. By contrast, if a census block contains Low Density residential zones and High-Density zones, we attribute 15 times the population of the census block to the High-Density zones than the Low-Density zones. The density factors were determined using the typical number of dwellings per acre in each zone.

The analysis uses these four zoning categories to identify the spatial distribution of the population of the census block and apportion it to the overlaying school area and access areas based on how much those areas cover the residential zones of the census block.

### **General Assumptions**

- This analysis assumes that the Oregon Statewide Zoning code reflects the actual residential densities of the current built environment.
- Areas that were zoned for housing that had no development on them according to the latest satellite imagery (and therefore significantly impacted the output) were removed from the analysis in order to improve the accuracy of the estimates. This was only utilized in a few low-population jurisdictions.
- For rural schools with no local residential zoning reported, the population of the appropriate block group is assumed to be evenly distributed across the school zone and the percentage of people served is equal to the percentage of the school zone covered by the new access area.
- This analysis assumes that families are evenly distributed between each of the four residential zone groups.
- The reported number of school-age students includes all students ages 5-17, not just elementary or middle school students. Thus, the number of students who actually attend the applicant school is likely much lower than the reported figure.