Exhibit D

TACOMA PUBLIC SCHOOLS
EVERY STUDENT. EVERY DAY.

Planning & Construction
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STATE ENVIRONMENTAL POLICY ACT

Determination to Retain DNS

Regarding: **Whittier Elementary School Replacement**

As the responsible official appointed pursuant to Tacoma School District Policy 3568, "Compliance with State Environmental Policy Act," I have reconsidered the Declaration of Non-significance which was issued on October 10, 2025 for the subject project, have determined that public notice was given as required by applicable regulations, have considered all comments received, and, therefore, determine that the Determination of NonSignificance issued for the subject project is **RETAINED** pursuant to WAC 197-11-340.

Dated this 6th day of November, 2025.

Morris Aldridge
Executive Director of Planning and Construction
Tacoma School District No. 10

Exhibit D

A. Background

1. **Name of proposed project, if applicable:**

   Whittier Elementary School

2. **Name of applicant:**

   Tacoma Public Schools (applicant)

3. **Address and phone number of applicant and contact person:**

   Applicant: Morris Aldridge, Planning and Construction
   Tacoma Public Schools
   Central Administration Building
   601 South 8th Street, Tacoma, WA 98405
   (253) 571-3364

   Agent: Kellie Bower, Principal
   Kaiser Bower Design & Consulting
   (206) 714-3518

4. **Date checklist prepared:**

   October 14, 2025

5. **Agency requesting checklist:**

   Tacoma Public Schools

6. **Proposed timing of schedule (including phasing, if applicable):**

   Phase 0 (Early mobilization)– May 2026 to June 2026

   Phase 1 – June 2026 to July 2027

   Phase 2A – July 2027 to August 2027 (building completion)

   Phase 2B – September 2027 to October 2027

   Phase 2C – November 2027 to December 2027

   Phase 3 – Project Completion

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   No other future additions, expansions, or activities are connected with this proposal at this time.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   None known.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   There are no other pending applications or government approvals impacting this project to our knowledge.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    - SEPA Review and Determination – Tacoma Public Schools
    - Conditional Use Permit – City of Fircrest
    - Site Development Permit – City of Fircrest
    - Building Permits – City of Fircrest
    - Electrical Permit – Tacoma Public Utilities
    - NPDES Permit – Department of Ecology
    - Health Permits – Pierce County Health

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.**

    The new approximately 46,000 sf Whittier Elementary school is a replacement of the existing Whittier Elementary school and will serve approximately 380, pK-3 students. Students and staff will remain on campus during construction. It is anticipated that a portion of Whittier Park will be utilized for construction staging and restored upon completion. Targeted completion for the new building is Fall 2027, with the remaining site improvements completed December 2027. The scope of work includes the development of a new building, covered play structure, utility infrastructure, on-site and off-site improvements, and demolition of existing buildings.

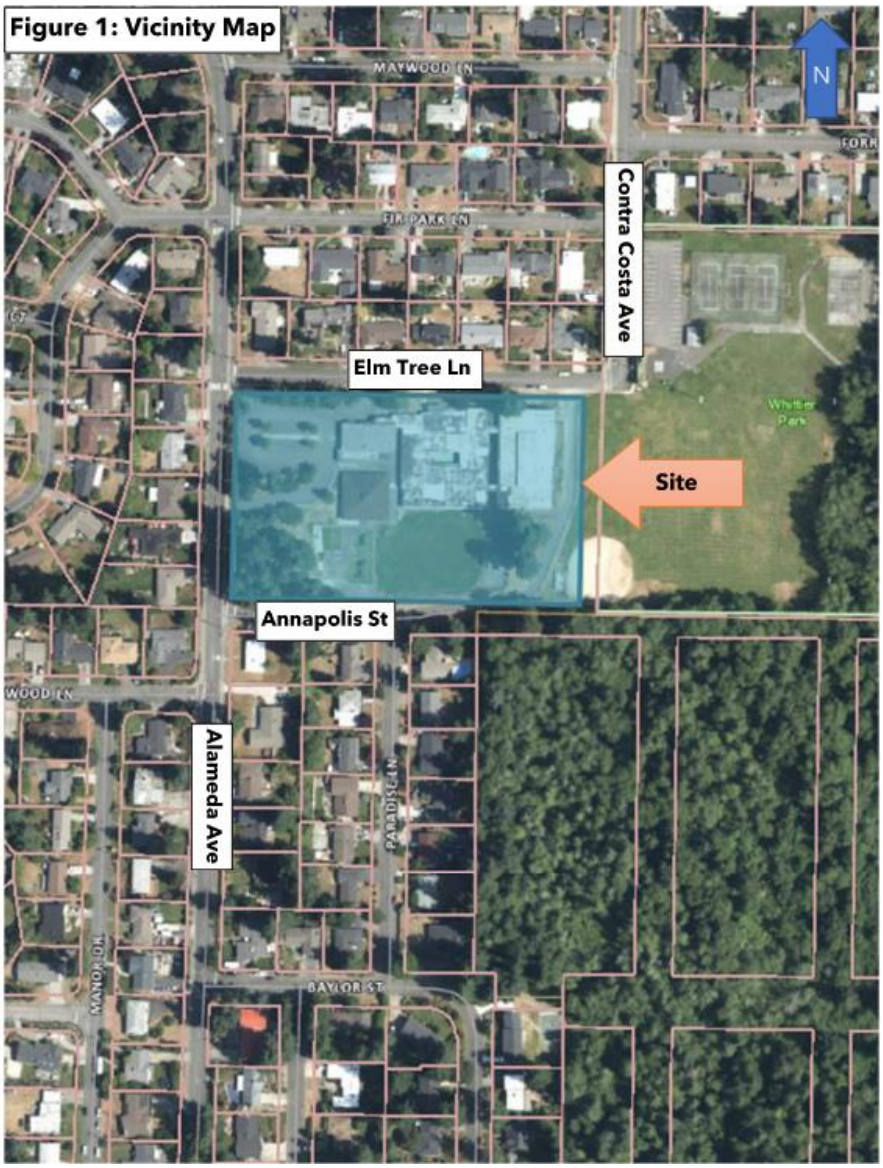
12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

    The site is located at 777 Elm Tree Lane in Fircrest, WA (Pierce County). The site is comprised of a single parcel #0220114002 that is listed at 4.96 acres in size. The site is bordered to the west by Alameda Ave (major collector), north by Elm Tree Lane (residential), south by Annapolis Street (residential) and to the east by City of Fircrest owned Whittier Park.

Legal Description:

Section 11 Township 20 Range 02 Quarter 43 : SW OF SW OF SE EXC N 264 FT EXC N 30 FT & E 30 FT & S 20 FT & W 30 FT FOR STS SUBJ TO EASE.

Vicinity Map



B. Environmental Elements

1. Earth

a. General description of the site: Vegetated spaces are located throughout with several clusters of large trees peppering the site and a large open lawn space at the southeast corner.

Circle or highlight one: flat, rolling, hilly, steep slopes, mountainous, other:

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 45% at the southeast corner of the site.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Existing fill of varying thickness (up to 8 feet) over glacial outwash over glacial till soils. Fill is generally loose to medium/medium to dense silty sand across the site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None known.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Earthwork excavation and filling will occur as necessary to establish subgrade elevations for redevelopment of the site. Approximately 3.3 acres of the site will be affected by earthwork operations, with an anticipated cut volume of 7,900 CY and fill volume of 7,200 CY. The source of fill will be suitable on-site soils and/or locally sourced clean imported structural fill.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

Yes. The site contains hilly terrain with slopes generally in the range of 10% to 25% sloping to the east. Clearing, grading and construction activities could expose soils to rainfall and surface runoff, which may result in localized erosion if left unmanaged. Temporary erosion and sediment control best management practices will be utilized to minimize erosion potential and protect downstream receiving water.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The existing site's impervious surface area is 59%. The proposed design will not exceed this and is targeting to decrease impervious surface where feasible. About 55% of the proposed site will be covered with impervious surfaces as part of this project, including existing parking surfaces to remain.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

Temporary Erosion and Sediment Control best management practices will be implemented under a Construction Stormwater Pollution Prevention Plan, such as stabilized construction entrances, silt fencing, covering stockpiles, straw waddles, Baker tanks, sediment trap, etc. During dry season earthwork soil will be moistened.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction activities have the potential to create temporary dust emissions during earth-moving activities and exhaust emissions due to the combustion of gasoline and diesel fuels. Dust may occur during periods of dry weather when earthwork / grading activity is underway. Dust and exhaust emissions are expected to be minimal, localized, and temporary. After construction, no additional emissions to air are anticipated to result from the proposal.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site air emissions or odors that may impact the proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

The Following (BMP's) Best Management Practices will be utilized to control emissions and air quality during construction.

Dust Control and Suppression (Particulate Matter)

- Water Sprays and Misting: Apply water to exposed soil, haul roads and material stockpiles.
- Surface Stabilization: (1) Provide temporary hydroseeding (erosion control mix design) to stabilize non active, disturbed areas. (2) Use of gravel or crushed stone on permanent

haul roads and construction entrances/exits to reduce dust. (3) Placement of paving on high-traffic areas as soon as feasible.

- Material and Waste Management: (1) Cover exposed stockpiles of fine materials (i.e. Sand, soils or demolition debris with plastic sheeting to prevent wind erosion and airborne particles.
    - Construction Equipment and Vehicle Emissions Control Alternative Fuels and Technology: Where possible, use electric or hybrid equipment to reduce air pollution and emissions.
    - Limit Idling: Implement anti-idling policy requiring equipment and vehicle operators to turn off engines when not in use for more than a few minutes. (Note: Some equipment will be required to run idle to warm up prior to use)
    - Efficient Operations: Minimize on-site travel by publishing the dedicated routes and limitation of vehicles speeds.
    - Sequence optimization: Reduce the overall duration of high-emission phases (Earthwork and Demolition) by providing the most efficient sequence for subcontractors.

Indoor Air Quality (During Construction)

- Low-VOC Materials: Use of building materials, paints, adhesives, sealants and coatings that are low-emitting VOCs.
- Ventilation Protection: Provide temporary seals to protect heating, ventilation and air conditioning (HVAC) systems and ductwork from contamination during construction. High-efficiency filters will be replaced/installed prior to the building being occupied.
- Wet Materials Curing: Store and allow wet materials (paints, adhesives, sealants) to fully cure and off-gas contaminants in well-ventilated areas before installing highly absorptive materials like carpets and acoustical ceilings.

3. Water

a. Surface:

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Leach Creek Holding Basin, owned by City of Tacoma, is a regional detention and water quality facility located to the southeast of the site, with portions of this basin identified as wetlands of an unknown classification. Stormwater within the broader Leach Creek Watershed including the project site, is piped into the Leach Creek Holding Basin, which discharges to Leach Creek. Leach Creek eventually connects downstream to Chambers Creek, which in turn outfalls to the Chambers Creek Reservoir. In heavy rainfall events,

stormwater is pumped from the holding basin to the Thea Foss Waterway to avoid sending high flows to Leach Creek.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**
   No work is currently proposed to occur within 200 feet of the described waters. Project activities are expected to remain outside this area; however, depending on final design or construction logistics, some work may occur in proximity to the 200-foot boundary. Should any work be proposed within 200 feet, additional environmental review and permitting will be completed as required prior to implementation. See Exhibit 1.
3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   No fill or dredge material will be placed in or removed from surface water.
4. **Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

   No, surface waters will not be withdrawn or diverted as a result of this proposal.
5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   No, the site is not within the 100, or 500-year floodplain. According to FEMA FIRM panel 53053C0282E, revised 2017.
6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No, the proposal does not involve any discharges of waste materials to surface waters.

b. Ground:

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

   No groundwater will be withdrawn nor will water be discharged to groundwater. Public water is provided to the site by the City of Fircrest.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

There will be no waste material discharged into the ground as a result of this proposal. The site will remain connected to City of Fircrest sewer.

c. Water Runoff (including stormwater):

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater runoff will occur from surfaces such as roofs, parking lots, bus load/unload areas, sidewalks/paths, play areas, and vegetated areas. Storm drain inlets will collect this runoff, and it will be conveyed to City of Fircrest public storm drainage system. Runoff treatment will be provided for pollution generating surfaces such as bus loading zones, synthetic turf fields and play areas. Stormwater flow control mitigation is not anticipated because there is an existing downstream regional facility that provides flow control and impervious surface area will not be increased.

Existing site runoff appears to be captured and conveyed to two City owned 18" CMP pipes that run diagonally through the site and outfall to the Leach Creek Holding Basin.

2. Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials will enter ground or surface waters as a result of this proposal.

3. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No, drainage patterns will not be affected as a result of this proposal.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The proposal will reduce the site's impervious surface area and drain to the regional Leach Creek holding basin. Runoff generated from pollution generating surfaces will be treated prior to discharge.

4. Plants

a. Check the types of vegetation found on the site:

☒ **deciduous tree: alder, maple, aspen, other**: Norway Maple, Ornamental Cherry, Paperbark Birch, Bitter Cherry, Callery Pear

☒ **evergreen tree: fir, cedar, pine, other**: Douglas Fir, Western Red Cedar, Deodar Cedar, Ponderosa Pine

☒ **shrubs :** Ornamental planting in parking lot, Evergreen Huckleberry, Oregon grape, Sword Fern, Salal, and Kinnikinnick

☒ **grass :** Manicured lawn

☐ **pasture**

☐ **crop or grain**

☐ **orchards, vineyards, or other permanent crops.**

☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☐ **water plants: water lily, eelgrass, milfoil, other**

☐ **other types of vegetation**

b. What kind and amount of vegetation will be removed or altered?

The preservation of the existing mature trees on site is a goal of the project. There will be some trees that will be impacted by the proposed improvements. The conceptual design has identified approximately 14 existing Douglas Fir Trees and 3 Paperbark Birch are proposed to be removed. Some native understory vegetation at western portion of the proposed building location will be removed. The understory vegetation consists of Evergreen Huckleberry, Sword Ferns, and Salal.

c. List threatened and endangered species known to be on or near the site.

No threatened or endangered species have been identified on the site itself.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

Proposed landscaping shall consist of primarily native plants such as Salal, Compact Oregon Grape, Douglas Iris, Kelsey Dogwood, Kinnikinnick, and Slough Sedge. The proposed native planting are located adjacent to existing native area to enhance and expand the natural aesthetics of the site.

Adjacent to the proposed building, ornamental, drought tolerant plantings are proposed such as Tulip Tree, Ginkgo Tree, Crape Myrtle, Junipers, Viburnum, Weigela, Abelia, Ornamental Grasses, Sedges, and Spirea.

Great effort has been made to locate the building and other site amenities to preserve existing vegetation. The existing parking lot is proposed to be preserved to reduce the need for vegetation removal and replanting.

e. List all noxious weeds and invasive species known to be on or near the site.

There is no evidence of noxious weeds or invasive species

5. Animals

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other: small mammals**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

b. List any threatened and endangered species known to be on or near the site.

Per Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species Mapping, queried on October 1, 2025, there are no threatened or endangered animal or bird species mapped on or near the site.

c. Is the site part of a migration route? If so, explain.

The Puget Sound region is part of the Pacific flyway, a bird migration route.

d. Proposed measures to preserve or enhance wildlife, if any.

The proposal does not include any impacts to wildlife, therefore no measures are proposed.

e. List any invasive animal species known to be on or near the site.

There are no known invasive animal species on or near the site.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric will be used to meet the completed project power needs. Electric will be used for general plug loads, lighting, heating and cooling, and for domestic/kitchen hot water usage. A roof mounted photovoltaic system will be provided to comply with the Washington State Energy Code C411 and C406.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No, the project will not have an impact on potential use of solar energy on adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

The new school will utilize heat pump and energy recovery equipment for mechanical and domestic hot water systems. Mechanical heating and cooling equipment will consist of Variable Refrigerant Flow (VRF) systems that utilize heat pump and energy recovery technology. Outside air will be provided through individual dedicated outdoor air units with energy recovery cores. Domestic hot water will be provided by heat pump hot water heaters.

Interior lighting controls will consist of occupancy sensors, dimming and daylight harvesting controls. Exterior lighting will be controlled with an astronomic timeclock and integrated motion sensors.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

The existing school contains asbestos-containing building materials (ACBMs), lead- containing paint, poly-chlorinated biphenyls (PCBs)-containing light ballasts, mercury (Hg)-containing fluorescent light tubes. Environmental health hazards, including exposure to toxic materials, could occur during the course of this project; this includes accidental spills of hazardous materials from equipment, and vehicles. A spill prevention and control plan will be developed to prevent the accidental release of contaminants into the environment.

1. Describe any known or possible contamination at the site from present or past uses.

Based on the review of the sites history and current conditions, no known or possible contamination exists from present or past uses. The location of the project has not been identified as a former industrial, commercial or disposal property which typically result in soil and groundwater contamination. A search of the regulatory databases (WA Ecology, Cleanup Sites, Underground Storage Tanks (UST), Environmental Covenants Registry) indicated that the site is not listed as a confirmed or suspected contaminated site.

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Existing natural gas transmission pipelines have been located along Elm Tree Lane underneath existing sidewalk. It is not believed these to have impact to the project.

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

The proposal does not involve the storage or use of toxic or hazardous chemicals, with the exception of some petroleum use during construction. Flammable materials used during construction will be stored in flammable lockers. All chemicals brought onto the project will be identified by trade partners and include Safety Data Sheets.

4. Describe special emergency services that might be required.

No additional special emergency services will be required other than those normally provided such as police, emergency medical, and fire protection.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   Any soils contaminated by spills would be excavated and disposed of in a manner consistent with the level of contamination and in accordance with federal, state, and local regulatory requirements. Spill kits will be utilized in the event of petroleum leaks or spills and immediately remedied.

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   The site is located in a primarily single-family neighborhood, with the noise associated with suburban residential and traffic levels.

2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?**

   Vehicle and equipment operation during construction could cause noise impacts to nearby residents. Construction hours and noise levels would comply with the Fircrest Municipal Code (FMC 9.74) noise standards, as discussed below.

   Sound emanating from the construction, maintenance, repair or demolition of buildings, grounds, and appurtenances such as fences and walls, or from activities associated with site clearing, grading, excavation, filling and other alterations, if audible beyond the boundary of the lot or parcel on which the activity is occurring is prohibited between the hours of 10:00 p.m. and 7:00 a.m. on weekdays and between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays and Sundays.

3. **Proposed measures to reduce or control noise impacts, if any:**

   No measures proposed for construction, as noise is expected to return to existing levels once construction is complete.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The current use is an elementary school, serving students from pre-kindergarten through grade 3 and a grass recreation field. Use will remain unchanged. Adjacent properties are single family homes and a public park.

Adjacent properties are single-family residential uses to the north, west and south, which will not experience land use impacts. To the east is Whittier Park, of which belongs to Fircrest Parks. The proposal will temporarily impact a portion of the park during construction for

staging.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The subject property has not recently been used as working farm or forest lands.

1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

   No, the proposal will not affect or be affected by surrounding working farm or forest operations.

c. Describe any structures on the site.

The main structure on the site is the existing Whittier Elementary School composed of (4) buildings with (1) fully detached from the others. Other structures on the site include play equipment.

d. Will any structures be demolished? If so, what?

The detached building will be removed at the beginning of construction and the remainder of existing structures will be demolished after the construction of the new building.

e. What is the current zoning classification of the site?

The site is zoned Residential-4 District (R-4).

f. What is the current comprehensive plan designation of the site?

The land use designation of the site is Public and Quasi-Public Facilities (PQPF).

g. If applicable, what is the current shoreline master program designation of the site?

The site is not within shoreline jurisdiction.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

There are no known critical areas on the site.

i. Approximately how many people would reside or work in the completed project?

Approximately 42 staff would work in the new building.

j. Approximately how many people would the completed project displace?

The project will not result in the displacement of people.

k. Proposed measures to avoid or reduce displacement impacts, if any.

No measures are proposed as displacement will not result from the proposal.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

None proposed as the proposed use is the same as the existing and will be compatible with existing land uses.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None proposed, as the proposal is not likely to result in any impacts to agricultural and forest lands.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing will be provided as part of this proposal.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing will be eliminated as part of this proposal.

c. Proposed measures to reduce or control housing impacts, if any:

None proposed, as the proposal will not impact housing.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed elementary school is located on a sloping site, and the conceptual design incorporates stepped building forms that cascade down with the natural grade. The school is organized around two primary roof elements: the classroom wing roof and the gymnasium roof.

Per code, building height has been calculated using the Average Building Elevation (ABE) method, which determines height from the average finished grade around the perimeter of each distinct building form. Based on this method, the measured heights to the high eave of the mechanical dormers are:

- **Classroom Roof:** approximately 47 feet
- **Gym Roof:** approximately 42 feet

These heights exceed the zoning height limit; however, the additional height is essential to accommodate the functional requirements of an elementary school, including appropriate classroom ceiling heights, gymnasium clearances, and mechanical system integration.

The principal exterior building materials are a combination of metal wall panels, corrugated sheet metal wall panels installed vertically and horizontally, and accent materials will be fiber cement siding and brick veneer.

b. What views in the immediate vicinity would be altered or obstructed?

Select trees will be removed to construct the project, altering views. The neighboring properties to the south that once looked upon the playfields and will now look at the south façade of the school which contains classrooms, commons, and the gymnasium, The neighboring homes to the north which once looked at the existing school will now be adjacent to the playfields, bus drop-off, with the school main entry at a lower elevation to south of the site.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Great care was taken to preserve existing trees and minimize earth disturbance by nestling the building program within the steep slopes and vegetation. Due to an occupied site, the placement of the building was limited to southern 1/3 of the site. A linear building organization was required to meet site setbacks as well as programmatic drivers. Exterior materials were selected based on the play of light, shadow, and texture to compliment natural elements found on the site.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Interior and Exterior lighting for limited times after dark only.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The interior and exterior lighting which is most likely to be on after dark is provided to increase safety and security. Illumination is not expected to interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

There are no off-site sources of light that affect this proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

There will be automatic timeclock control of lights during non-daylight hours and utilization of optically controlled light fixtures to direct the light where needed and incorporation of house side shields, full and semi cutoff optics to minimize light trespass.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

A grass play field and play equipment are presently located on the site. Whittier Park is directly to the east of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The existing play field and play equipment would be temporarily interrupted during construction. These amenities will be replaced/relocated with the proposed project.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The play field will have improved drainage for year-round play opportunities. Play equipment with safety surfacing will be provided, along with a new covered play area and outdoor educational spaces. Bicycle parking will also be added to the site.

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

A Washington Information System for Architectural and Archaeological Records Data (WISAAD) Property Inventory search was completed on 9/18/25, for Whittier Elementary School, 777 Elm Tree Lane, Fircrest. No inventoried historic properties, structures or districts are located on the parcel within the immediate vicinity.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

A WISAARD search was completed on 9/18/25, for Whittier Elementary School, 777 Elm Tree Lane. The search identifies no recorded archaeological sites or historic property inventory

entries on the parcel. However, a map generated by WISAARD indicates that the property is in a moderate risk area.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The proposal utilized the Washington Information System for Architectural and Archaeological Records Data (WISAARD) online database to assess potential impacts to cultural and historic resources on and near the project site.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Due to the project being in a Moderate Risk Area, an inadvertent discovery plan and procedures is recommended and will be in place during excavation activities. If cultural or archaeological objects are found during construction for the project, the Washington State Office of Archaeology and Historic Preservation will be notified and appropriate measures taken.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Whittier Elementary is bounded by Alameda Avenue to the west, Elm Tree Lane to the north, and Annapolis Street to the south and east. Each road has two lanes. The site will have access from Alameda Avenue to a parking area in the northwest quadrant of the site. Drivers will continue to use Annapolis Street for drop-off and pick-up activities. School bus parking will be located along the northern edge of the site, accessed via Elm Tree Lane.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The site is not served directly by public transit. Pierce Transit operates Route 52 along Regents Boulevard in Fircrest. The nearest stop is at Regents Boulevard/Electron Way, a little over ½ mile from the school. Buses on Route 52 run from 5:45 AM to 10:03 PM on weekdays, with 30-minute headways during peak times and hourly service outside of peak times. Hourly buses operate on weekends. This route connects Tacoma Community College with the Tacoma Mall. However, the Tacoma School District operates around four to five school buses to and from Whittier Elementary School.

c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Existing sidewalk, curb and gutter, and driveways will be replaced as necessary along the street frontages.

d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No, the project is not within the vicinity of water, rail, or air transportation.

e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

With a maximum student capacity of 380 students, or 60 students increase over current enrollment, the school is estimated to generate 136 new weekday daily trips. This includes 44 trips during the AM peak hour (7:45-8:45) associated with morning drop-off and 26 trips during the PM peak hour (2:45-3:45) associated with afternoon drop-off. Trip generation estimates are based on the Institute of Transportation Engineers Trip Generation Manual, 12th Edition, for Land Use Code (LUC) 520. No additional heavy-vehicle trips beyond existing conditions are anticipated.

f. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No, the proposal will not affect or be affected by the movement of agricultural or forest products.

g. Proposed measures to reduce or control transportation impacts, if any:

Refer to the Traffic Impact Analysis (TIA) prepared by Heath & Associates, Exhibit 2.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The project will not result in an increased need for public services other than those already provided at the site.

b. Proposed measures to reduce or control direct impacts on public services, if any.

The school will be designed to meet requirements for vehicular emergency access onto the building site. Monitored fire and security alarms will also be installed in the building.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity (Tacoma Power), natural gas (Puget Sound Energy), water (City of Fircrest), refuse service (Westside Disposal), telephone and internet (Tacoma Power K20), and sanitary sewer (City of Fircrest). General construction activities include trenching, pavement restoration, and connections to existing utilities.

C. Signature

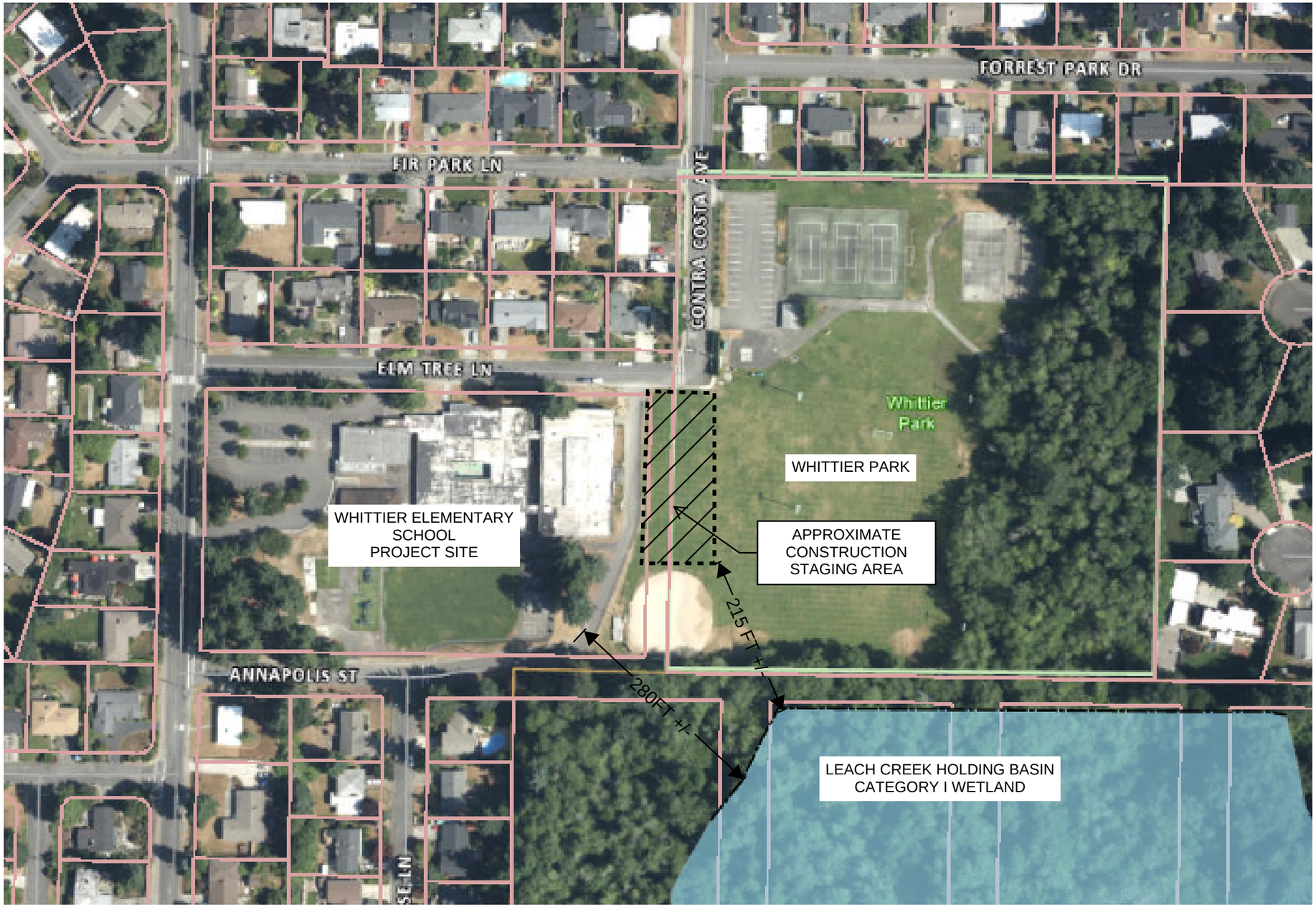
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

X _____

Type name of signee: Kellie Bower
Position and agency/organization: Principal, Kaiser Bower Design & Consulting
Date submitted: 10/15/2025

EXHIBIT 1

Exhibit D



DOCUMENT SOURCE: PIERCE COUNTY PUBLIC GIS

N

- NOT TO SCALE -

ETHOS CIVIL	**Whittier Elementary School**	**EXHIBIT C1**
	ADJACENT CRITICAL AREA EXHIBIT	

EXHIBIT 2

Exhibit D

HEATH & ASSOCIATES

Transportation Planning & Engineering

TRAFFIC IMPACT ANALYSIS

Whittier Elementary School

Fircrest, Washington

October 15, 2025

1011 E Main Ave Suite 453 | Puyallup, WA | 98372
(253) 770-1401| heathtraffic.com

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

Prepared for:

Whittier Elementary School

Prepared by:

Heath & Associates
PO Box 397
Puyallup, WA 98371
(253) 770 1401
Heathtraffic.com

License:

10/15/2025

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

CONTENTS

TABLES

FIGURES

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

1. INTRODUCTION

Heath & Associates has been retained to prepare a Traffic Impact Analysis (TIA) for the proposed reconstruction of Whittier Elementary School within the City of Fircrest. The study evaluates existing traffic conditions in the vicinity of the site and compares them to future conditions with and without the proposed project. The analysis considers traffic operations, safety, and circulation, and concludes with findings and recommended mitigation measures, if warranted, to ensure the school's redevelopment can be accommodated within the surrounding transportation network.

2. PROJECT DESCRIPTION

Whittier Elementary School, located at 777 Elm Tree Lane, currently serves approximately 320 students (Pre-K through 3rd grade) with a staff of about 40. The proposal would replace the existing campus with a new school building, increasing capacity to up to 380 students and 45 staff. As part of site development, the three existing buildings (totaling 52,383 sq ft) would be demolished prior to construction. The project will include 51 on-site parking stalls, with a bus drop-off and pick-up area created on the north side of the site. Buses currently stage on Elm Tree Lane. Today, parents and guardians drop-off and pick-up students along Annapolis Avenue, traveling east and then north from Alameda Avenue. With the new project, traffic flow will be reversed. Parents will enter the site from Elm Tree Lane and exit onto Alameda Avenue.

The 4.96-acre site (Tax Parcel #0220114002) is bounded by Elm Tree Lane to the north, Alameda Avenue to the west, and Annapolis Street to the south and east. Today, vehicular access is provided via driveways on Alameda Avenue and Elm Tree Lane, with student drop-off and pick-up occurring along Annapolis Street. Although Annapolis Street accommodates two-way traffic, most vehicles approach from the south and west and then exit to Elm Tree Lane.

Figure 1 displays the vicinity map with the subject site highlighted in blue. A conceptual site plan is provided in **Figure 2.**

Exhibit D

Figure 1: Vicinity Map

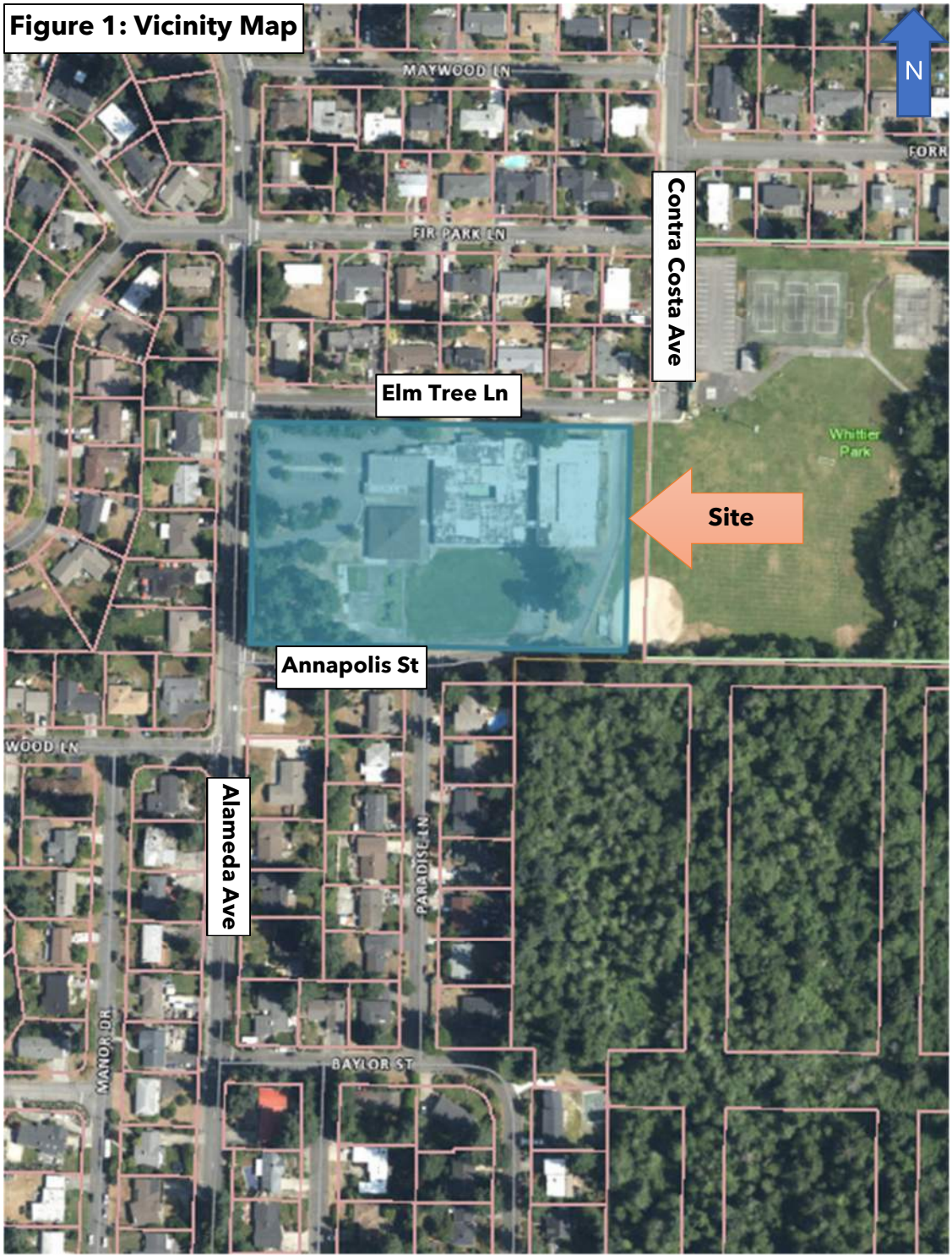
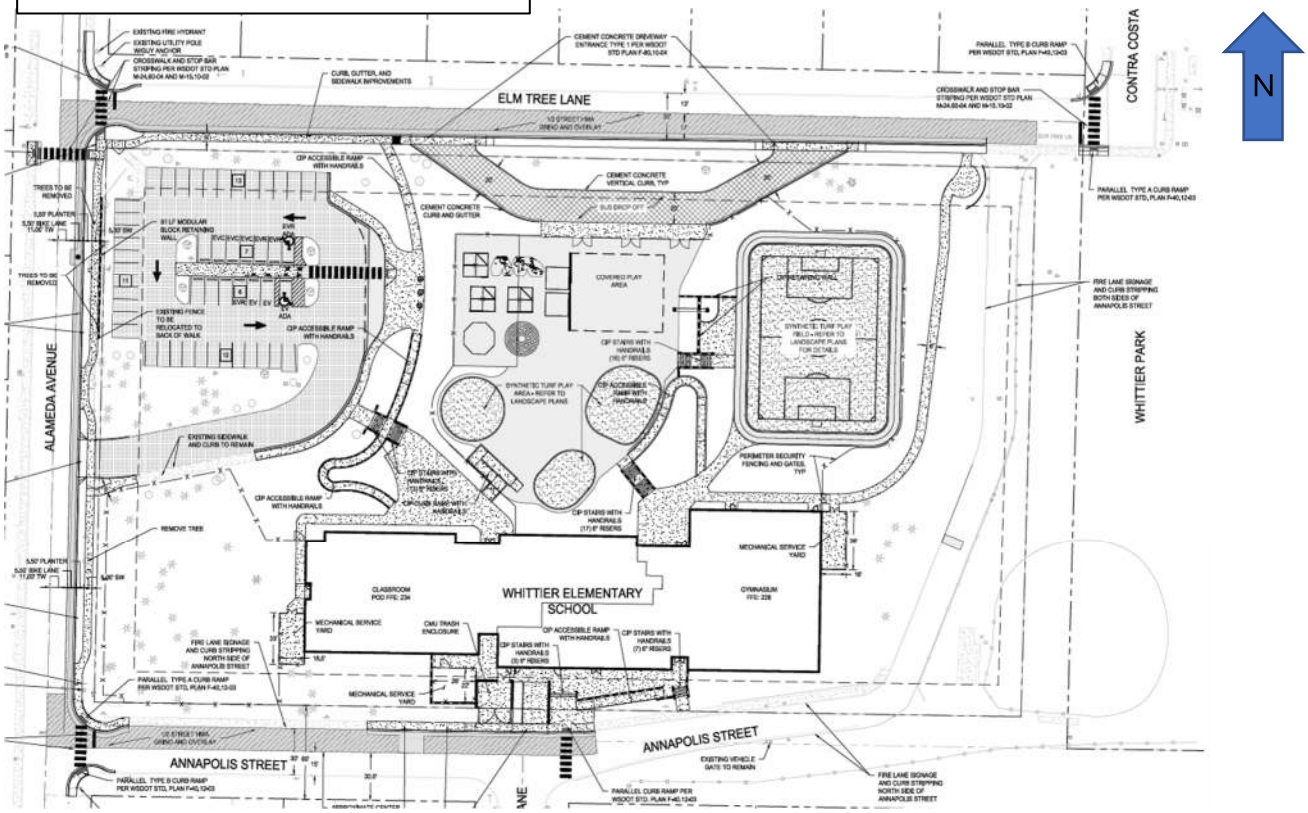


Exhibit D

Figure 2: Conceptual Site Plan



As illustrated above, access to the parking lot would continue from Alameda Avenue. A new bus loop is proposed from Elm Tree Lane, and the existing drop-off and pick-up lane on Annapolis Street, currently one-way northbound, would be reoriented to one-way southbound.

Exhibit D

3. EXISTING CONDITIONS

3.1 Existing Street System

Table 1 summarizes information on the roadways around Whittier Elementary School.

Table 1: Roadway Network

Roadway Classification	Roadway	Speed Limit	Lanes	Street Parking	Sidewalk	Bike Facilities
Major Collector	Alameda Ave	25	2	No	Yes[1]	No
Local Roads	Elm Tree Lane	25	2	Yes	South side	No
	Annapolis St	25	2	No	North side	No
	Contra Costa Ave	25	2	Yes	West side	No

[1] The sidewalk on the east side of Alameda ends south of Rosewood Lane.

3.2 Roadway Improvement Projects

The City of Fircrest's Draft 2026-2031 Transportation Improvement Program (TIP) identifies one improvement project near the study area. **Table 2** below provides details on the planned improvement project.

Table 2: Six-Year Transportation Improvement Project

Name	Location	Improvement	Cost
Alameda Avenue Active Transportation Improvement (#6)	Emerson St to Rosewood Ln	Construction of new curbs, gutters, sidewalk, and bike lane on the east side of Alameda Avenue.	$1,900,000

The City of Fircrest plans to expand non-motorist infrastructure along Alameda Avenue from Rosewood (located just south of the school) to Emerson Street in 2029. Note there is a second project that would continue these improvements from Emerson Street to 44th Street W.

3.3 Transit Service

The site is not served directly by public transit. Pierce Transit operates Route 52 along Regents Boulevard in Fircrest. The nearest stop is at Regents Boulevard/Electron Way, a little over ½ mile from the school. Buses on Route 52 run from 5:45 AM to 10:03 PM on weekdays, with 30-minute headways during peak times and hourly service outside of peak times. Hourly buses operate on weekends. This route connects Tacoma Community College with the Tacoma Mall.

Route 53 operates along Emerson Street south of the school. The nearest stop to Whittier Elementary is at Alameda Avenue/Emerson Street, about ½ mile from the school. Route 53 operates buses every 30 minutes on weekdays, from 5:30 AM to 10:29 PM. Weekend days, buses operate hourly from about 8:40 AM to 6:30 PM. This route also connects Tacoma Community College with the Tacoma Mall.

The Tacoma School District operates three to four school buses to and from Whittier Elementary School.

3.4 Existing Peak Hour Volumes and Travel Patterns

Traffic counts were collected covering existing school driveways and nearby intersections. Intersection turning movement data were collected in June 2025 with school in session[1]. The study intersections are listed below.

1. Alameda Avenue/Elm Tree Lane
2. Elm Tree Lane/North Parking Lot Access
3. Annapolis Street/Elm Tree Lane
4. Alameda Avenue/Annapolis Street
5. Alameda Avenue/West Parking Lot Access

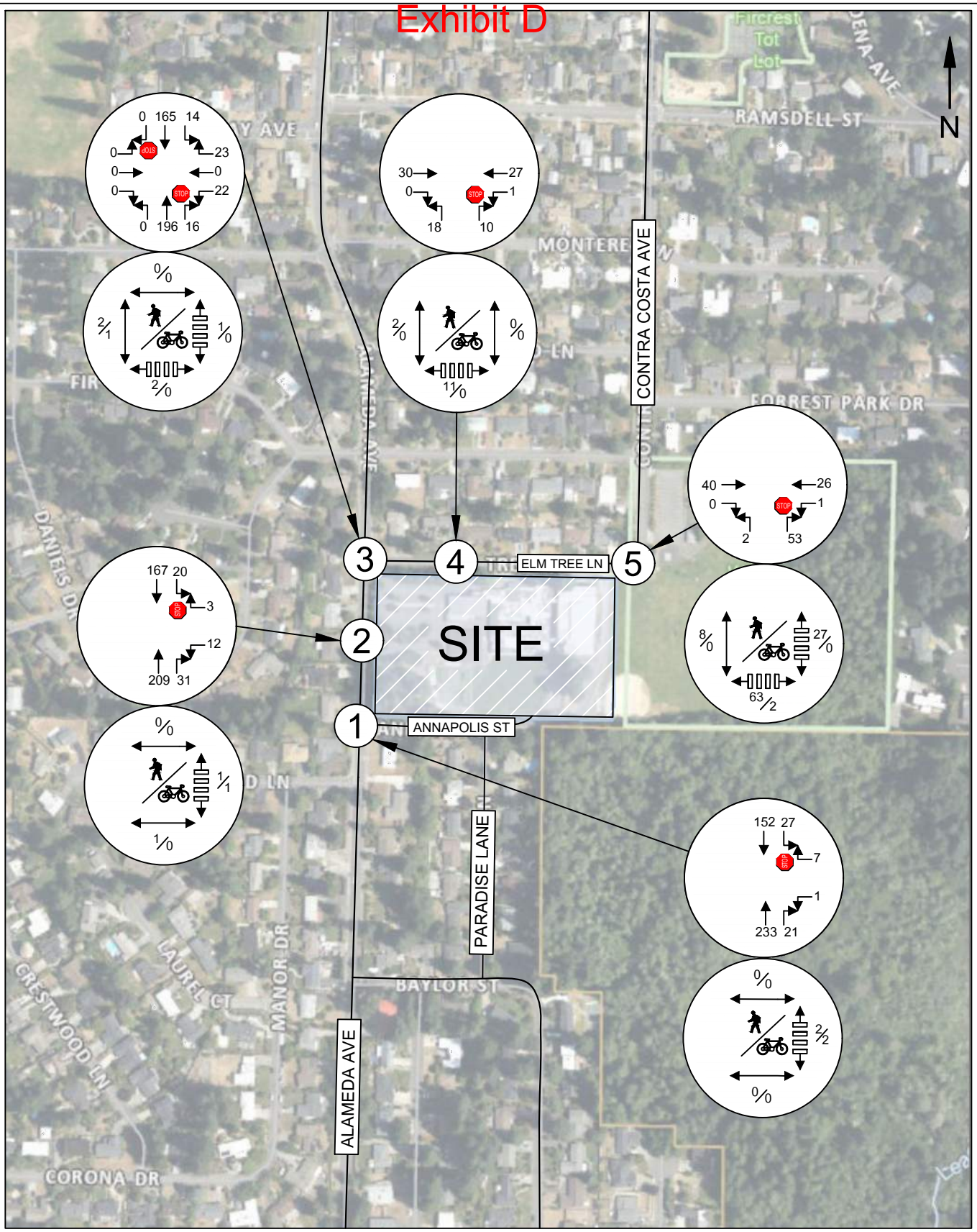
Whittier Elementary School operates from 8:40 AM to 3:10 PM. Data were therefore collected from 7:00 to 9:00 AM and 2:00 to 6:00 PM to cover AM peak of school and street activity, the school PM peak hour, and the PM peak hour of the street. **Figure 3** illustrates volumes during the AM peak hour of the school. **Figure 4** illustrates PM peak hour of the school volumes at each existing study intersection, while **Figure 5** shows the volumes during the PM peak hour of the street. Peak times of activity were:

- AM Peak Hour: 8:00 to 9:00 AM
- PM Peak Hour of the School: 2:45 to 3:45 PM
- PM Peak Hour of the Street: 5:00 to 6:00 PM

Note that a school board meeting was held at Whittier Elementary during the PM peak hour of the street. As such, the PM peak hour of the street may overstate typical traffic at the site from 5:00 to 6:00 PM. Full count sheets are attached in the appendix.

[1] Field data were also collected in September 2025 to capture vehicle queuing lengths along Annapolis Street. Queueing is discussed in a later section.

Exhibit D



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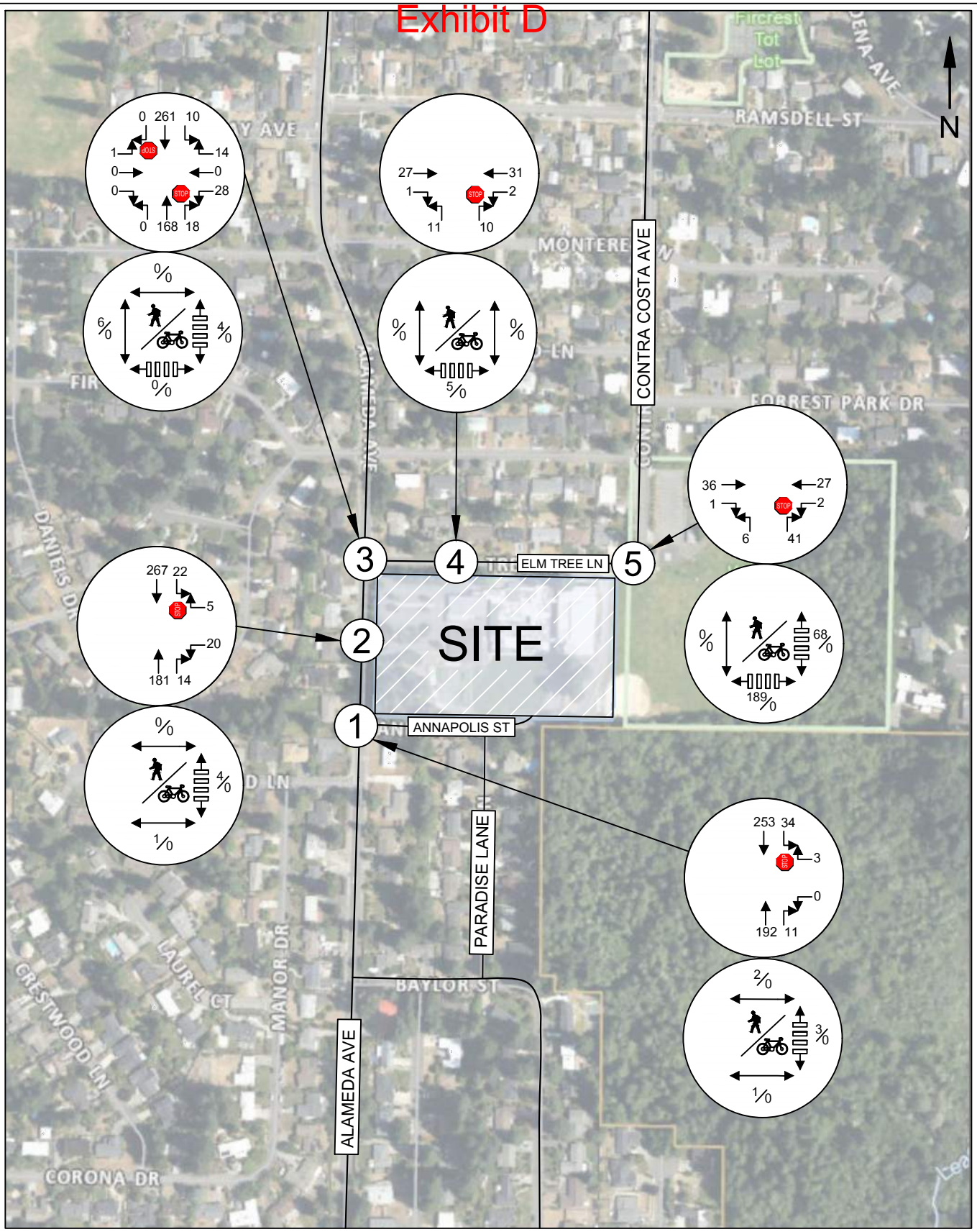
WHITTIER ELEMENTARY SCHOOL

EXISTING AM PEAK HOUR OF SCHOOL VOLUMES
FIGURE 3

Exhibit D



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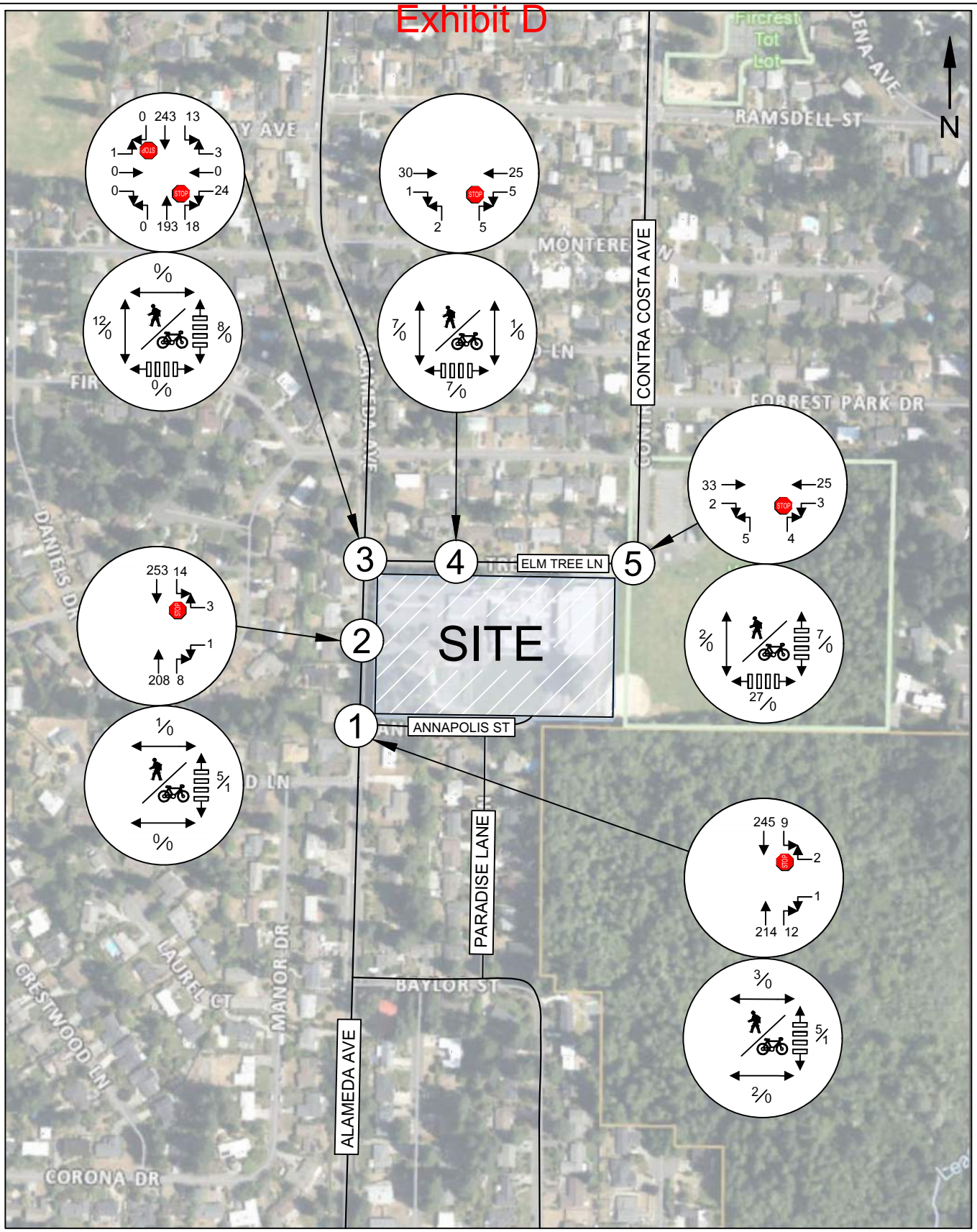
WHITTIER ELEMENTARY SCHOOL

EXISTING PM PEAK HOUR OF SCHOOL VOLUMES
FIGURE 4

Exhibit D



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WHITTIER ELEMENTARY SCHOOL

EXISTING PM PEAK HOUR OF STREET VOLUMES
FIGURE 5

3.5 Level of Service

Level of Service (LOS) rates[2] the quality of traffic flow and user experience, typically on a scale from A to F, where:

- **LOS A** represents free-flowing traffic with minimal delays and low congestion.
- **LOS B** indicates stable traffic flow with some minor delays.
- **LOS C** shows moderate traffic flow with noticeable delays at peak times.
- **LOS D** is high-density traffic flow with more frequent and longer delays.
- **LOS E** is near-capacity conditions with significant delays and congestion.
- **LOS F** denotes over-capacity conditions, where traffic flow breaks down, resulting in severe congestion and delays.

Level of service (LOS) calculations were performed using Synchro 12. For stop-controlled intersections, LOS is determined by the approach with the highest delay. **Table 3** summarizes the 2025 existing LOS and delay results for the study intersections, all of which are stop-controlled on the minor approaches.

Table 3: Existing 2025 Peak Hour Level of Service

Delays Given in Seconds per Vehicle

Intersection	Approach	School AM Peak		School PM Peak		PM of Peak Street	
		LOS	Delay	LOS	Delay	LOS	Delay
1. Alameda Ave/Annapolis Street	WB	A	10.0	A	9.6	B	10.4
2. Alameda Ave/West Parking Lot	WB	B	11.5	B	12.9	B	10.6
3. Alameda Ave/Elm Tree Ln	EB/WB[1]	B	11.1	B	13.1	B	13.0
4. North Parking Lot/Elm Tree Ln	NB	A	8.8	A	8.8	A	8.7
5. Annapolis St/Elm Tree Ln	NB	A	9.1	B	12.7	A	9.1

[1] The eastbound approach experiences the greatest delays during both the AM and school PM peak hours, while in the PM peak hour of the street, the highest delays shift to the westbound approach.

The City of Fircrest has an LOS D standard for intersections. Existing 2025 peak hour levels of service are shown to operate with LOS B or better for all three study periods.

---

[8] *Signalized Intersections - Level of Service*

Level of Service	Control Delay per Vehicle (sec)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Stop Controlled Intersections – Level of Service

Level of Service	Control Delay per Vehicle (sec)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

Highway Capacity Manual (HCM), 7th Edition

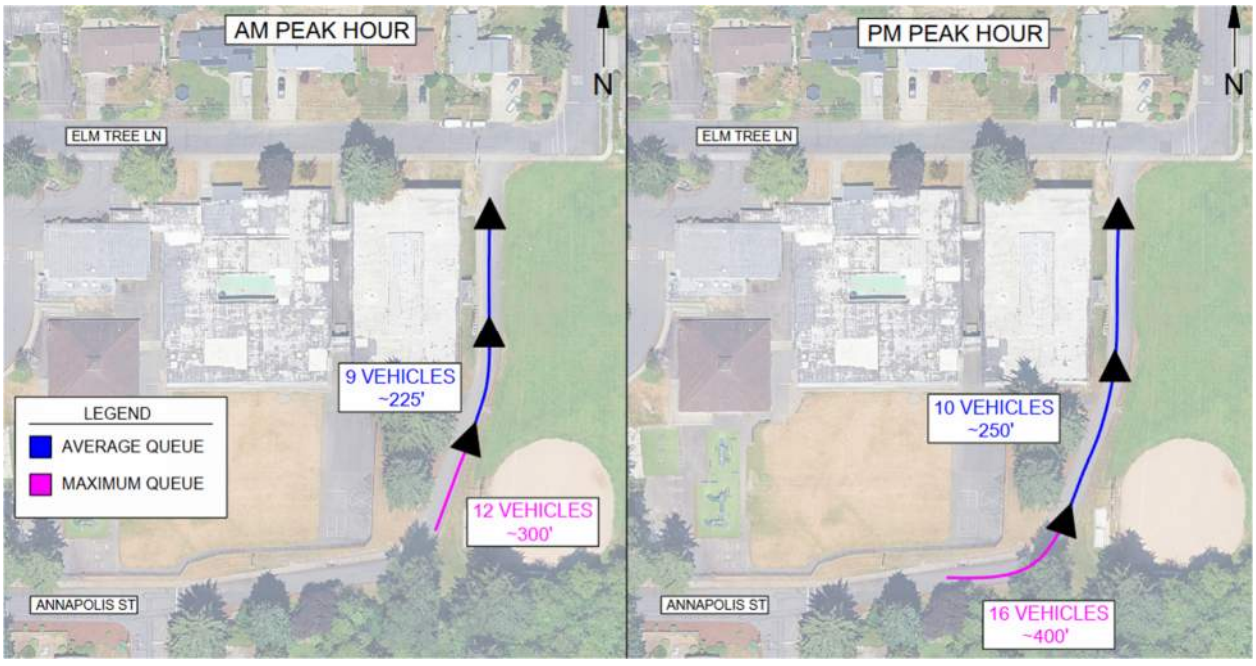
3.6 Queuing

While turning movement counts were collected in June 2025, additional field observations were conducted in September 2025 to review drop-off and pick-up queuing conditions. Currently, vehicles travel northbound on Annapolis Street along the east side of the school to drop off and pick up students. **Table 4** summarizes the existing average and maximum queues.

Table 4: Existing Queuing

Time Period	Average Queue	Max Queue
AM Peak of School	~9 vehicles	~12 vehicles
PM Peak of School	~10 vehicles	~16 vehicles

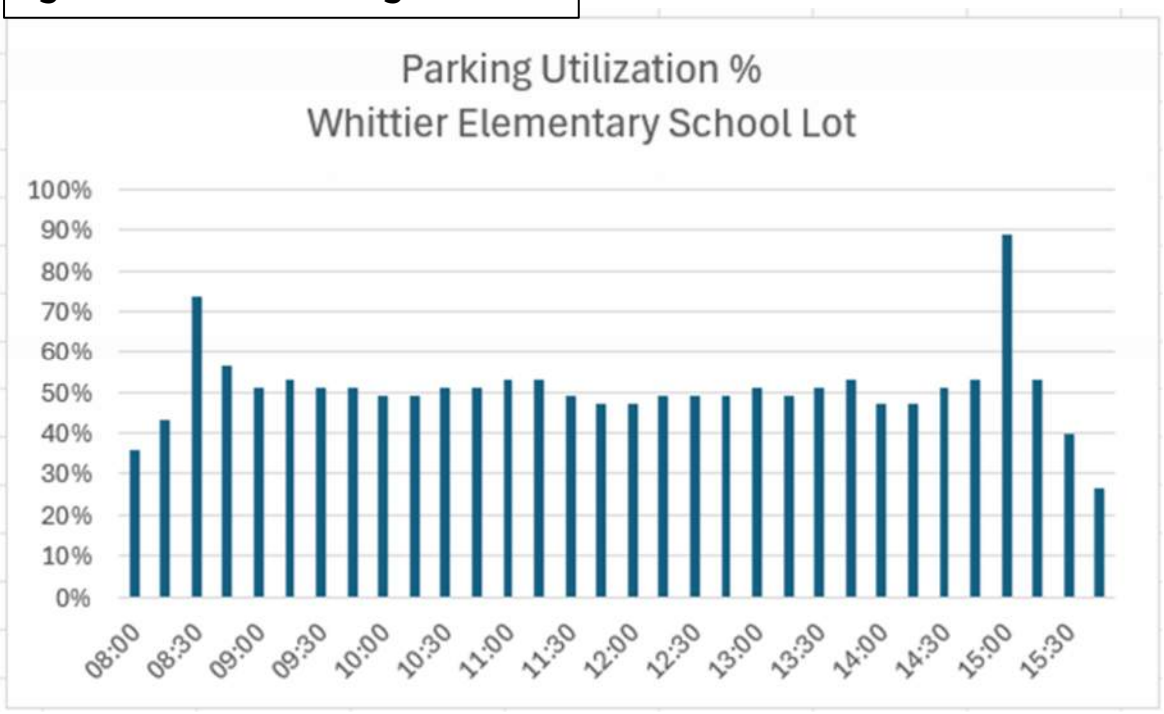
As is typical for most schools, the afternoon period exhibited higher queuing activity, with a maximum of 16 vehicles observed at 3:09 PM—just before the dismissal bell. Approximately 510 feet of queuing space is available along Annapolis Street, extending from south of Elm Tree Lane to the existing crosswalk on the east side of Paradise Lane. The 16 queued vehicles occupied roughly 400 feet, and no spillover beyond Paradise Lane was observed. However, some parents and guardians were also observed using on-street parking along Paradise Lane and Contra Costa Avenue, as well as the Whittier Park parking lot.



3.7 Parking

Whittier Elementary provides 53 surface parking stalls within the on-site lot. Parking utilization was evaluated by recording vehicle entries and exits in 15-minute intervals between 7:00 AM and 6:00 PM. The analysis found a peak utilization rate of 89% (47 vehicles) between 3:00 and 3:15 PM. On average, the lot was approximately half occupied, with demand increasing during the morning and afternoon drop-off and pick-up periods. **Figure 6** below illustrates parking utilization trends throughout the study day in September.

Figure 6: On-Site Parking Utilization



Parking utilization was also observed at the nearby Fircrest Park lot, located just northeast of the school. Parents occasionally used this lot for short-term drop-off and pick-up, though it primarily served park visitors. The 32-stall lot reached a maximum utilization of 69% (22 vehicles) during the same period as the on-site peak, with approximately 13 vehicles likely associated with school activity. For most of the day, utilization remained below 50%.

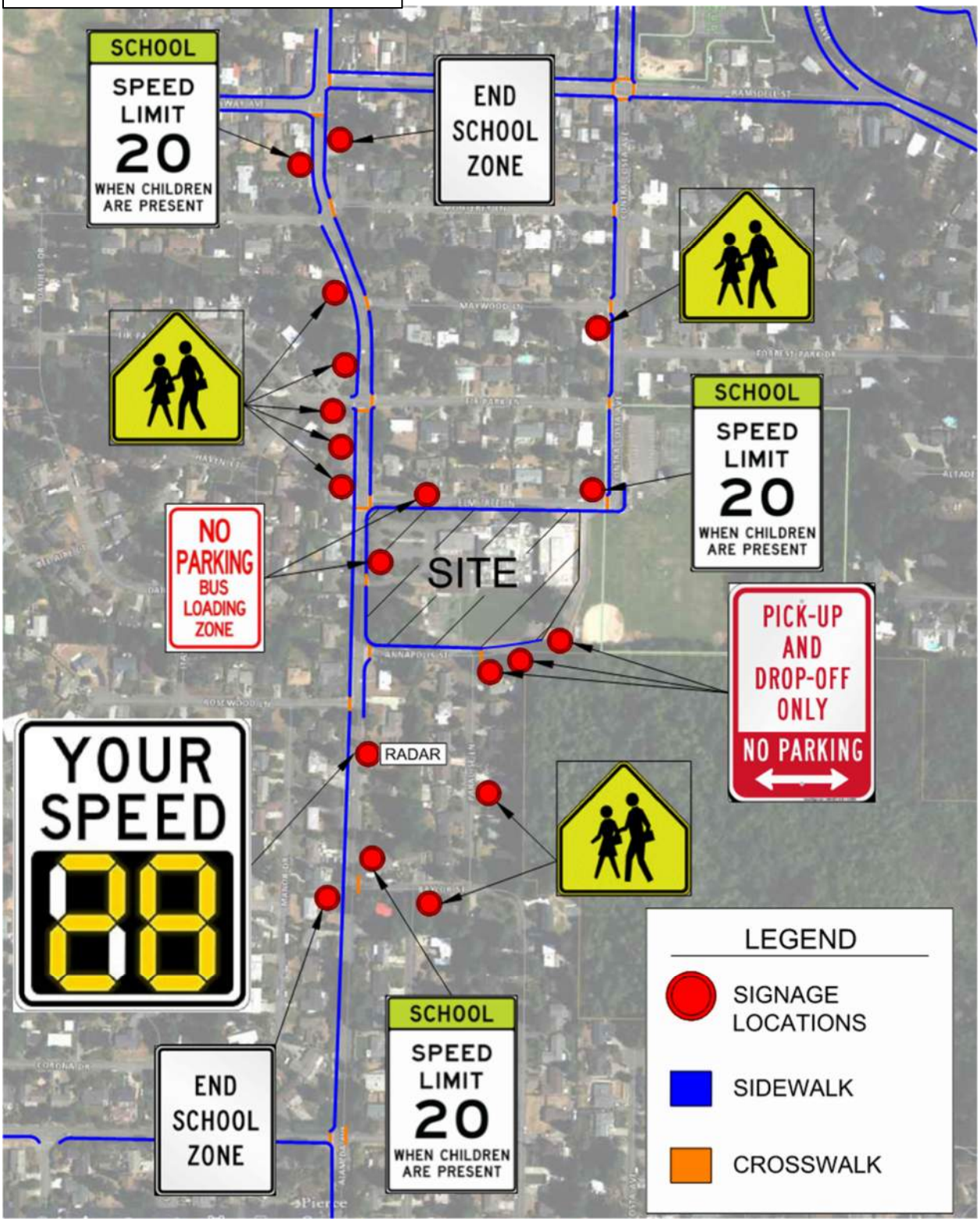
3.8 Non-Motorist Activity and Infrastructure

Non-motorized traffic was recorded during the three study-hour count periods. At the Annapolis Street/Elm Tree Lane intersection, approximately 98 pedestrians were observed during the AM peak hour and 257 pedestrians during the PM school peak hour. Note that some of these observations represent the same individuals crossing in multiple directions (east–west and north–south).

This is the busiest intersection for pedestrians; the other study intersections have fewer, ranging from 2 to 13 per study hour. Figures 3 through 5 show the numbers of pedestrians and bicyclists observed around the school during the AM and PM peak hours of study. Observations suggest that some parents and guardians currently park along Contra Costa Avenue or at the park parking lot and walk students to and from the school, while others access the campus on foot from nearby residences. Crossing guards stop vehicular traffic at the Elm Tree Lane/Annapolis Street intersection to facilitate pedestrian crossings.

Figure 7 on the following page illustrates the nearby school signs and crossing signs along with sidewalk and crosswalk locations.

Figure 7: Existing School Signs



3.9 Collision History

Crash records for the five most recent years (2020 through 2024) were obtained from Washington State Department of Transportation (WSDOT). There were two incidents reported in the study area in that time. These are summarized below.

Collision #1: Alameda Avenue south of Rosewood Lane: This collision occurred over the summer (7/24/23) at 2:09 AM. A driver traveling northbound on Alameda Avenue struck a parked, unoccupied vehicle about 50 feet south of Rosewood Lane. The driver was noted as lost in thought or daydreaming. There were no apparent injuries related to this incident.

Collision #2: Elm Tree Lane east of Alameda Avenue: On February 29, 2024, at 5:38 PM, a driver traveling on Elm Tree Lane struck a parked vehicle about 200 feet east of Alameda Avenue. The report does not state which direction the driver was headed. The vehicle struck was unoccupied. The driver behavior was listed as "other contributing circumstance." The weather condition was raining, and the pavement was wet. No injuries were reported.

Exhibit D

4. FORECAST TRAFFIC DEMAND AND ANALYSIS

4.1 Trip Generation

Trip generation for the school was estimated using the *ITE Trip Generation Manual, 12th Edition*. ITE average rates applied, using data for Land Use Code (LUC) 520 – Elementary School. The updated school will have a maximum enrollment capacity of 380 students. The school currently serves approximately 320 students. Since this traffic is already accounted for in the existing conditions, the trip generation assessment was based on the expanded capacity of 60 students. **Table 5** summarizes the average weekday daily trips (AWDT) as well as the school's AM and PM peak hours, and the PM peak hour of the adjacent street network, defined as the busiest hour between 4:00 and 6:00 PM.

Table 5: Project Trip Generation

Land Use	Additnl Students	AWDT	School AM Peak			School PM Peak			4-6 PM Peak Street		
			In	Out	Total	In	Out	Total	In	Out	Total
Elementary School (LUC 520)	60	136	24	20	**44**	12	14	**26**	5	5	**10**

With the addition of 60 potential students in the future school, a total of 136 new daily vehicle trips are expected, with 44 during the AM peak hour, 26 during the school PM peak hour, and 10 during the PM peak hour of the street.

4.2 Trip Redistribution and Assignment

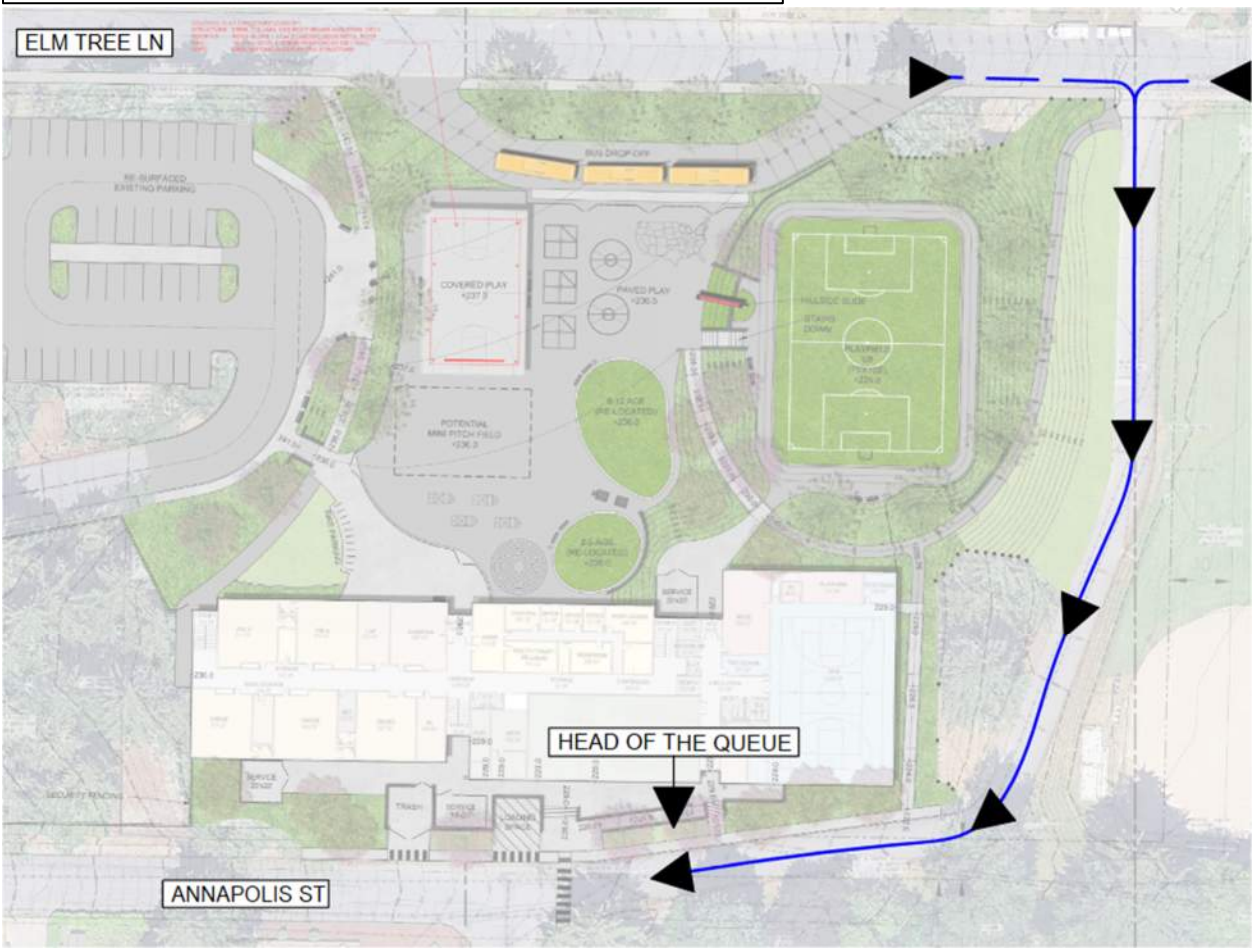
Vehicle Routing: Student drop-off and pick-up activity will continue along Annapolis Street on the east side of the school; however, the traffic flow will be reversed under the updated site plan, with vehicles queuing southbound. The revised layout will provide approximately 565 feet of queuing capacity, a slight increase from the existing 510 feet. **Figure 8** illustrates the new drop-off and pick-up route.

Bus Routing: Currently, buses queue eastbound along Elm Tree Lane. Under the proposed site plan, a new bus loop accessed from Elm Tree Lane would eliminate the need for buses to park within the public right-of-way. The school typically operates three to four buses, which is expected to remain consistent under future conditions.

Existing Traffic: Because of the changes to the site access and circulation, existing traffic was redistributed to the access and egress patterns.

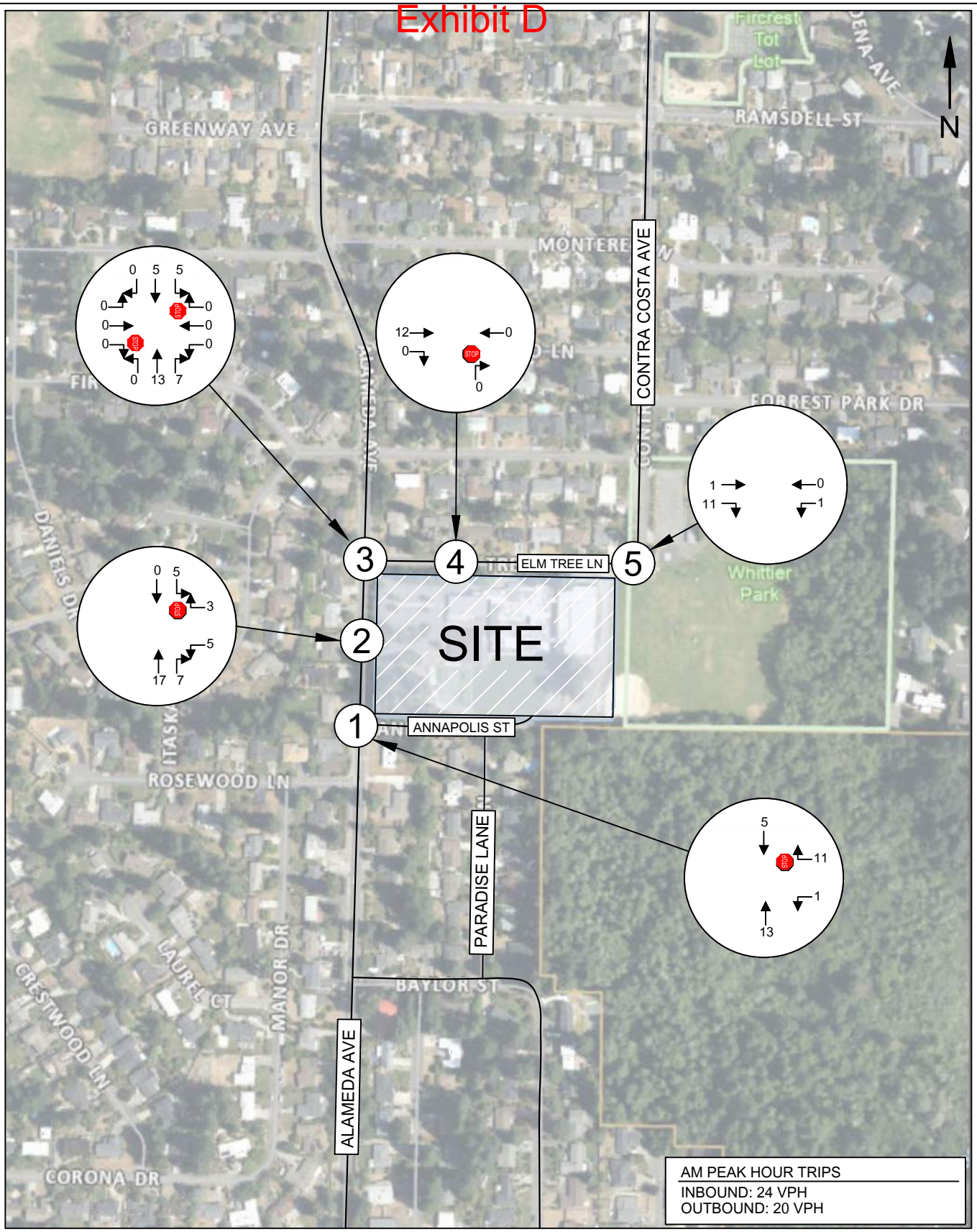
Exhibit D

Figure 8: Proposed Drop-Off and Pick-Up Route



Trip assignments for the new project trips are illustrated in **Figures 9, 10, and 11**.

Exhibit D



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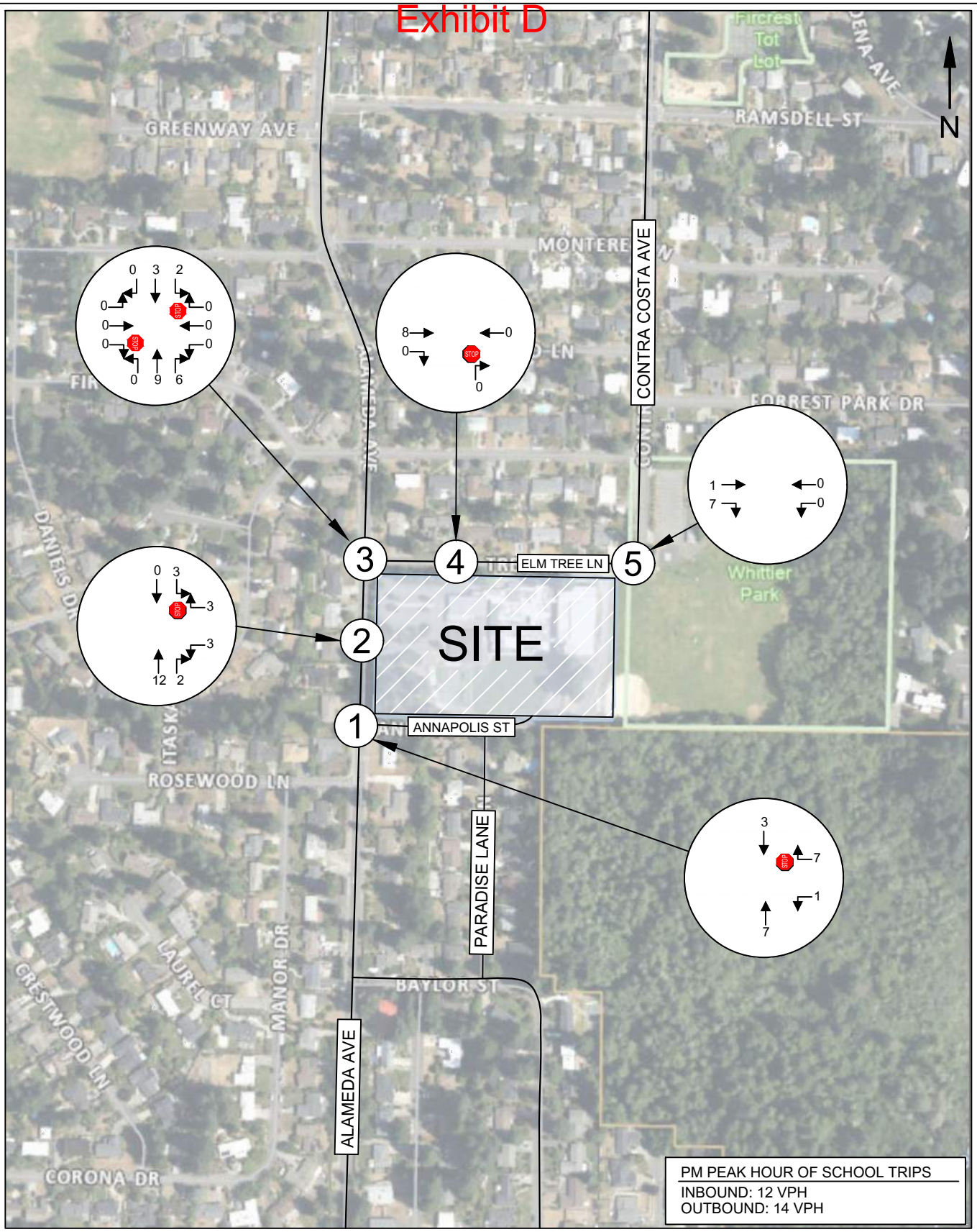
WHITTIER ELEMENTARY SCHOOL

TRIP ASSIGNMENT AM PEAK HOUR OF SCHOOL
FIGURE 9

Exhibit D



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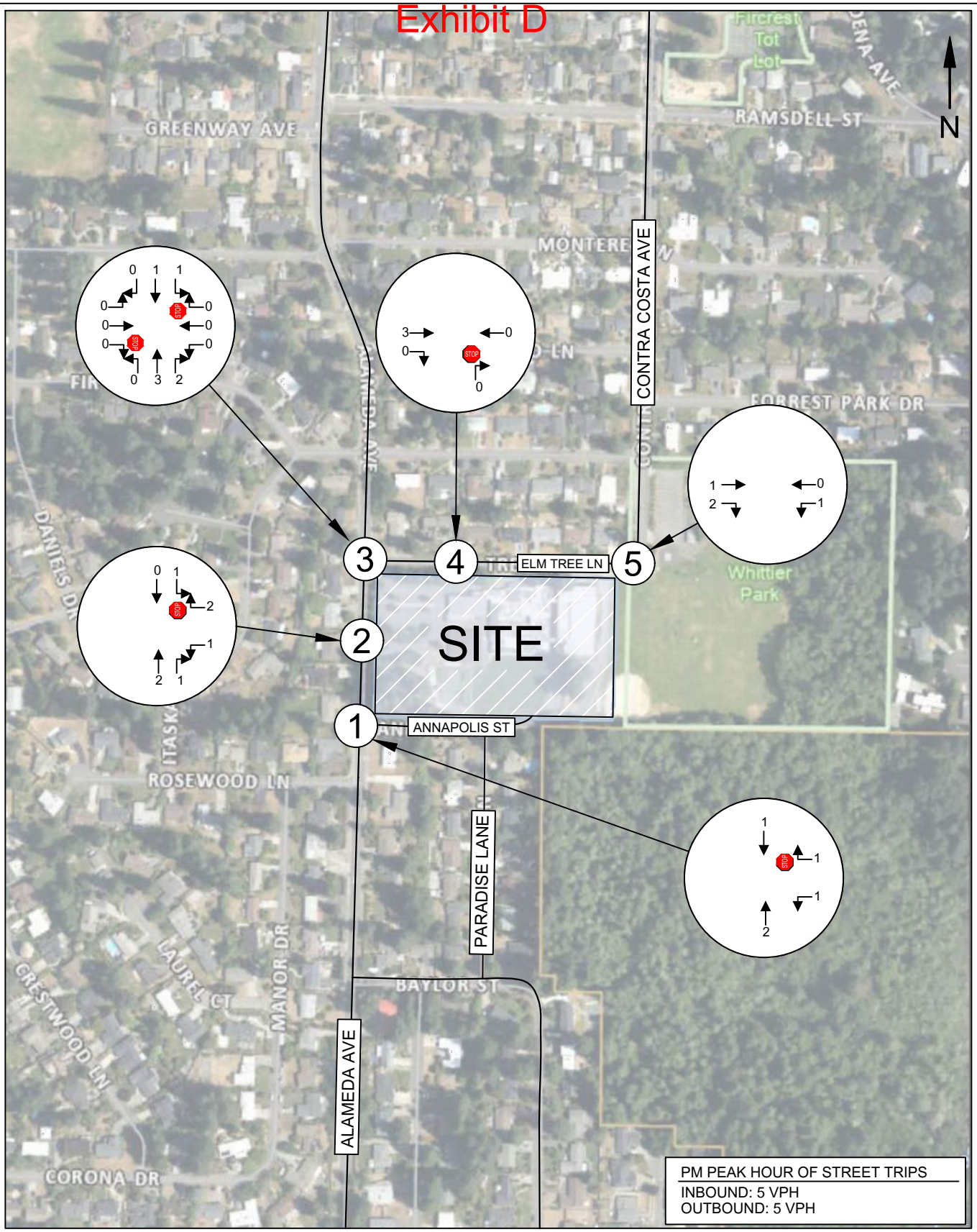
WHITTIER ELEMENTARY SCHOOL

TRIP ASSIGNMENT PM PEAK HOUR OF SCHOOL
FIGURE 10

Exhibit D



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WHITTIER ELEMENTARY SCHOOL

TRIP ASSIGNMENT PM PEAK HOUR OF STREET
FIGURE 11

4.3 Future Peak Hour Volumes

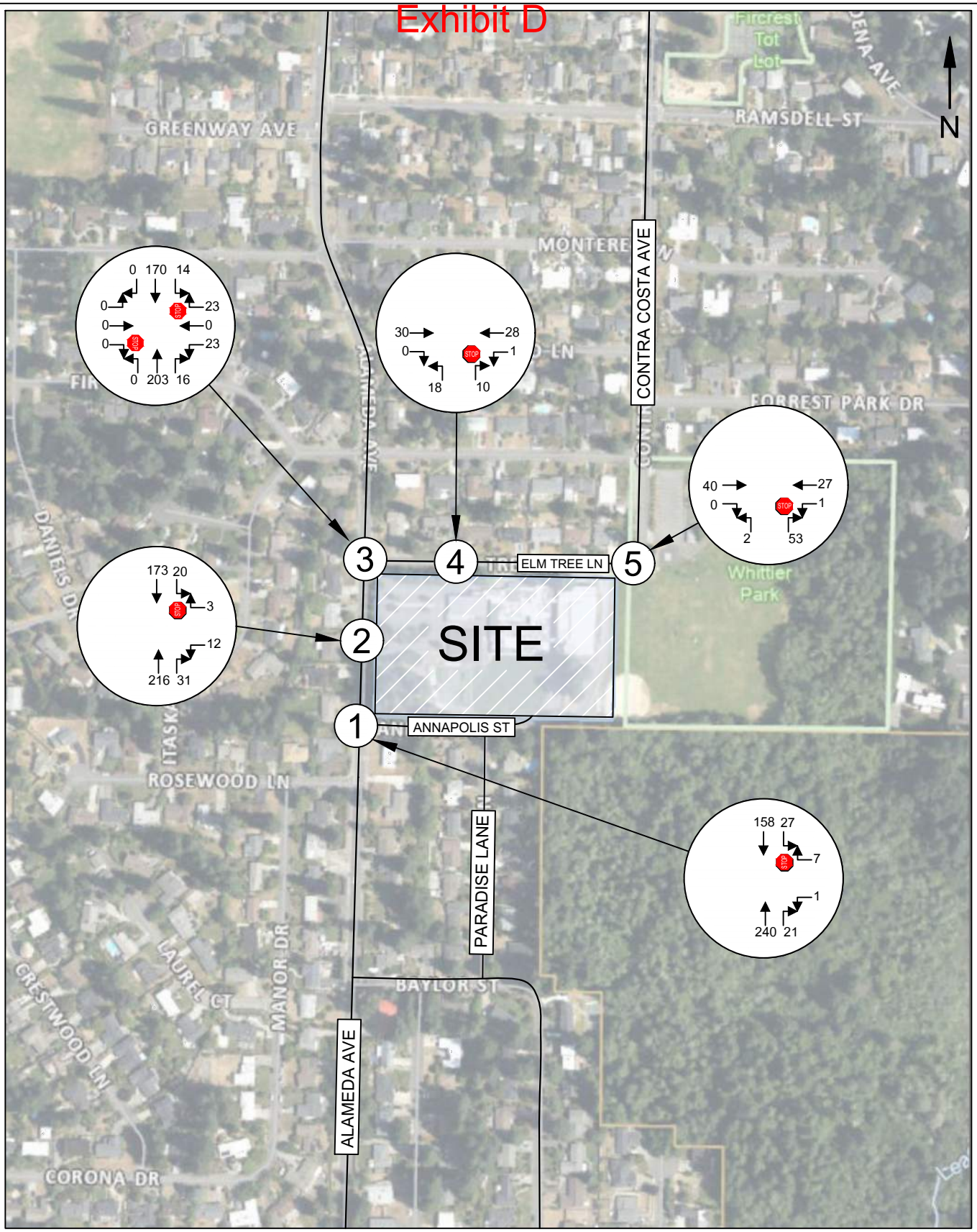
A three-year horizon of 2028 was used to assess future conditions with project buildout. This assumes Whittier Elementary would be operating at a full capacity of 380 students. Forecast 2028 peak hour background volumes were derived by applying a one percent compound annual growth rate per year to the existing volumes.[3]

Forecast 2028 volumes without project for AM and PM peak hours are illustrated in **Figures 12, 13, and 14**[4]. No pipeline projects are expected in the study area. Forecast 2028 volumes with project for the AM and PM peak hours are illustrated in **Figures 15, 16, 17.** This includes redistribution of the existing school traffic due to the changes in access with the project in place.

[3] Confirmed with City of Fircrest.

[4] The future without project scenario analyses assume the same traffic patterns as today.

Exhibit D



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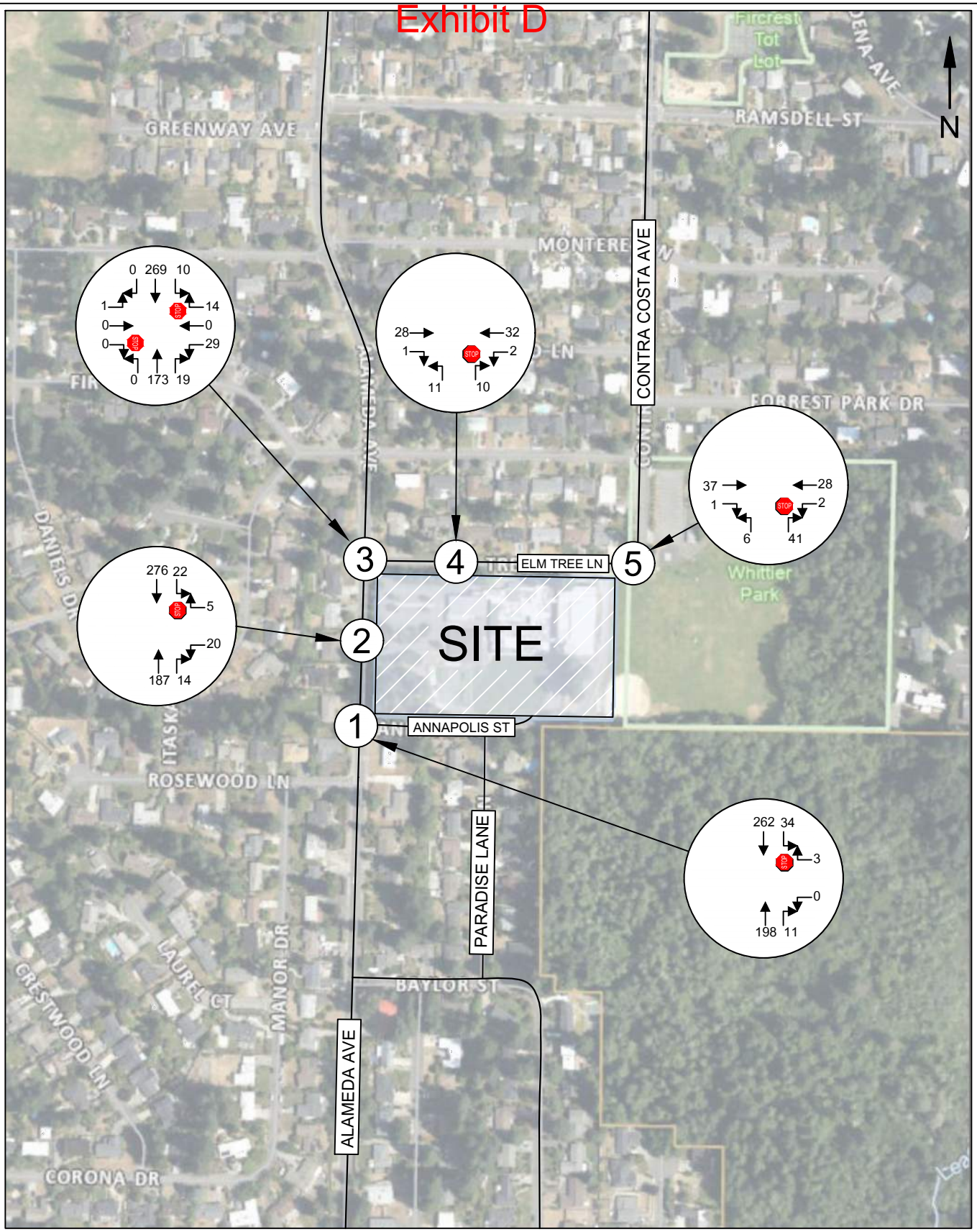
WHITTIER ELEMENTARY SCHOOL

FORECAST 2028 WITHOUT PROJECT AM PEAK HOUR OF SCHOOL
FIGURE 12

Exhibit D



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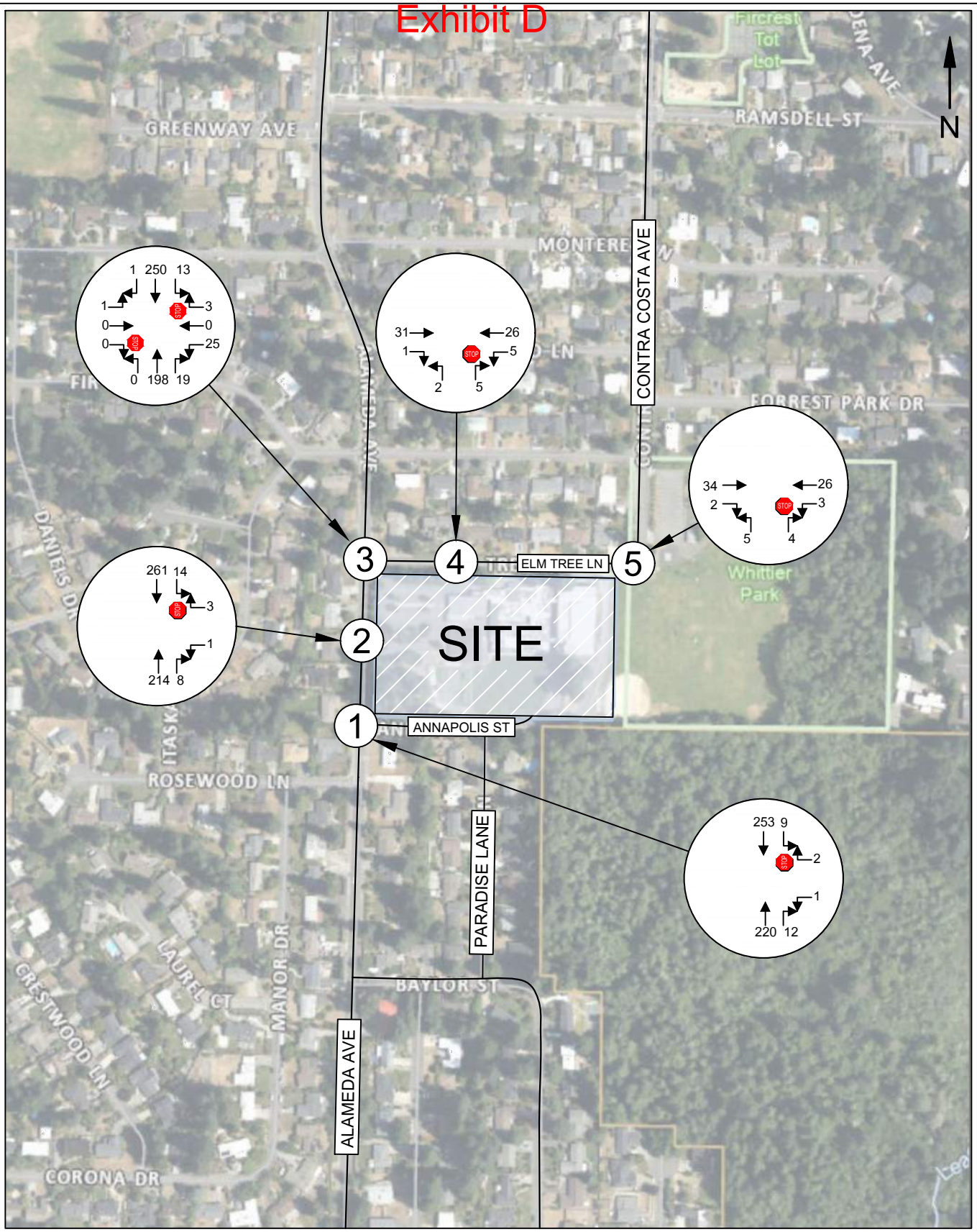
WHITTIER ELEMENTARY SCHOOL

FORECAST 2028 WITHOUT PROJECT PM PEAK HOUR OF SCHOOL
FIGURE 13

Exhibit D



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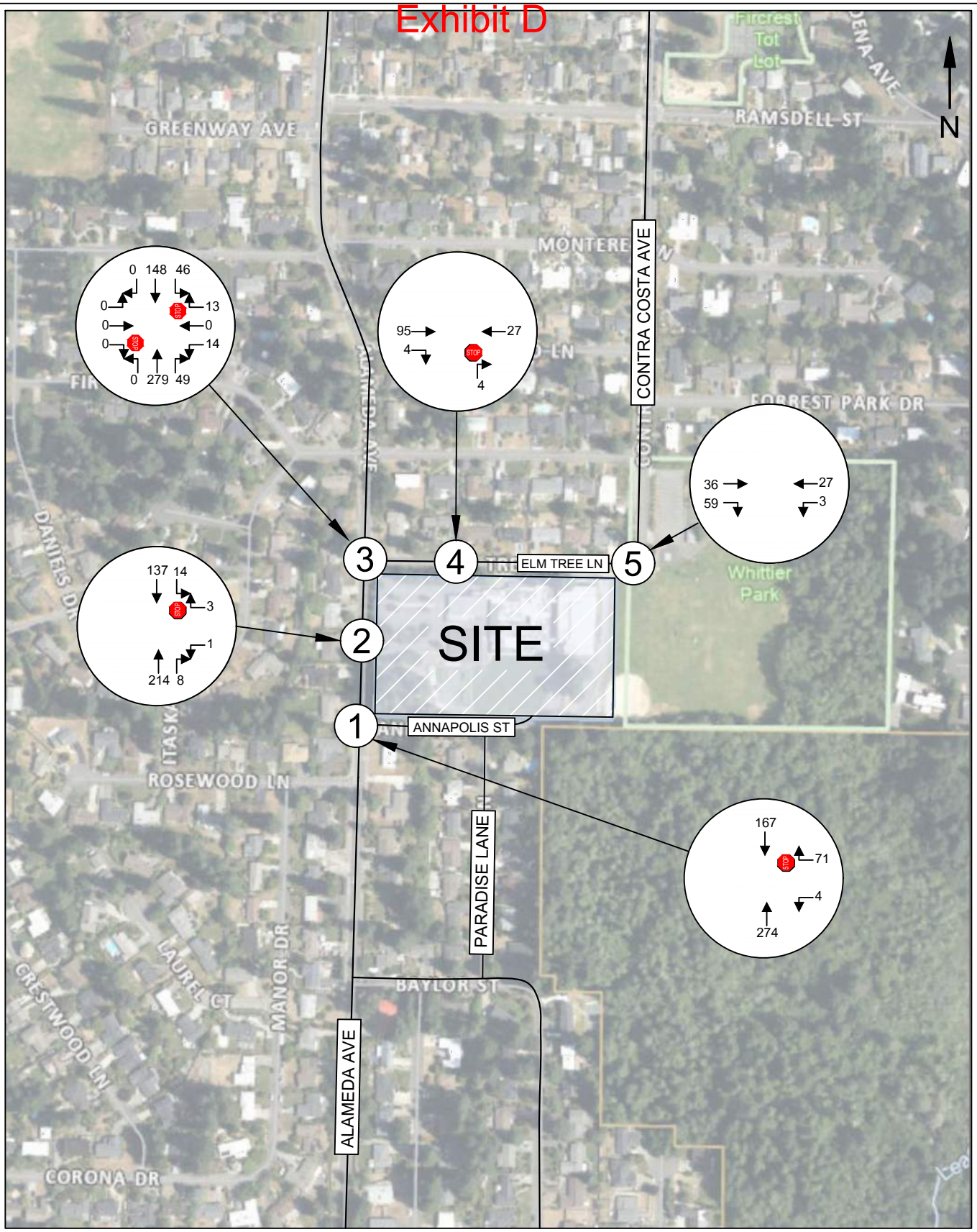
WHITTIER ELEMENTARY SCHOOL

FORECAST 2028 WITHOUT PROJECT PM PEAK HOUR OF STREET
FIGURE 14

Exhibit D



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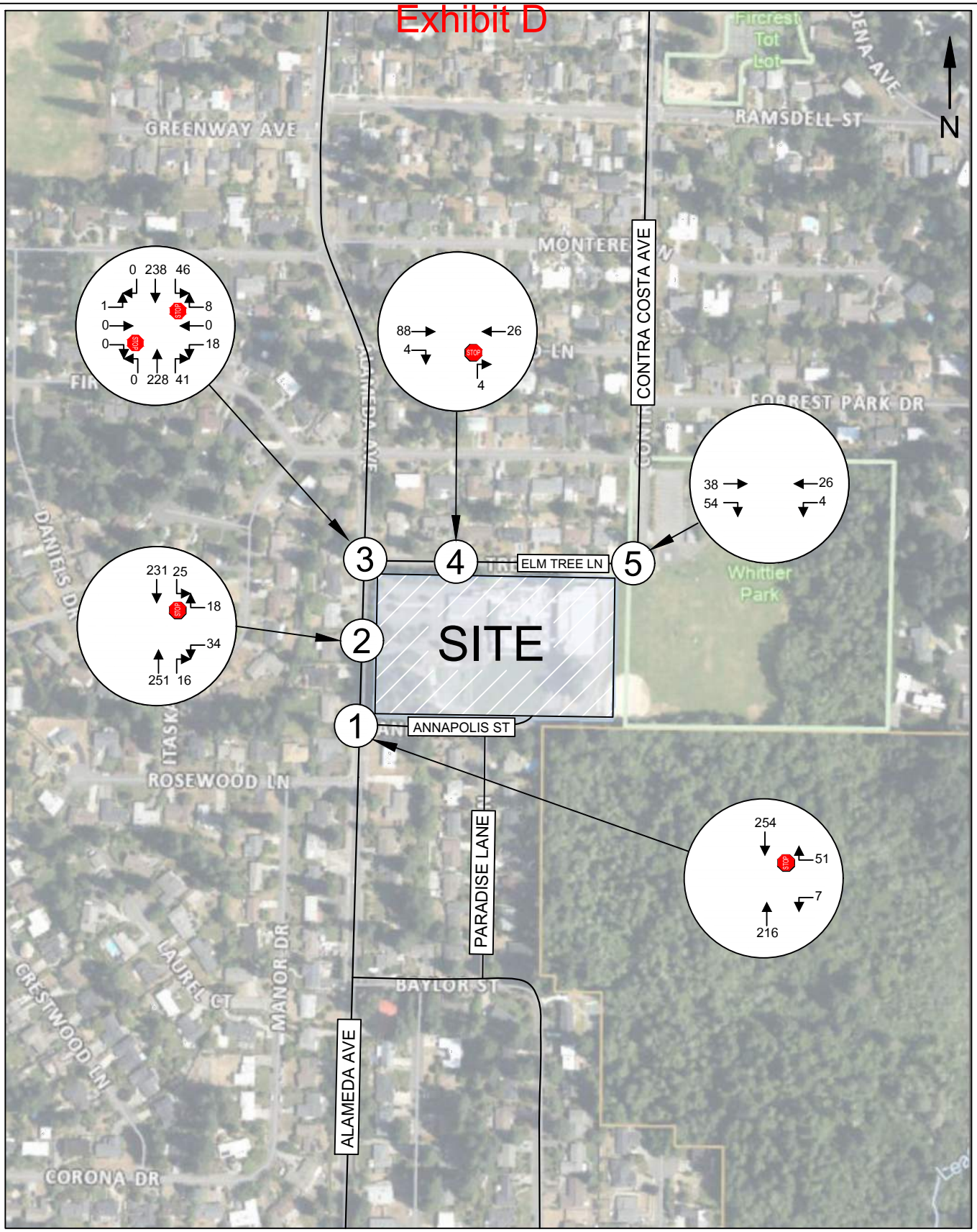
WHITTIER ELEMENTARY SCHOOL

FORECAST 2028 WITH PROJECT AM PEAK HOUR OF SCHOOL
FIGURE 15

Exhibit D



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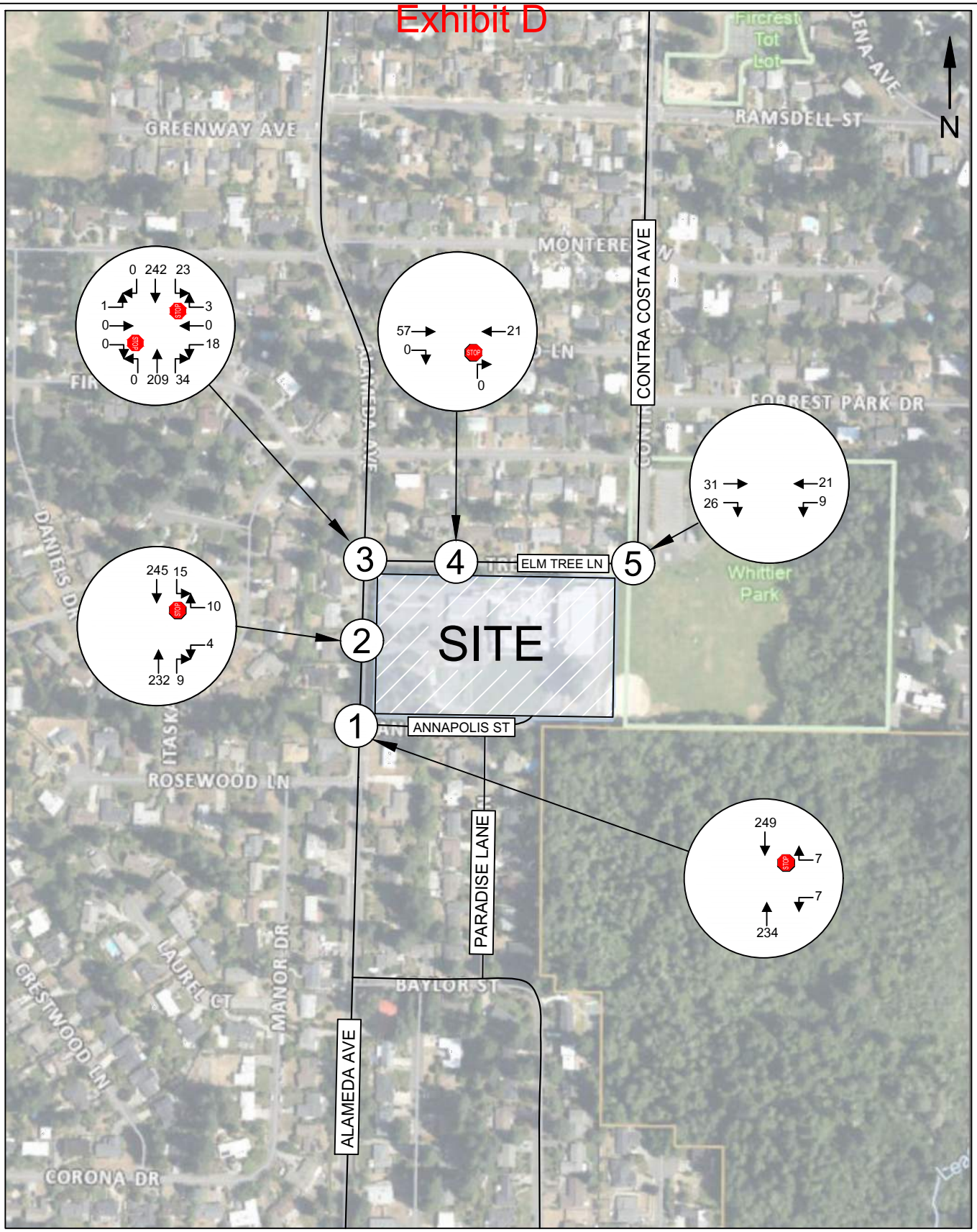
WHITTIER ELEMENTARY SCHOOL

FORECAST 2028 WITH PROJECT PM PEAK HOUR OF SCHOOL
FIGURE 16

Exhibit D



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WHITTIER ELEMENTARY SCHOOL
FORECAST 2028 WITH PROJECT PM PEAK HOUR OF SCHOOL
FIGURE 17

4.4 Future Level of Service

Level of service analyses were conducted for future peak hour conditions both without and with the additional school-related trips added to the study intersections. The resulting delays and levels of service under are summarized below in **Table 6**. It should be noted that the Elm Tree Lane/North Parking Lot driveway will serve only buses with the project in place. Since no bus activity is expected during the PM peak hour of the adjacent street network, no delay is reported for that period.

Table 6: Forecast 2028 Weekday Peak Hour Level of Service

Delays Given in Seconds per Vehicle

Intersection	Approach	Peak Hour	Without Project		With Project	
			LOS	Delay	LOS	Delay
1. Alameda Ave/ Annapolis Street	WB	AM Peak	B	10.0	B	12.0
		PM School	A	9.7	B	10.6
		PM Street	B	10.5	B	10.9
2. Alameda Ave/ West Parking Lot	WB	AM Peak	B	11.6	B	14.3
		PM School	B	13.1	B	13.6
		PM Street	B	10.6	B	11.0
3. Alameda Ave/ Elm Tree Ln	WB/EB	AM Peak	B	11.3	B	14.2
		PM School	B	13.3	C	15.2
		PM Street	B	13.2	B	13.5
4. Elm Tree Lane/ North Parking Lot	NB	AM Peak Hour	A	8.8	B	10.2
		PM School	A	8.8	B	10.2
		PM Street	A	8.7	A	0.0
5. Annapolis St/ Elm Tree Ln	NB/WB	AM Peak	A	9.1	A	0.9
		PM School	A	12.8	A	1.1
		PM Street	A	9.1	A	2.3

Operations improve at the Elm Tree Lane/Annapolis Street intersection in with project conditions because Annapolis Street becomes one way southbound in the future along the east side of the school. With no northbound exiting trips, delays decrease due to fewer conflicts. The approach with the highest delay also changes, from northbound to westbound.

Forecast 2028 AM and PM peak hour operations are projected to be LOS C or better. The study intersections continue to meet City of Fircrest standards in future conditions. Overall, the project is not expected to create a significant impact.

4.5 Queuing

As discussed in Section 3.6, the current maximum queue of 16 vehicles with 320 students represents a vehicle-to-student ratio of approximately 5%. With the addition of 60 students, queuing demand may increase by about three vehicles, resulting in a projected maximum of 19 vehicles (approximately 475 feet). The proposed configuration provides roughly 565 feet of available queuing space, indicating that the future maximum queue should remain within the available length. Vehicles are not expected to spill back onto Elm Tree Lane. This assumes that some parents and guardians would continue to utilize street parking and on-site parking stalls for pick-up and drop-off activity.

4.6 Parking

The existing school campus provides 53 parking stalls, and the proposed redevelopment plans will revise this to 51 stalls. Parking requirements for schools are established in the Fircrest Municipal Code, Chapter 22 (Section 22.60.003). A summary of the code-required parking for the proposed school is shown in **Table 7**.

Table 7: City of Fircrest Parking Requirements – Future School

Land Use	Per Student Standard	Per Classroom Standard
Elementary	1 stall/50 students	1 stall/classroom

Applying the parking requirements results in the following required parking:

- Students (380) = 8 stalls
- Classrooms (16) = 16 stalls
- Total = 24 parking spaces

Applying the City of Fircrest's parking requirements to an elementary school result in a requirement of 24 parking stalls compared to the proposed supply of 51 stalls. However, parking utilization counts showed an average demand of about 28 vehicles, with a peak of 47 vehicles—exceeding the minimum code requirement. Parking demand may continue to rise as student enrollment grows.

To evaluate potential future parking needs, the *Institute of Transportation Engineers (ITE) Parking Generation Manual, 6th Edition* was reviewed. Using Land Use Code 520 – Elementary School, estimated parking demands were developed and are summarized in **Table 8.**

Table 8: ITE Parking Demand

Rates Expressed in Parking Stalls per Students

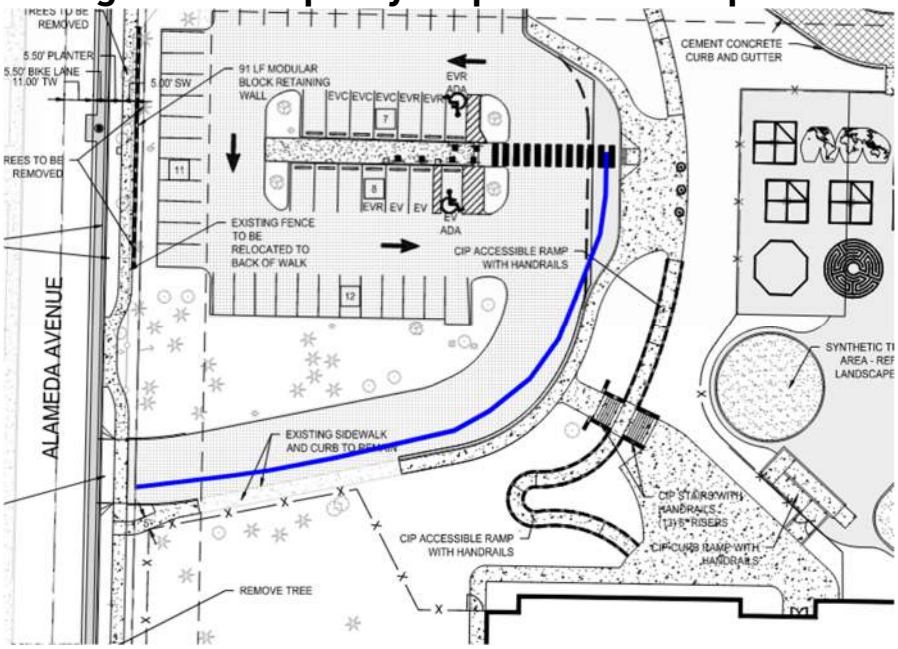
Land Use	Students	Average Rate	Parking Demand	Proposed Supply
Elementary School	380	0.14	53 veh	51 spaces

For an elementary school with 380 students, ITE data indicates a parking demand of approximately 53 stalls. The updated site configuration will provide 51 stalls, which is expected to accommodate typical daily demand; however, parking demand may temporarily exceed supply during peak drop-off and pick-up periods. There is on-street parking along the surrounding streets along with additional capacity in the pick-up loop to accommodate these demands.

4.7 Queuing and Parking – Construction Final Months

The new school building is anticipated to open in Fall 2027, with construction of the fields and play areas continuing until January 2028. During this final construction phase, Annapolis Street will be unavailable for parent and guardian drop-off and pick-up. These activities will temporarily take place within the on-site parking lot shown below in **Figure 18**, which provides approximately 230 feet of queuing capacity—less than the existing demand of about 400 feet. As such, the school should proactively inform parents of these temporary conditions and encourage alternative transportation options such as walking, biking, carpooling, or parking on nearby streets and walking to school to minimize impacts on Alameda Avenue.

Figure 18: Temporary Drop-Off and Pick-Up Area



5. CONCLUSIONS

The Whittier Elementary School project is intended to rebuild the existing school and create capacity for up to 60 additional students. The school is located in and serves Fircrest and is part of the Tacoma School District. The future site will move the building to the south and create new fields and play areas. On-site drop off and pick up activity will remain along Annapolis Street, but queueing direction will change from northbound to southbound.

Data were collected and operations evaluated for the AM peak hour, the school's PM peak hour, and the street's PM peak hour. All intersections operated at LOS B or better under existing conditions. A review of the past five years of collision data identified two reported incidents, neither involving injuries. During afternoon pick-up, a maximum queue of 16 vehicles was observed along Annapolis Street, with additional activity on adjacent streets and within the on-site parking lot. The lot, which provides 53 stalls, reached a peak utilization of 89% between 3:00 and 3:15 PM, averaging around 50% occupancy throughout the day.

With an additional 60 students, the project is estimated to generate 136 average weekday daily trips with 44 AM peak hour trips, 26 PM peak hour of school trips, and 10 PM peak hour of street trips. A three-year horizon (2028) was used to assess full buildout conditions. Because of the change in drop-off and pick-up activity, all existing project trips were redistributed for the forecast with project scenario. Forecast 2028 LOS are projected at LOS C or better for all three scenarios, without or with the project. The City of Fircrest level of service standards will be met with the project in place.

Assuming the new school at full-capacity, vehicle queuing on Annapolis Street is estimated at 19 vehicles (approximately 475 feet) in future conditions. The proposed configuration provides roughly 565 feet of available queuing space, so the future maximum queue should be accommodated within the available length. The updated site configuration will provide 51 stalls, accommodating typical daily demand. During the peak drop-off and pick-up times, parking demand may temporarily exceed supply. There is on-street parking along the surrounding streets along with additional capacity in the pick-up loop to accommodate these demands.

Site redevelopment will include frontage improvements such as a 5.5-foot bike lane on the east side of Alameda Avenue, new curb, gutter, and sidewalk along the school frontages on Alameda Avenue and Elm Tree Lane, and pedestrian curb bulbs at the intersections of Alameda Avenue with Elm Tree Lane and Annapolis Street.

Exhibit D

During the final three months of construction, the Annapolis Street drop-off and pick-up lane will not be available. These activities will temporarily take place within the on-site parking lot. That lot provides approximately 230 feet of queuing capacity—less than the existing demand of about 400 feet. As such, the school should proactively inform parents of these temporary conditions and encourage alternative transportation options such as walking, biking, carpooling, or parking on nearby streets and walking to school to minimize impacts on Alameda Avenue.

Please feel free to contact me should you have any questions.

Aaron Van Aken, P.E., PTOE

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX
Count Sheets

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623c
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Driveway Southbound				Elm Tree Ln Westbound				School Access Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	0	0	1	1	0	4	2	6	0	0	0	0	0	7	0	7	14
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	0	0	0	4	1	5	1	0	2	3	0	7	0	7	15
08:30 AM	0	0	0	0	0	12	0	12	8	0	13	21	0	11	0	11	44
08:45 AM	0	0	0	0	0	10	0	10	1	0	3	4	0	7	0	7	21
Total	0	0	0	0	0	28	1	29	10	0	18	28	0	28	0	28	85
Grand Total	0	0	1	1	0	32	3	35	10	0	18	28	0	35	0	35	99
Apprch %	0	0	100		0	91.4	8.6		35.7	0	64.3		0	100	0		
Total %	0	0	1	1	0	32.3	3	35.4	10.1	0	18.2	28.3	0	35.4	0	35.4	
Passenger +	0	0	1	1	0	31	3	34	9	0	18	27	0	29	0	29	91
% Passenger +	0	0	100	100	0	96.9	100	97.1	90	0	100	96.4	0	82.9	0	82.9	91.9
Heavy	0	0	0	0	0	1	0	1	1	0	0	1	0	6	0	6	8
% Heavy	0	0	0	0	0	3.1	0	2.9	10	0	0	3.6	0	17.1	0	17.1	8.1

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623c
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Driveway Southbound				Elm Tree Ln Westbound				School Access Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	0	0	0	4	**1**	5	1	0	2	3	0	7	0	7	15
08:30 AM	0	0	0	0	0	**12**	0	**12**	**8**	0	**13**	**21**	0	**11**	0	**11**	**44**
08:45 AM	0	0	0	0	0	10	0	10	1	0	3	4	0	7	0	7	21
Total Volume	0	0	0	0	0	28	1	29	10	0	18	28	0	28	0	28	85
% App. Total	0	0	0		0	96.6	3.4		35.7	0	64.3		0	100	0		
PHF	.000	.000	.000	.000	.000	.583	.250	.604	.313	.000	.346	.333	.000	.636	.000	.636	.483
Passenger +	0	0	0	0	0	28	1	29	9	0	18	27	0	24	0	24	80
% Passenger +	0	0	0	0	0	100	100	100	90.0	0	100	96.4	0	85.7	0	85.7	94.1
Heavy	0	0	0	0	0	0	0	0	1	0	0	1	0	4	0	4	5
% Heavy	0	0	0	0	0	0	0	0	10.0	0	0	3.6	0	14.3	0	14.3	5.9

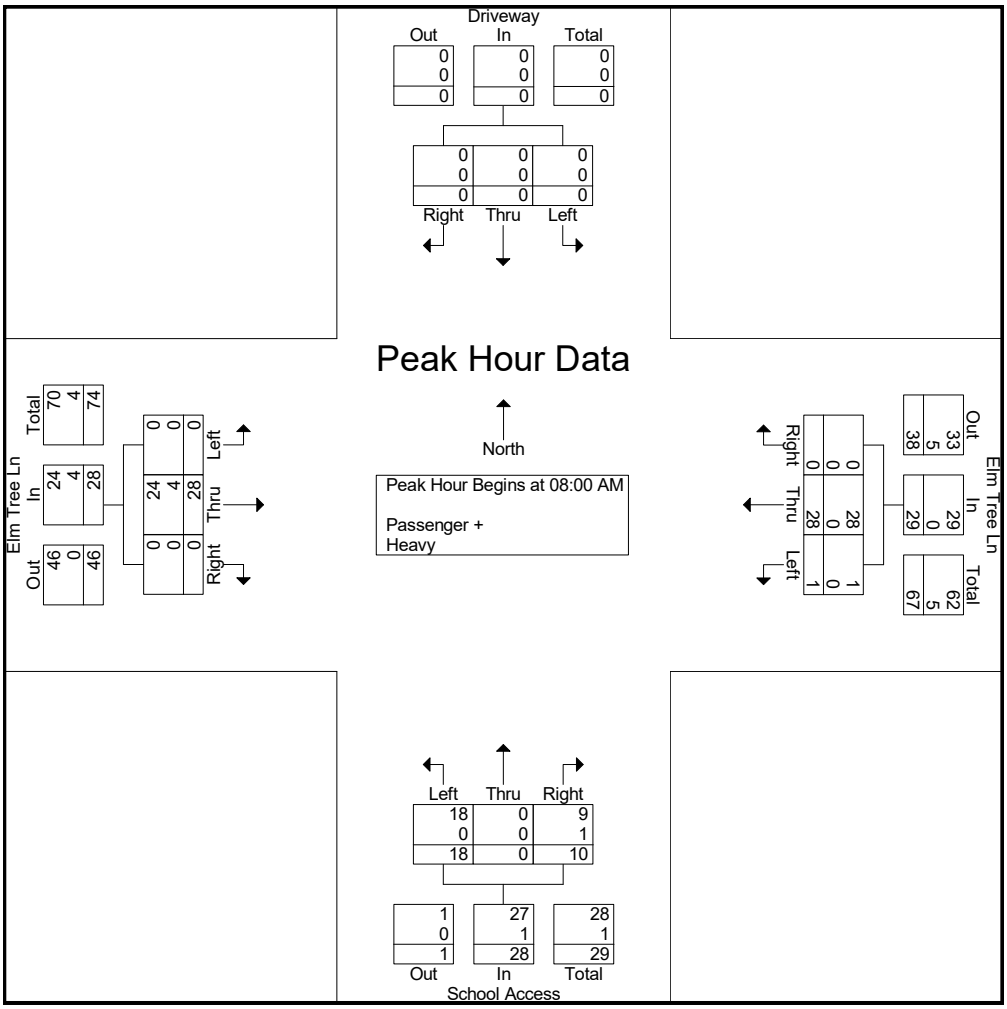

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623g
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Driveway Southbound				Elm Tree Ln Westbound				Annapolis St Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	3	5	1	0	0	1	0	1	0	1	7
07:15 AM	0	0	1	1	0	1	0	1	2	0	1	3	0	1	1	2	7
07:30 AM	0	0	0	0	0	2	0	2	3	0	0	3	1	1	0	2	7
07:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	0	4	0	4	7
Total	0	0	1	1	0	7	3	10	7	0	1	8	1	7	1	9	28
08:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4	8
08:15 AM	1	0	0	1	0	6	0	6	7	0	0	7	0	3	1	4	18
08:30 AM	0	0	0	0	0	8	0	8	45	0	2	47	0	19	1	20	75
08:45 AM	0	0	0	0	0	8	1	9	0	0	0	0	0	8	0	8	17
Total	1	0	0	1	0	25	1	26	53	0	2	55	0	34	2	36	118
Grand Total	1	0	1	2	0	32	4	36	60	0	3	63	1	41	3	45	146
Apprch %	50	0	50		0	88.9	11.1		95.2	0	4.8		2.2	91.1	6.7		
Total %	0.7	0	0.7	1.4	0	21.9	2.7	24.7	41.1	0	2.1	43.2	0.7	28.1	2.1	30.8	
Passenger +	1	0	1	2	0	31	4	35	60	0	3	63	1	33	3	37	137
% Passenger +	100	0	100	100	0	96.9	100	97.2	100	0	100	100	100	80.5	100	82.2	93.8
Heavy	0	0	0	0	0	1	0	1	0	0	0	0	0	8	0	8	9
% Heavy	0	0	0	0	0	3.1	0	2.8	0	0	0	0	0	19.5	0	17.8	6.2

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623g
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Driveway Southbound				Elm Tree Ln Westbound				Annapolis St Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4	8
08:15 AM	**1**	0	0	**1**	0	6	0	6	7	0	0	7	0	3	**1**	4	18
08:30 AM	0	0	0	0	0	**8**	0	8	**45**	0	**2**	**47**	0	**19**	1	**20**	**75**
08:45 AM	0	0	0	0	0	8	**1**	**9**	0	0	0	0	0	8	0	8	17
Total Volume	1	0	0	1	0	25	1	26	53	0	2	55	0	34	2	36	118
% App. Total	100	0	0		0	96.2	3.8		96.4	0	3.6		0	94.4	5.6		
PHF	.250	.000	.000	.250	.000	.781	.250	.722	.294	.000	.250	.293	.000	.447	.500	.450	.393
Passenger +	1	0	0	1	0	25	1	26	53	0	2	55	0	28	2	30	112
% Passenger +	100	0	0	100	0	100	100	100	100	0	100	100	0	82.4	100	83.3	94.9
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	6
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	17.6	0	16.7	5.1

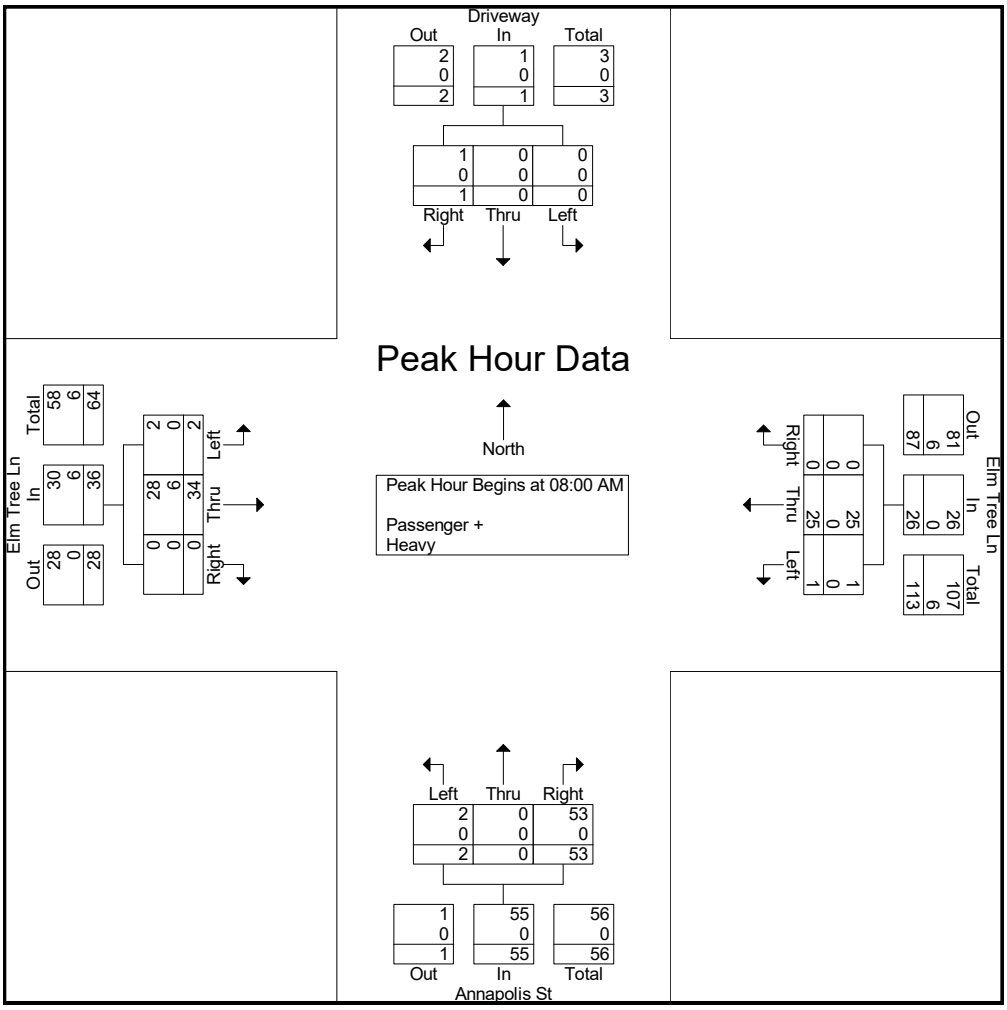

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623i
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Alameda Ave Southbound			Annapolis St Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
07:00 AM	16	2	18	0	0	0	0	24	24	42
07:15 AM	12	1	13	2	0	2	1	44	45	60
07:30 AM	24	1	25	1	1	2	2	50	52	79
07:45 AM	36	0	36	1	0	1	1	59	60	97
Total	88	4	92	4	1	5	4	177	181	278
08:00 AM	25	0	25	4	0	4	0	65	65	94
08:15 AM	25	12	37	1	1	2	7	60	67	106
08:30 AM	57	15	72	1	0	1	14	71	85	158
08:45 AM	39	0	39	1	0	1	0	37	37	77
Total	146	27	173	7	1	8	21	233	254	435
Grand Total	234	31	265	11	2	13	25	410	435	713
Apprch %	88.3	11.7		84.6	15.4		5.7	94.3		
Total %	32.8	4.3	37.2	1.5	0.3	1.8	3.5	57.5	61	
Passenger +	232	31	263	11	2	13	25	401	426	702
% Passenger +	99.1	100	99.2	100	100	100	100	97.8	97.9	98.5
Heavy	2	0	2	0	0	0	0	9	9	11
% Heavy	0.9	0	0.8	0	0	0	0	2.2	2.1	1.5

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623i
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Alameda Ave Southbound			Annapolis St Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	25	0	25	**4**	0	**4**	0	65	65	94
08:15 AM	25	12	37	1	**1**	2	7	60	67	106
08:30 AM	**57**	**15**	**72**	1	0	1	**14**	**71**	**85**	**158**
08:45 AM	39	0	39	1	0	1	0	37	37	77
Total Volume	146	27	173	7	1	8	21	233	254	435
% App. Total	84.4	15.6		87.5	12.5		8.3	91.7		
PHF	.640	.450	.601	.438	.250	.500	.375	.820	.747	.688
Passenger +	145	27	172	7	1	8	21	228	249	429
% Passenger +	99.3	100	99.4	100	100	100	100	97.9	98.0	98.6
Heavy	1	0	1	0	0	0	0	5	5	6
% Heavy	0.7	0	0.6	0	0	0	0	2.1	2.0	1.4

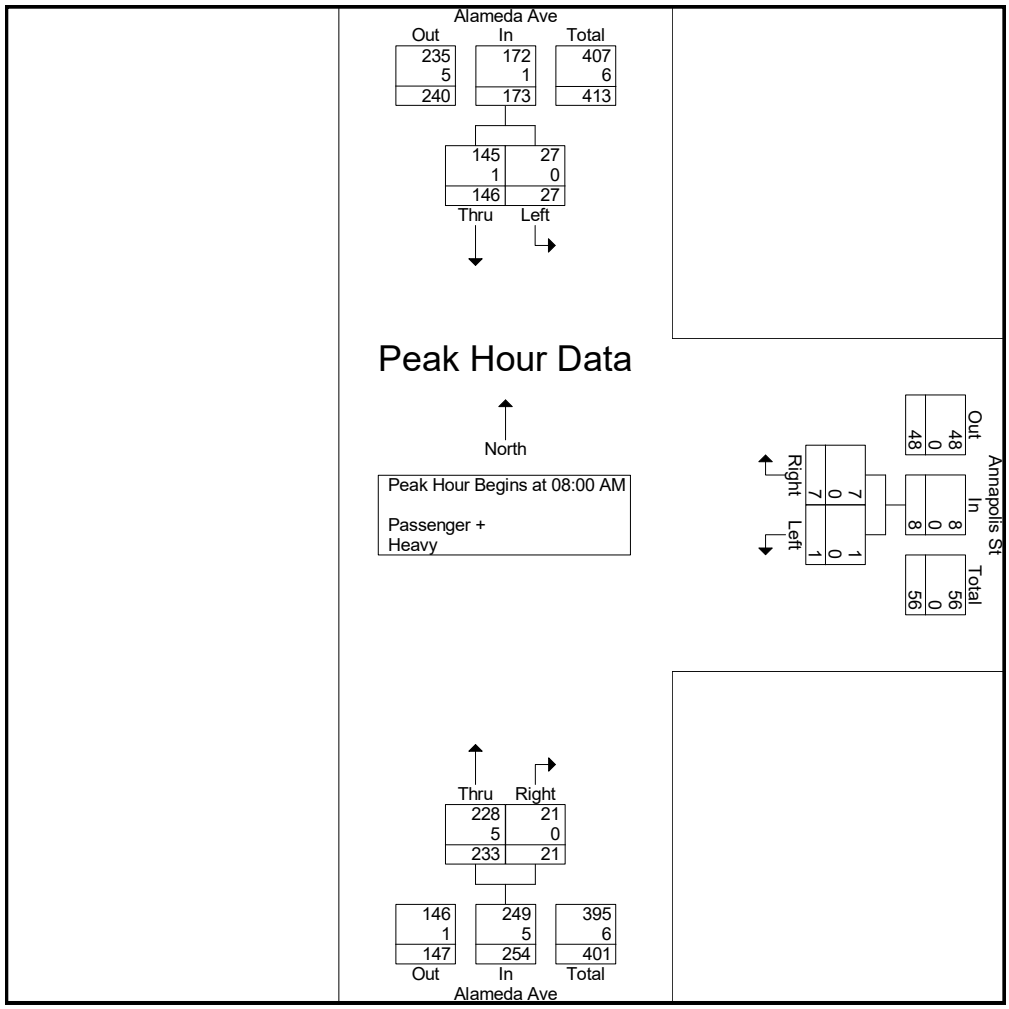

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623e
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Alameda Ave Southbound				School Access Westbound				Alameda Ave Northbound						
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	18	3	0	21	0	0	0	0	1	23	0	24	0	45	45
07:15 AM	13	0	0	13	0	0	1	0	0	45	1	45	2	58	60
07:30 AM	26	2	0	28	0	0	0	0	0	50	0	50	0	78	78
07:45 AM	36	5	0	41	0	0	0	0	5	56	0	61	0	102	102
Total	93	10	0	103	0	0	1	0	6	174	1	180	2	283	285
08:00 AM	23	4	0	27	0	0	1	0	3	64	1	67	2	94	96
08:15 AM	39	7	0	46	0	0	0	0	7	53	0	60	0	106	106
08:30 AM	65	8	0	73	2	9	0	11	19	51	0	70	0	154	154
08:45 AM	36	1	0	37	1	3	0	4	2	37	0	39	0	80	80
Total	163	20	0	183	3	12	1	15	31	205	1	236	2	434	436
Grand Total	256	30	0	286	3	12	2	15	37	379	2	416	4	717	721
Apprch %	89.5	10.5			20	80			8.9	91.1					
Total %	35.7	4.2		39.9	0.4	1.7		2.1	5.2	52.9		58	0.6	99.4	
Passenger +	256	30		286	3	12		17	37	379		418	0	0	721
% Passenger +	100	100	0	100	100	100	100	100	100	100	100	100	0	0	100
Heavy	0	0		0	0	0		0	0	0		0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Exhibit D

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PO Box 397 Puyallup, WA 98371

File Name : 5623e
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Alameda Ave Southbound			School Access Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	23	4	27	0	0	0	3	**64**	67	94
08:15 AM	39	7	46	0	0	0	7	53	60	106
08:30 AM	**65**	**8**	**73**	**2**	**9**	**11**	**19**	51	**70**	**154**
08:45 AM	36	1	37	1	3	4	2	37	39	80
Total Volume	163	20	183	3	12	15	31	205	236	434
% App. Total	89.1	10.9		20	80		13.1	86.9		
PHF	.627	.625	.627	.375	.333	.341	.408	.801	.843	.705
Passenger +	163	20	183	3	12	15	31	205	236	434
% Passenger +	100	100	100	100	100	100	100	100	100	100
Heavy	0	0	0	0	0	0	0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0

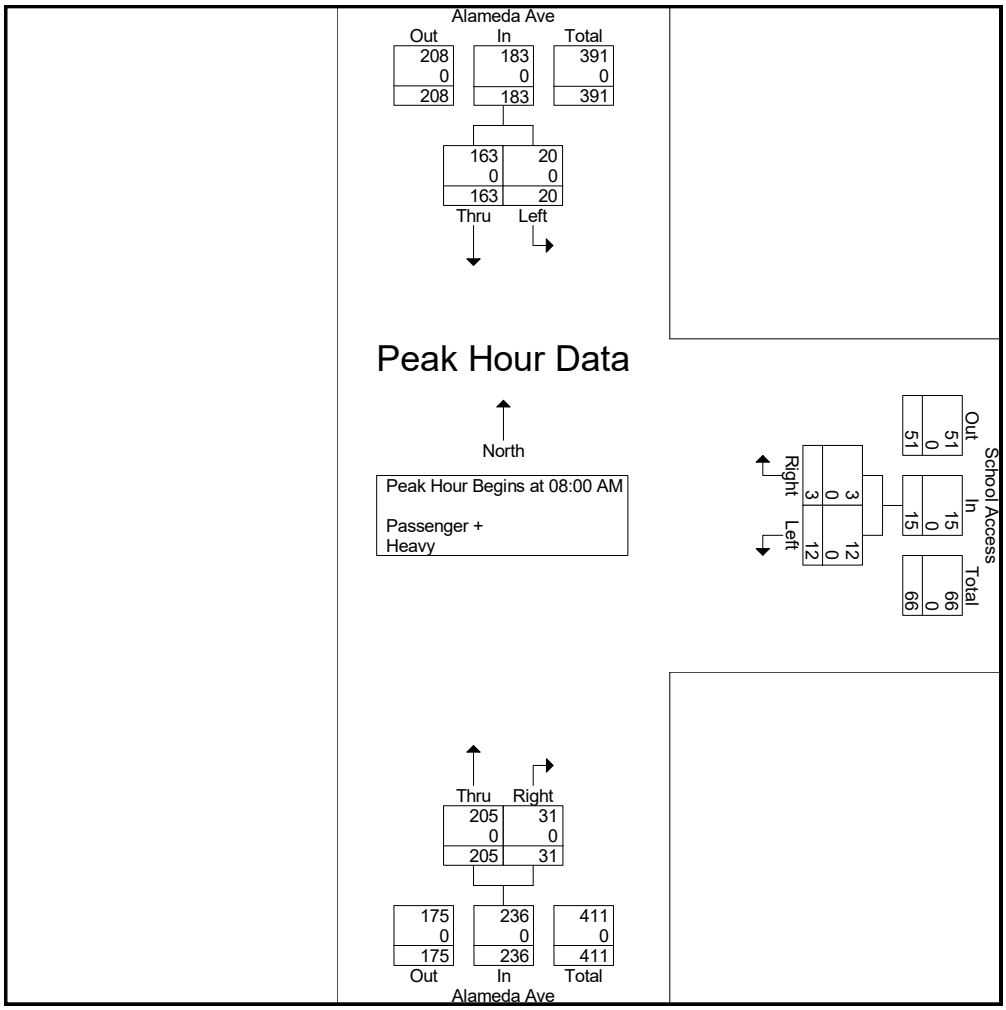

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623b
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Alameda Ave Southbound				Elm Tree Ln Westbound				Alameda Ave Northbound				Driveway Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
02:00 PM	0	28	0	28	1	0	7	8	1	25	0	26	0	0	0	0	62
02:15 PM	0	49	4	53	0	0	2	2	0	39	0	39	0	0	0	0	94
02:30 PM	0	42	1	43	1	0	4	5	1	39	0	40	0	0	0	0	88
02:45 PM	0	61	5	66	3	0	4	7	6	46	0	52	0	0	0	0	125
Total	0	180	10	190	5	0	17	22	8	149	0	157	0	0	0	0	369
03:00 PM	0	82	2	84	4	0	8	12	4	46	0	50	0	0	0	0	146
03:15 PM	0	63	2	65	6	0	12	18	4	45	0	49	0	0	0	0	132
03:30 PM	0	55	1	56	3	0	4	7	4	31	0	35	0	0	1	1	99
03:45 PM	1	60	6	67	4	0	5	9	1	39	0	40	0	0	0	0	116
Total	1	260	11	272	17	0	29	46	13	161	0	174	0	0	1	1	493
04:00 PM	0	57	2	59	1	0	1	2	2	45	0	47	0	0	0	0	108
04:15 PM	0	61	1	62	1	0	2	3	0	51	0	51	0	0	1	1	117
04:30 PM	0	56	3	59	1	0	3	4	4	58	0	62	0	0	0	0	125
04:45 PM	0	64	1	65	1	0	4	5	5	38	0	43	0	0	0	0	113
Total	0	238	7	245	4	0	10	14	11	192	0	203	0	0	1	1	463
05:00 PM	1	75	2	78	0	0	5	5	5	44	0	49	0	0	1	1	133
05:15 PM	0	58	5	63	0	0	8	8	2	43	0	45	0	0	0	0	116
05:30 PM	0	54	3	57	3	0	7	10	6	51	0	57	0	0	0	0	124
05:45 PM	0	56	3	59	3	0	4	7	5	54	0	59	0	0	0	0	125
Total	1	243	13	257	6	0	24	30	18	192	0	210	0	0	1	1	498
Grand Total	2	921	41	964	32	0	80	112	50	694	0	744	0	0	3	3	1823
Apprch %	0.2	95.5	4.3		28.6	0	71.4		6.7	93.3	0		0	0	100		
Total %	0.1	50.5	2.2	52.9	1.8	0	4.4	6.1	2.7	38.1	0	40.8	0	0	0.2	0.2	
Passenger +	2	906	36	944	32	0	77	109	47	690	0	737	0	0	3	3	1793
% Passenger +	100	98.4	87.8	97.9	100	0	96.2	97.3	94	99.4	0	99.1	0	0	100	100	98.4
Heavy	0	15	5	20	0	0	3	3	3	4	0	7	0	0	0	0	30
% Heavy	0	1.6	12.2	2.1	0	0	3.8	2.7	6	0.6	0	0.9	0	0	0	0	1.6

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623b
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Alameda Ave Southbound				Elm Tree Ln Westbound				Alameda Ave Northbound				Driveway Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	61	**5**	66	3	0	4	7	**6**	**46**	0	**52**	0	0	0	0	125
03:00 PM	0	**82**	2	**84**	4	0	8	12	4	46	0	50	0	0	0	0	**146**
03:15 PM	0	63	2	65	**6**	0	**12**	**18**	4	45	0	49	0	0	0	0	132
03:30 PM	0	55	1	56	3	0	4	7	4	31	0	35	0	0	**1**	**1**	99
Total Volume	0	261	10	271	16	0	28	44	18	168	0	186	0	0	1	1	502
% App. Total	0	96.3	3.7		36.4	0	63.6		9.7	90.3	0		0	0	100		
PHF	.000	.796	.500	.807	.667	.000	.583	.611	.750	.913	.000	.894	.000	.000	.250	.250	.860
Passenger +	0	256	8	264	16	0	28	44	16	166	0	182	0	0	1	1	491
% Passenger +	0	98.1	80.0	97.4	100	0	100	100	88.9	98.8	0	97.8	0	0	100	100	97.8
Heavy	0	5	2	7	0	0	0	0	2	2	0	4	0	0	0	0	11
% Heavy	0	1.9	20.0	2.6	0	0	0	0	11.1	1.2	0	2.2	0	0	0	0	2.2

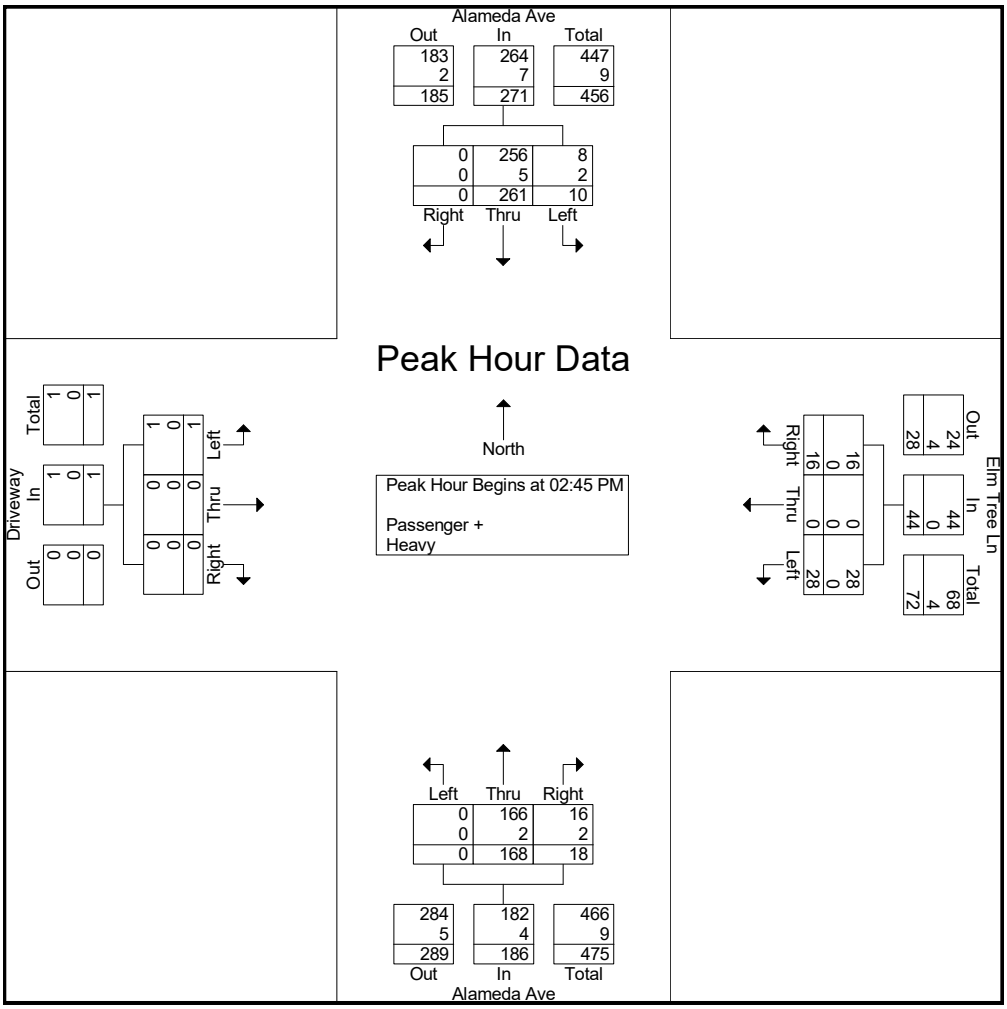

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623b
Site Code : 00005623
Start Date : 6/12/2025
Page No : 3

	Alameda Ave Southbound				Elm Tree Ln Westbound				Alameda Ave Northbound				Driveway Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	**75**	2	**78**	0	0	5	5	5	44	0	49	0	0	**1**	**1**	**133**
05:15 PM	0	58	**5**	63	0	0	**8**	8	2	43	0	45	0	0	0	0	116
05:30 PM	0	54	3	57	**3**	0	7	**10**	**6**	51	0	57	0	0	0	0	124
05:45 PM	0	56	3	59	3	0	4	7	5	**54**	0	**59**	0	0	0	0	125
Total Volume	1	243	13	257	6	0	24	30	18	192	0	210	0	0	1	1	498
% App. Total	0.4	94.6	5.1		20	0	80		8.6	91.4	0		0	0	100		
PHF	.250	.810	.650	.824	.500	.000	.750	.750	.750	.889	.000	.890	.000	.000	.250	.250	.936
Passenger +	1	243	13	257	6	0	24	30	17	192	0	209	0	0	1	1	497
% Passenger +	100	100	100	100	100	0	100	100	94.4	100	0	99.5	0	0	100	100	99.8
Heavy	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% Heavy	0	0	0	0	0	0	0	0	5.6	0	0	0.5	0	0	0	0	0.2

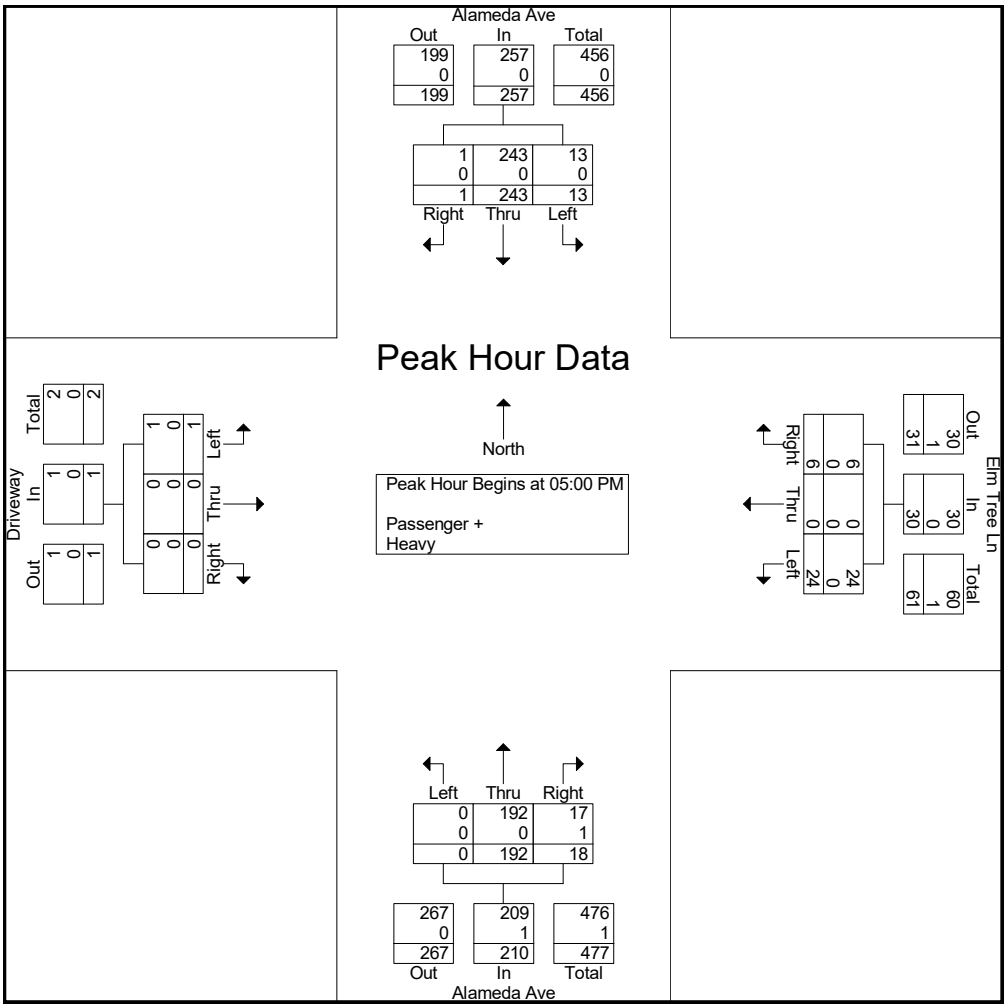

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623d
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Driveway Southbound				Elm Tree Ln Westbound				School Access Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
02:00 PM	0	0	0	0	0	8	0	8	1	0	0	1	0	1	0	1	10
02:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
02:30 PM	0	0	0	0	0	4	1	5	1	0	1	2	0	2	0	2	9
02:45 PM	0	0	0	0	0	5	0	5	0	0	2	2	0	11	0	11	18
Total	0	0	0	0	0	19	1	20	2	0	3	5	0	18	0	18	43
03:00 PM	0	0	0	0	0	9	2	11	4	0	3	7	1	6	0	7	25
03:15 PM	0	0	0	0	0	15	0	15	4	0	2	6	0	5	0	5	26
03:30 PM	0	0	0	0	0	4	0	4	2	0	4	6	0	5	0	5	15
03:45 PM	0	0	0	0	0	4	1	5	1	0	4	5	0	5	0	5	15
Total	0	0	0	0	0	32	3	35	11	0	13	24	1	21	0	22	81
04:00 PM	0	0	0	0	0	1	0	1	1	0	1	2	0	3	0	3	6
04:15 PM	0	0	0	0	1	4	0	5	3	0	1	4	0	1	0	1	10
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
04:45 PM	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5	11
Total	0	0	0	0	1	13	0	14	5	0	2	7	0	15	0	15	36
05:00 PM	0	0	0	0	0	5	1	6	0	0	0	0	0	7	0	7	13
05:15 PM	0	0	0	0	0	8	0	8	0	0	0	0	0	7	0	7	15
05:30 PM	0	0	0	0	0	7	0	7	2	0	1	3	0	9	0	9	19
05:45 PM	0	0	0	0	0	6	4	10	3	0	1	4	1	5	0	6	20
Total	0	0	0	0	0	26	5	31	5	0	2	7	1	28	0	29	67
Grand Total	0	0	0	0	1	90	9	100	23	0	20	43	2	82	0	84	227
Apprch %	0	0	0		1	90	9		53.5	0	46.5		2.4	97.6	0		
Total %	0	0	0	0	0.4	39.6	4	44.1	10.1	0	8.8	18.9	0.9	36.1	0	37	
Passenger +	0	0	0	0	1	88	9	98	23	0	20	43	2	74	0	76	217
% Passenger +	0	0	0	0	100	97.8	100	98	100	0	100	100	100	90.2	0	90.5	95.6
Heavy	0	0	0	0	0	2	0	2	0	0	0	0	0	8	0	8	10
% Heavy	0	0	0	0	0	2.2	0	2	0	0	0	0	0	9.8	0	9.5	4.4

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623d
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Driveway Southbound				Elm Tree Ln Westbound				School Access Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	5	0	5	0	0	2	2	0	**11**	0	**11**	18
03:00 PM	0	0	0	0	0	9	**2**	11	**4**	0	3	**7**	**1**	6	0	7	25
03:15 PM	0	0	0	0	0	**15**	0	**15**	4	0	2	6	0	5	0	5	**26**
03:30 PM	0	0	0	0	0	4	0	4	2	0	**4**	6	0	5	0	5	15
Total Volume	0	0	0	0	0	33	2	35	10	0	11	21	1	27	0	28	84
% App. Total	0	0	0		0	94.3	5.7		47.6	0	52.4		3.6	96.4	0		
PHF	.000	.000	.000	.000	.000	.550	.250	.583	.625	.000	.688	.750	.250	.614	.000	.636	.808
Passenger +	0	0	0	0	0	33	2	35	10	0	11	21	1	23	0	24	80
% Passenger +	0	0	0	0	0	100	100	100	100	0	100	100	100	85.2	0	85.7	95.2
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	14.8	0	14.3	4.8

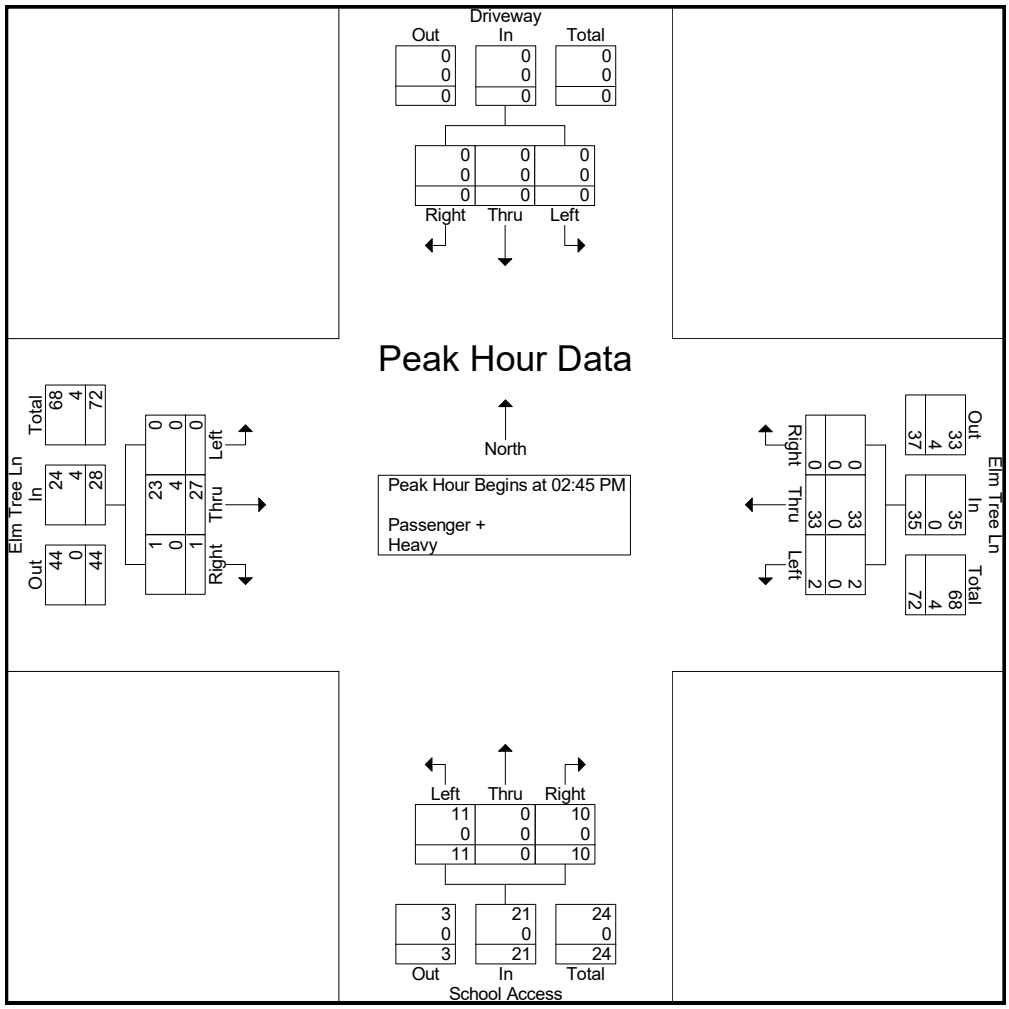

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623d
Site Code : 00005623
Start Date : 6/12/2025
Page No : 3

	Driveway Southbound				Elm Tree Ln Westbound				School Access Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	5	1	6	0	0	0	0	0	7	0	7	13
05:15 PM	0	0	0	0	0	**8**	0	8	0	0	0	0	0	7	0	7	15
05:30 PM	0	0	0	0	0	7	0	7	2	0	**1**	3	0	**9**	0	**9**	19
05:45 PM	0	0	0	0	0	6	**4**	**10**	**3**	0	1	**4**	**1**	5	0	6	**20**
Total Volume	0	0	0	0	0	26	5	31	5	0	2	7	1	28	0	29	67
% App. Total	0	0	0		0	83.9	16.1		71.4	0	28.6		3.4	96.6	0		
PHF	.000	.000	.000	.000	.000	.813	.313	.775	.417	.000	.500	.438	.250	.778	.000	.806	.838
Passenger +	0	0	0	0	0	26	5	31	5	0	2	7	1	27	0	28	66
% Passenger +	0	0	0	0	0	100	100	100	100	0	100	100	100	96.4	0	96.6	98.5
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6	0	3.4	1.5

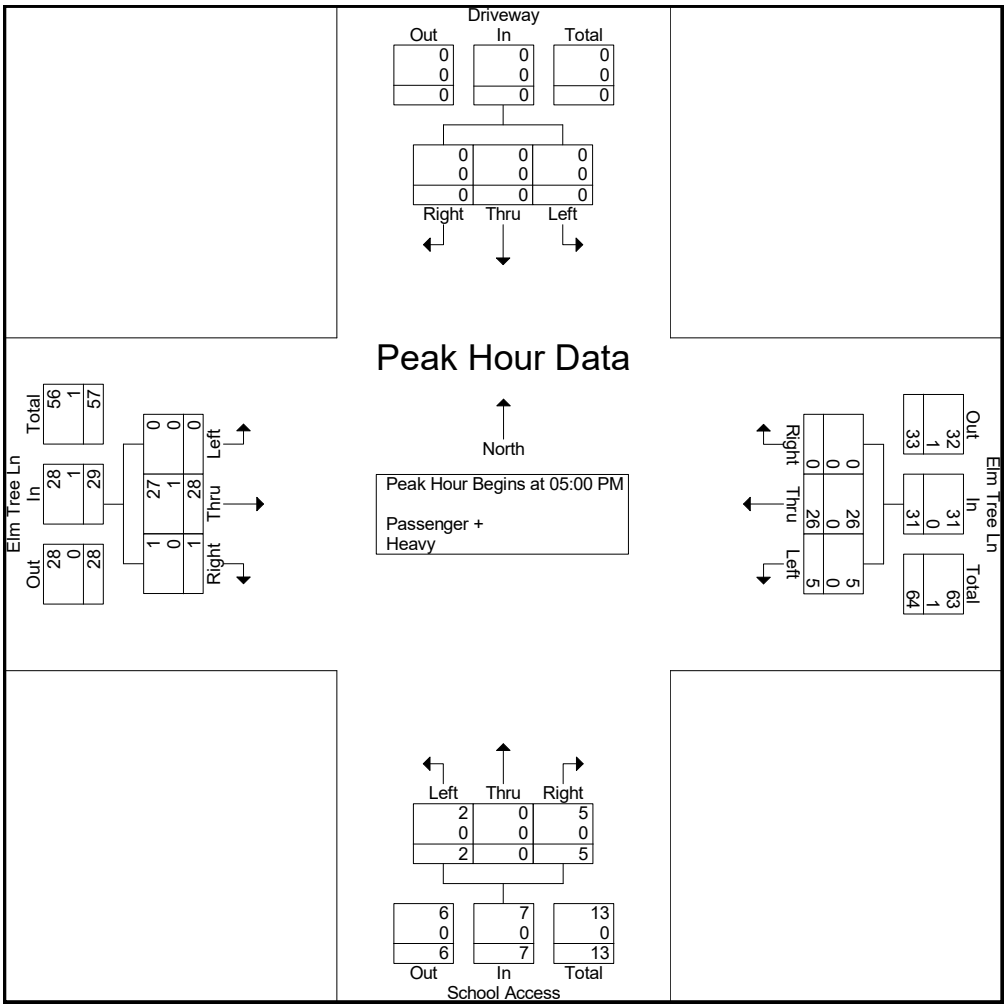

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623h
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Driveway Southbound				Elm Tree Ln Westbound				Annapolis St Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
02:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
02:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
02:30 PM	0	0	1	1	0	6	0	6	0	0	0	0	0	2	1	3	10
02:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	14
Total	0	0	1	1	0	22	0	22	0	0	0	0	0	15	1	16	39
03:00 PM	0	0	0	0	0	7	0	7	16	0	0	16	0	5	0	5	28
03:15 PM	0	0	0	0	0	8	0	8	23	0	6	29	0	11	0	11	48
03:30 PM	0	0	0	0	0	5	2	7	2	0	0	2	1	6	0	7	16
03:45 PM	0	0	0	0	0	5	0	5	2	0	0	2	1	4	0	5	12
Total	0	0	0	0	0	25	2	27	43	0	6	49	2	26	0	28	104
04:00 PM	0	0	0	0	0	1	2	3	0	0	0	0	1	4	0	5	8
04:15 PM	0	0	0	0	0	4	0	4	1	0	1	2	2	2	1	5	11
04:30 PM	0	0	0	0	0	0	2	2	1	0	1	2	0	5	0	5	9
04:45 PM	0	0	0	0	0	5	1	6	2	0	1	3	0	7	0	7	16
Total	0	0	0	0	0	10	5	15	4	0	3	7	3	18	1	22	44
05:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	0	5	0	5	11
05:15 PM	0	0	0	0	0	8	0	8	1	0	1	2	0	6	1	7	17
05:30 PM	0	0	0	0	0	9	2	11	1	0	1	2	1	11	0	12	25
05:45 PM	0	0	0	0	0	7	1	8	2	0	1	3	1	6	0	7	18
Total	0	0	0	0	0	28	3	31	6	0	3	9	2	28	1	31	71
Grand Total	0	0	1	1	0	85	10	95	53	0	12	65	7	87	3	97	258
Apprch %	0	0	100		0	89.5	10.5		81.5	0	18.5		7.2	89.7	3.1		
Total %	0	0	0.4	0.4	0	32.9	3.9	36.8	20.5	0	4.7	25.2	2.7	33.7	1.2	37.6	
Passenger +	0	0	1	1	0	81	10	91	53	0	12	65	7	78	3	88	245
% Passenger +	0	0	100	100	0	95.3	100	95.8	100	0	100	100	100	89.7	100	90.7	95
Heavy	0	0	0	0	0	4	0	4	0	0	0	0	0	9	0	9	13
% Heavy	0	0	0	0	0	4.7	0	4.2	0	0	0	0	0	10.3	0	9.3	5

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623h
Site Code : 00005623
Start Date : 6/12/2025
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	Driveway Southbound				Elm Tree Ln Westbound				Annapolis St Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	14
03:00 PM	0	0	0	0	0	7	0	7	16	0	0	16	0	5	0	5	28
03:15 PM	0	0	0	0	0	**8**	0	**8**	**23**	0	**6**	**29**	0	**11**	0	**11**	**48**
03:30 PM	0	0	0	0	0	5	**2**	7	2	0	0	2	**1**	6	0	7	16
Total Volume	0	0	0	0	0	26	2	28	41	0	6	47	1	30	0	31	106
% App. Total	0	0	0		0	92.9	7.1		87.2	0	12.8		3.2	96.8	0		
PHF	.000	.000	.000	.000	.000	.813	.250	.875	.446	.000	.250	.405	.250	.682	.000	.705	.552
Passenger +	0	0	0	0	0	26	2	28	41	0	6	47	1	27	0	28	103
% Passenger +	0	0	0	0	0	100	100	100	100	0	100	100	100	90.0	0	90.3	97.2
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	10.0	0	9.7	2.8

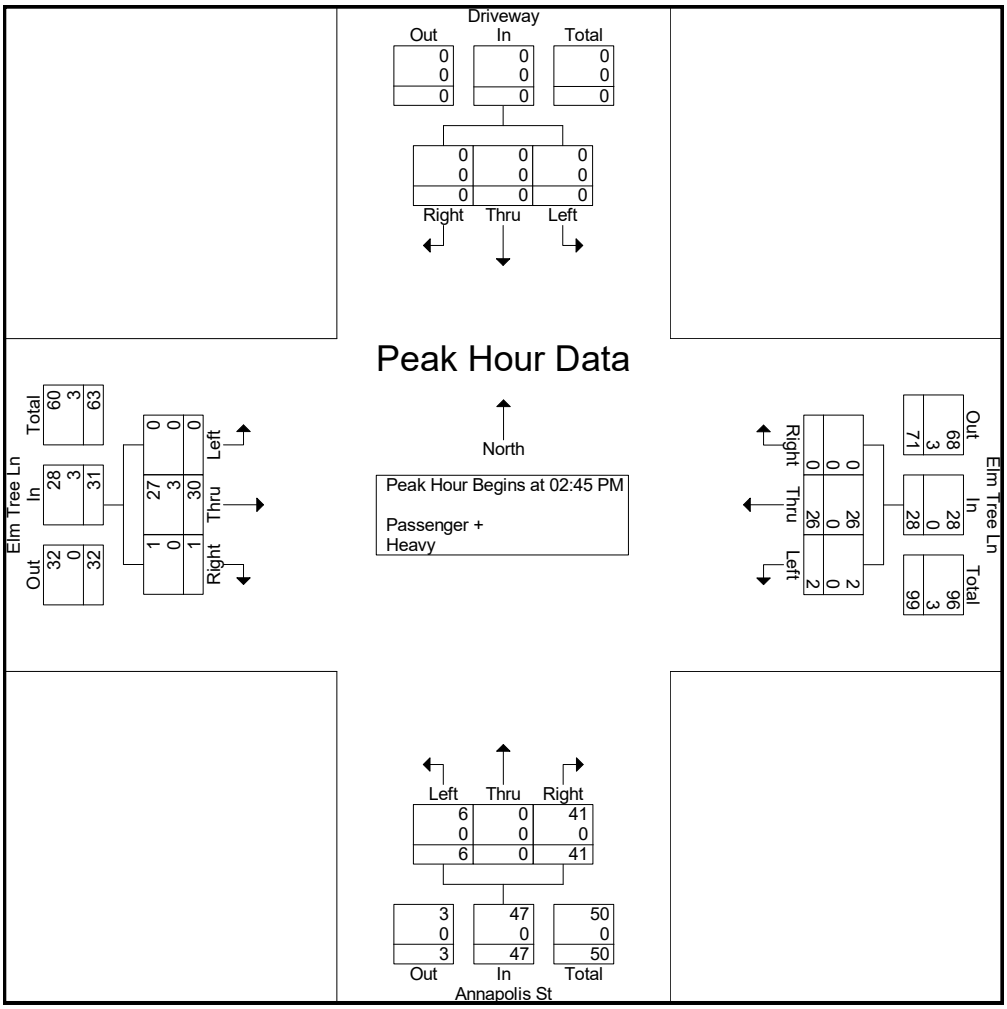


Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623h
Site Code : 00005623
Start Date : 6/12/2025
Page No : 3

	Driveway Southbound				Elm Tree Ln Westbound				Annapolis St Northbound				Elm Tree Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	4	0	4	**2**	0	0	2	0	5	0	5	11
05:15 PM	0	0	0	0	0	8	0	8	1	0	**1**	2	0	6	**1**	7	17
05:30 PM	0	0	0	0	0	**9**	**2**	**11**	1	0	1	2	**1**	**11**	0	**12**	**25**
05:45 PM	0	0	0	0	0	7	1	8	2	0	1	**3**	1	6	0	7	18
Total Volume	0	0	0	0	0	28	3	31	6	0	3	9	2	28	1	31	71
% App. Total	0	0	0		0	90.3	9.7		66.7	0	33.3		6.5	90.3	3.2		
PHF	.000	.000	.000	.000	.000	.778	.375	.705	.750	.000	.750	.750	.500	.636	.250	.646	.710
Passenger +	0	0	0	0	0	28	3	31	6	0	3	9	2	26	1	29	69
% Passenger +	0	0	0	0	0	100	100	100	100	0	100	100	100	92.9	100	93.5	97.2
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	7.1	0	6.5	2.8

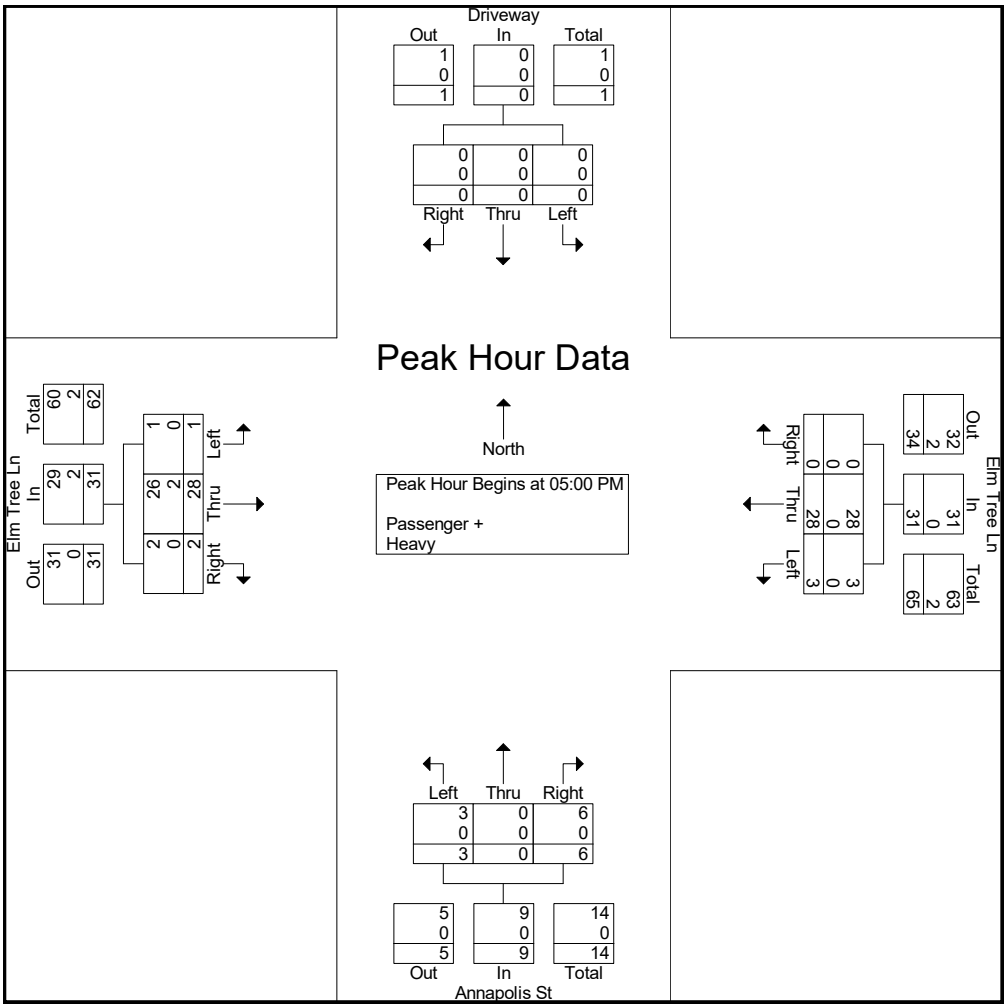


Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623j
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Alameda St Southbound			Annapolis St Westbound			Alameda St Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
02:00 PM	34	2	36	1	0	1	1	25	26	63
02:15 PM	50	0	50	1	0	1	0	41	41	92
02:30 PM	42	3	45	0	0	0	0	42	42	87
02:45 PM	52	10	62	0	0	0	3	59	62	124
Total	178	15	193	2	0	2	4	167	171	366
03:00 PM	77	16	93	3	0	3	4	54	58	154
03:15 PM	65	7	72	0	0	0	3	45	48	120
03:30 PM	56	1	57	0	0	0	1	34	35	92
03:45 PM	58	0	58	2	1	3	0	39	39	100
Total	256	24	280	5	1	6	8	172	180	466
04:00 PM	58	2	60	1	1	2	2	47	49	111
04:15 PM	56	2	58	2	1	3	2	51	53	114
04:30 PM	55	2	57	1	0	1	3	58	61	119
04:45 PM	66	2	68	1	0	1	1	46	47	116
Total	235	8	243	5	2	7	8	202	210	460
05:00 PM	77	1	78	1	0	1	1	51	52	131
05:15 PM	64	2	66	0	0	0	2	43	45	111
05:30 PM	58	2	60	1	1	2	1	55	56	118
05:45 PM	54	4	58	0	0	0	8	65	73	131
Total	253	9	262	2	1	3	12	214	226	491
Grand Total	922	56	978	14	4	18	32	755	787	1783
Apprch %	94.3	5.7		77.8	22.2		4.1	95.9		
Total %	51.7	3.1	54.9	0.8	0.2	1	1.8	42.3	44.1	
Passenger +	902	55	957	13	4	17	31	748	779	1753
% Passenger +	97.8	98.2	97.9	92.9	100	94.4	96.9	99.1	99	98.3
Heavy	20	1	21	1	0	1	1	7	8	30
% Heavy	2.2	1.8	2.1	7.1	0	5.6	3.1	0.9	1	1.7

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623j
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Alameda St Southbound			Annapolis St Westbound			Alameda St Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	52	10	62	0	0	0	3	**59**	**62**	124
03:00 PM	**77**	**16**	**93**	**3**	0	**3**	**4**	54	58	**154**
03:15 PM	65	7	72	0	0	0	3	45	48	120
03:30 PM	56	1	57	0	0	0	1	34	35	92
Total Volume	250	34	284	3	0	3	11	192	203	490
% App. Total	88	12		100	0		5.4	94.6		
PHF	.812	.531	.763	.250	.000	.250	.688	.814	.819	.795
Passenger +	243	34	277	2	0	2	10	189	199	478
% Passenger +	97.2	100	97.5	66.7	0	66.7	90.9	98.4	98.0	97.6
Heavy	7	0	7	1	0	1	1	3	4	12
% Heavy	2.8	0	2.5	33.3	0	33.3	9.1	1.6	2.0	2.4

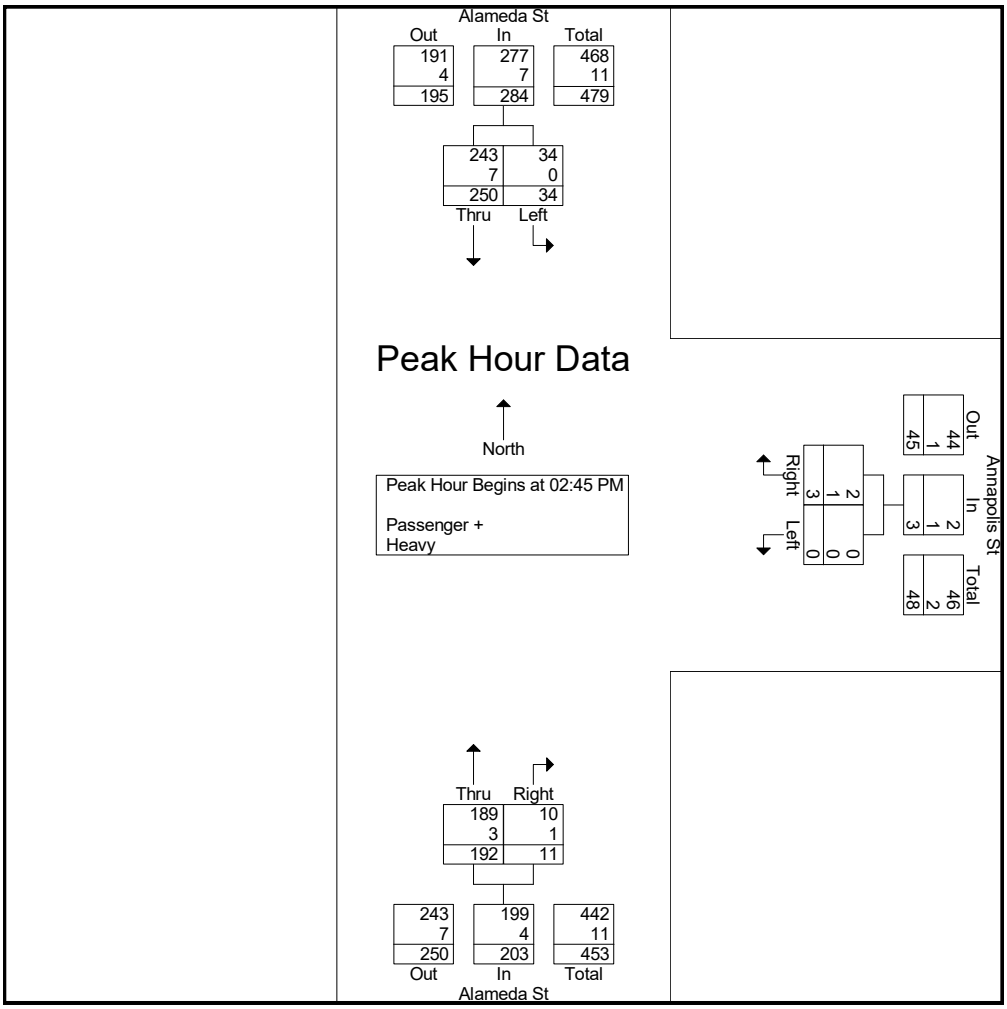


Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623j
Site Code : 00005623
Start Date : 6/12/2025
Page No : 3

	Alameda St Southbound			Annapolis St Westbound			Alameda St Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	**77**	1	**78**	**1**	0	1	1	51	52	**131**
05:15 PM	64	2	66	0	0	0	2	43	45	111
05:30 PM	58	2	60	1	**1**	**2**	1	55	56	118
05:45 PM	54	**4**	58	0	0	0	**8**	**65**	**73**	131
Total Volume	253	9	262	2	1	3	12	214	226	491
% App. Total	96.6	3.4		66.7	33.3		5.3	94.7		
PHF	.821	.563	.840	.500	.250	.375	.375	.823	.774	.937
Passenger +	253	8	261	2	1	3	12	213	225	489
% Passenger +	100	88.9	99.6	100	100	100	100	99.5	99.6	99.6
Heavy	0	1	1	0	0	0	0	1	1	2
% Heavy	0	11.1	0.4	0	0	0	0	0.5	0.4	0.4

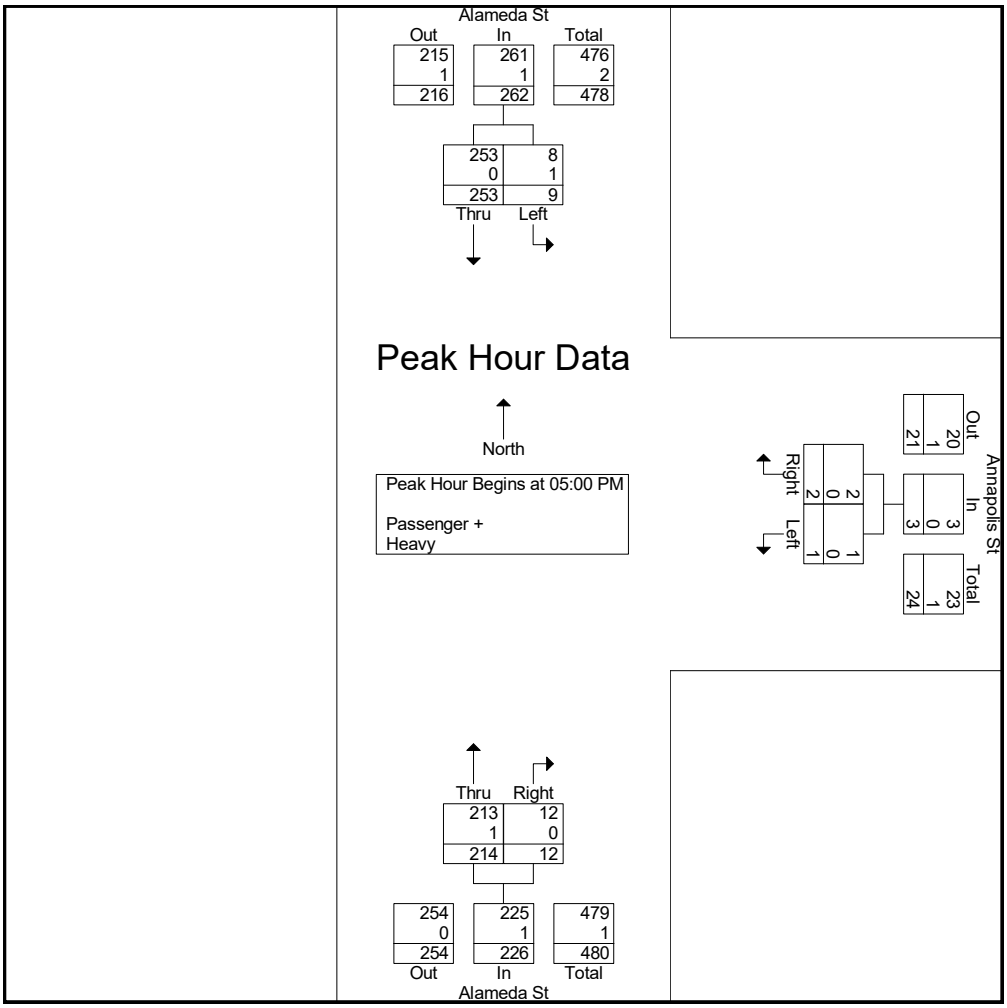


Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623f
Site Code : 00005623
Start Date : 6/12/2025
Page No : 1

Groups Printed- Passenger + - Heavy

	Alameda Ave Southbound			School Access Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
02:00 PM	37	0	37	0	0	0	0	26	26	63
02:15 PM	51	1	52	0	0	0	3	39	42	94
02:30 PM	45	1	46	0	0	0	2	40	42	88
02:45 PM	60	5	65	0	1	1	5	52	57	123
Total	193	7	200	0	1	1	10	157	167	368
03:00 PM	83	4	87	1	8	9	8	49	57	153
03:15 PM	66	9	75	2	7	9	0	45	45	129
03:30 PM	53	4	57	2	4	6	1	31	32	95
03:45 PM	55	6	61	1	1	2	2	42	44	107
Total	257	23	280	6	20	26	11	167	178	484
04:00 PM	59	1	60	2	2	4	1	47	48	112
04:15 PM	59	1	60	0	0	0	0	52	52	112
04:30 PM	55	2	57	0	1	1	0	58	58	116
04:45 PM	69	1	70	0	0	0	2	45	47	117
Total	242	5	247	2	3	5	3	202	205	457
05:00 PM	77	1	78	1	0	1	2	51	53	132
05:15 PM	65	3	68	0	0	0	0	41	41	109
05:30 PM	58	4	62	2	0	2	1	54	55	119
05:45 PM	56	6	62	0	1	1	5	60	65	128
Total	256	14	270	3	1	4	8	206	214	488
Grand Total	948	49	997	11	25	36	32	732	764	1797
Apprch %	95.1	4.9		30.6	69.4		4.2	95.8		
Total %	52.8	2.7	55.5	0.6	1.4	2	1.8	40.7	42.5	
Passenger +	924	49	973	11	25	36	32	724	756	1765
% Passenger +	97.5	100	97.6	100	100	100	100	98.9	99	98.2
Heavy	24	0	24	0	0	0	0	8	8	32
% Heavy	2.5	0	2.4	0	0	0	0	1.1	1	1.8

Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623f
Site Code : 00005623
Start Date : 6/12/2025
Page No : 2

	Alameda Ave Southbound			School Access Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	60	5	65	0	1	1	5	**52**	**57**	123
03:00 PM	**83**	4	**87**	1	**8**	**9**	**8**	49	57	**153**
03:15 PM	66	**9**	75	**2**	7	9	0	45	45	129
03:30 PM	53	4	57	2	4	6	1	31	32	95
Total Volume	262	22	284	5	20	25	14	177	191	500
% App. Total	92.3	7.7		20	80		7.3	92.7		
PHF	.789	.611	.816	.625	.625	.694	.438	.851	.838	.817
Passenger +	254	22	276	5	20	25	14	173	187	488
% Passenger +	96.9	100	97.2	100	100	100	100	97.7	97.9	97.6
Heavy	8	0	8	0	0	0	0	4	4	12
% Heavy	3.1	0	2.8	0	0	0	0	2.3	2.1	2.4

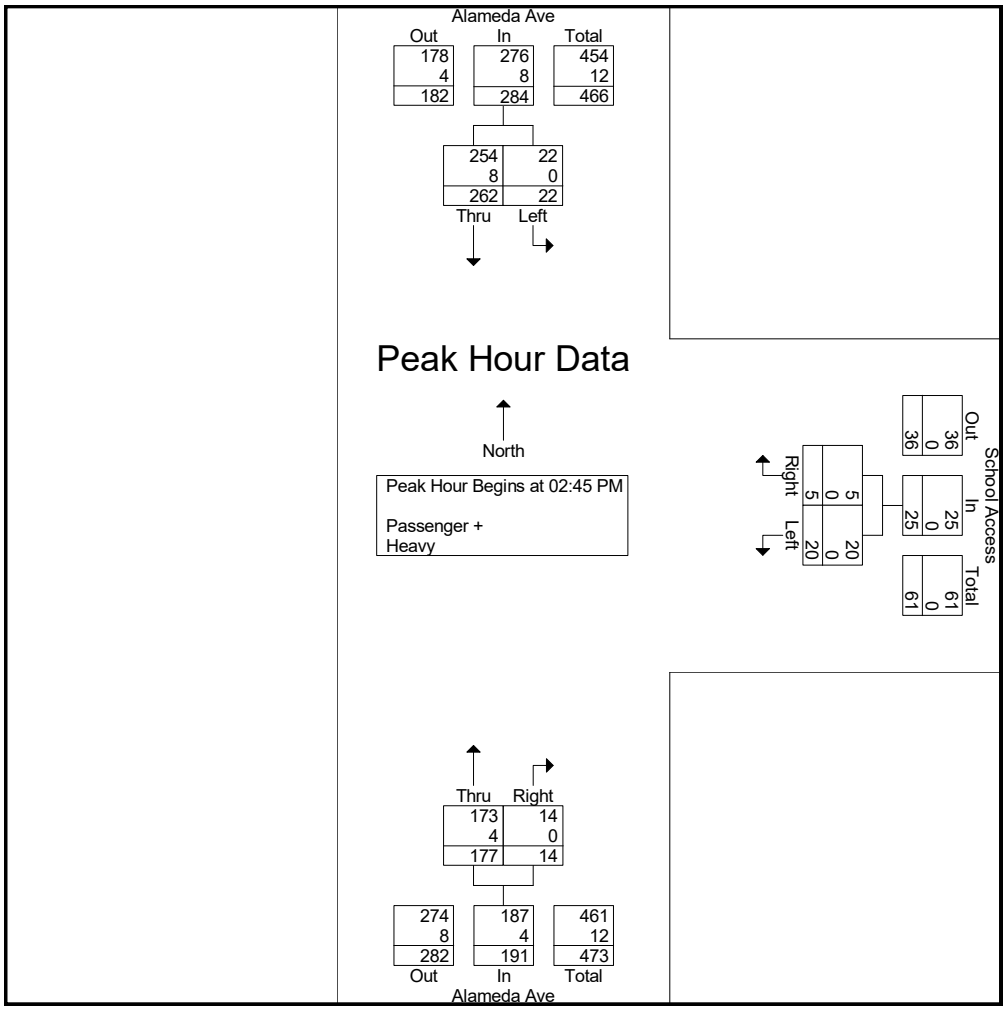


Exhibit D

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5623f
Site Code : 00005623
Start Date : 6/12/2025
Page No : 3

	Alameda Ave Southbound			School Access Westbound			Alameda Ave Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	**77**	1	**78**	1	0	1	2	51	53	**132**
05:15 PM	65	3	68	0	0	0	0	41	41	109
05:30 PM	58	4	62	**2**	0	**2**	1	54	55	119
05:45 PM	56	**6**	62	0	**1**	1	**5**	**60**	**65**	128
Total Volume	256	14	270	3	1	4	8	206	214	488
% App. Total	94.8	5.2		75	25		3.7	96.3		
PHF	.831	.583	.865	.375	.250	.500	.400	.858	.823	.924
Passenger +	255	14	269	3	1	4	8	205	213	486
% Passenger +	99.6	100	99.6	100	100	100	100	99.5	99.5	99.6
Heavy	1	0	1	0	0	0	0	1	1	2
% Heavy	0.4	0	0.4	0	0	0	0	0.5	0.5	0.4

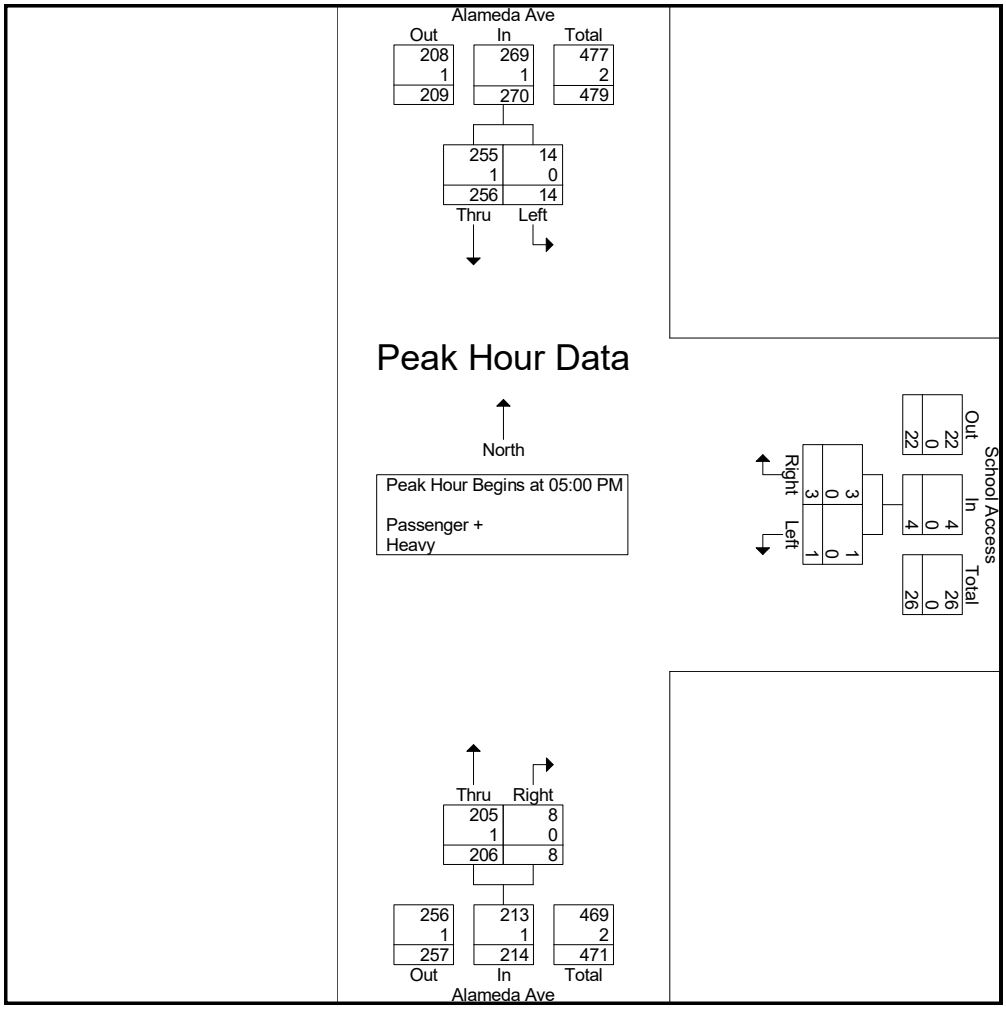


Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX
ITE Trip Generation Worksheets

Exhibit D

Elementary School
(520)

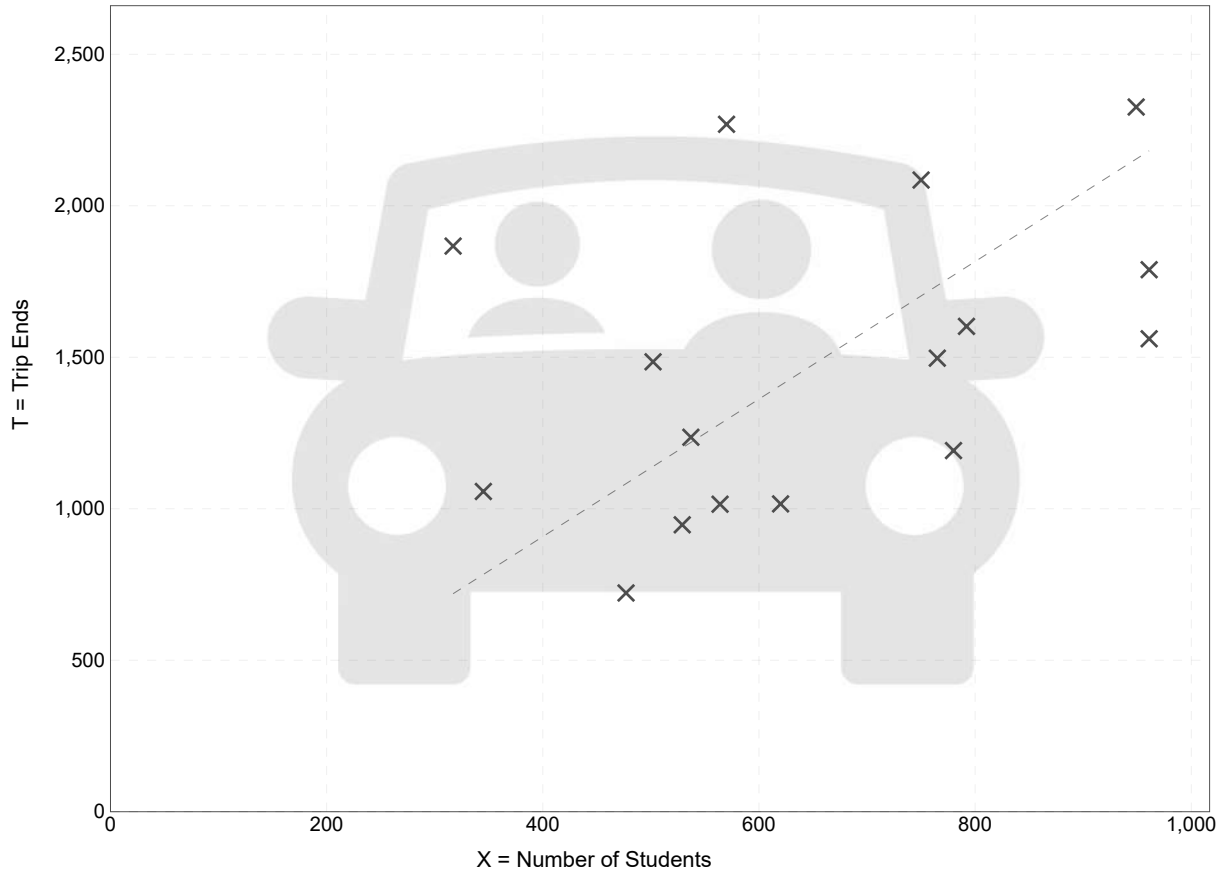
Vehicle Trip Ends vs: **Students**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 16
Avg. Num. of Students: 651
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.27	1.51 - 5.89	0.93

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

Exhibit D

Elementary School
(520)

Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 50
Avg. Num. of Students: 604
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.74	0.38 - 1.58	0.28

Data Plot and Equation

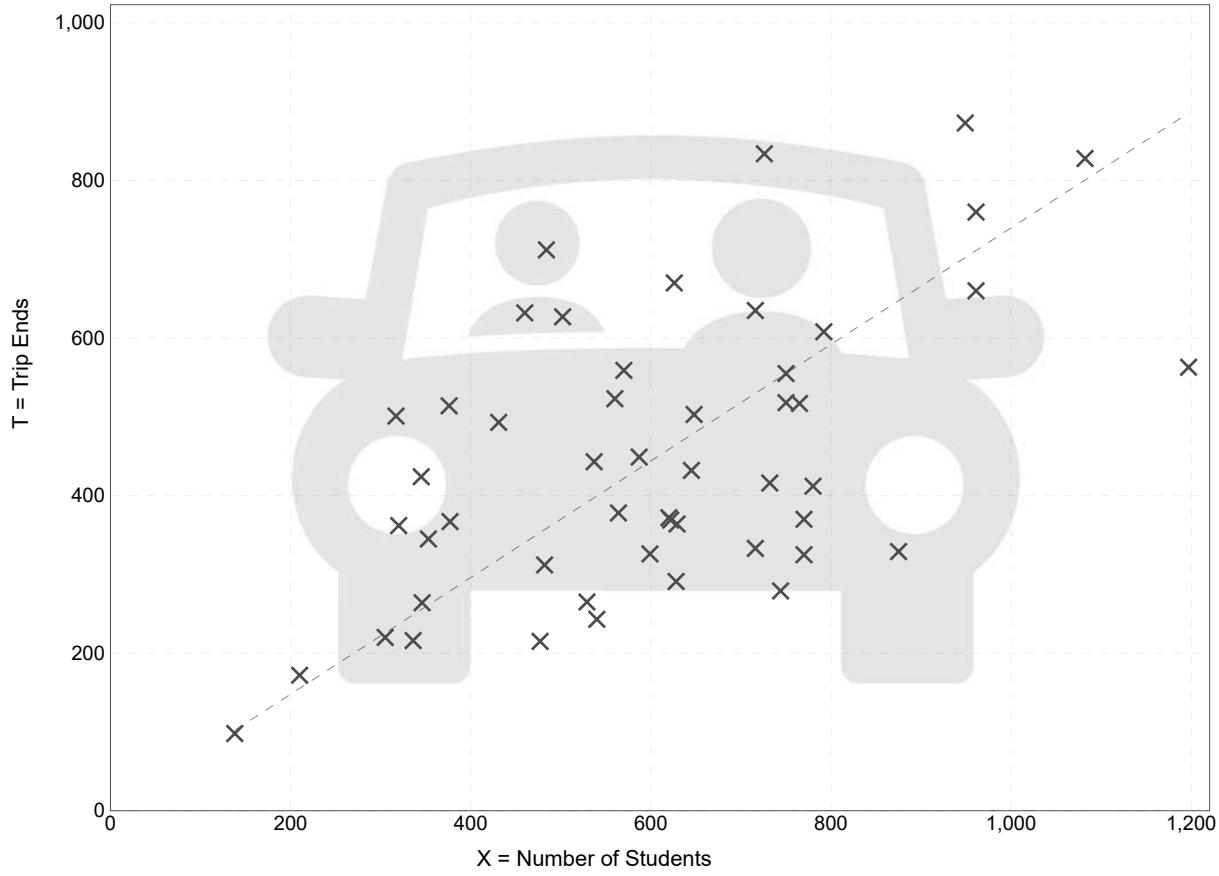


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Exhibit D

Elementary School
(520)

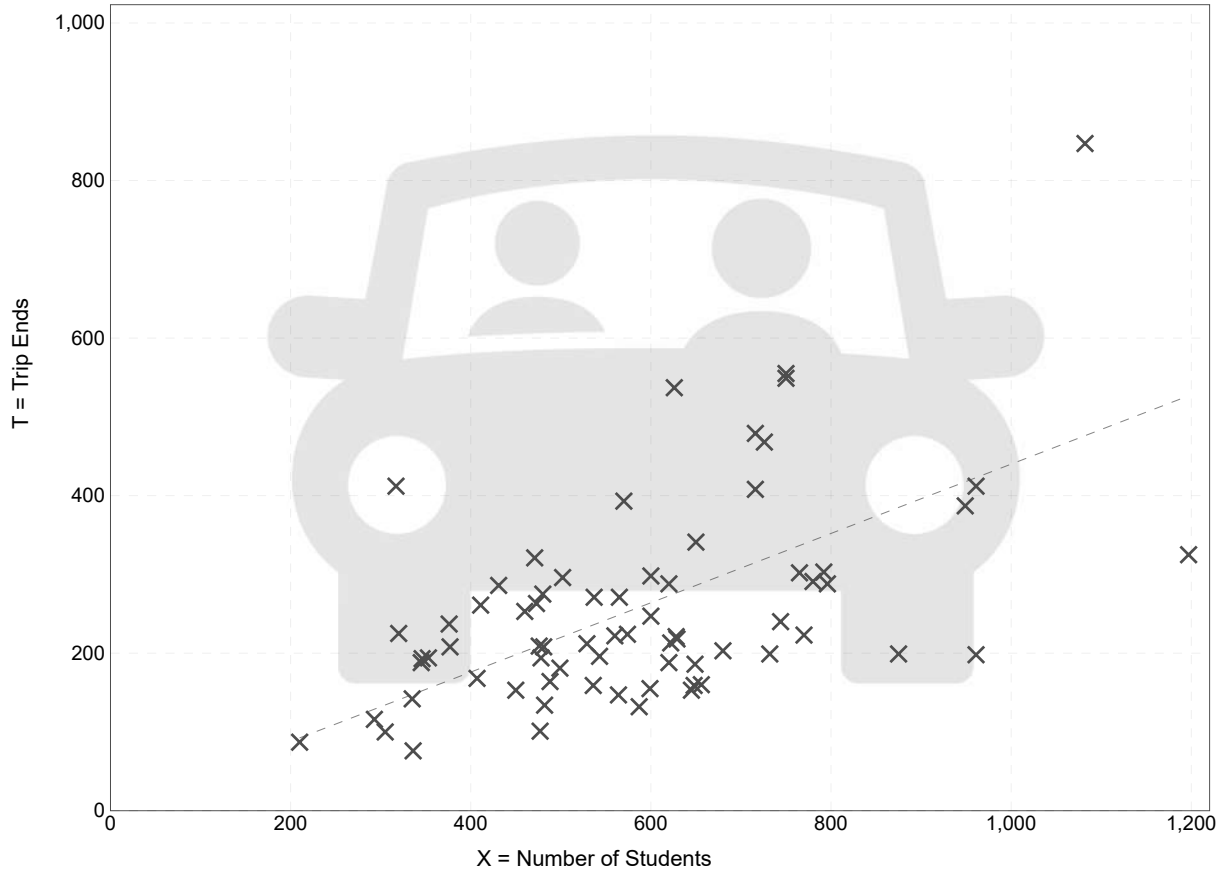
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 71
Avg. Num. of Students: 584
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.44	0.21 - 1.30	0.18

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX
Level of Service Worksheets – Existing Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	233	21	27	152
Future Vol, veh/h	1	7	233	21	27	152
Conflicting Peds, #/hr	2	3	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	7	248	22	29	162

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	480	262	0	0	270	0
Stage 1	259	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	545	777	-	-	1293	-
Stage 1	784	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	530	774	-	-	1293	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.98	0	1.18
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	732	272	-
HCM Lane V/C Ratio	-	-	0.012	0.022	-
HCM Ctrl Dly (s/v)	-	-	10	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	3	209	31	20	167
Future Vol, veh/h	12	3	209	31	20	167
Conflicting Peds, #/hr	0	1	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	3	227	34	22	182

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	474	250	0	0	266	0
Stage 1	249	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	549	789	-	-	1298	-
Stage 1	792	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	536	784	-	-	1292	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.47	0	0.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	572	193	-
HCM Lane V/C Ratio	-	-	0.028	0.017	-
HCM Ctrl Dly (s/v)	-	-	11.5	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	22	0	23	0	196	16	14	165	0
Future Vol, veh/h	0	0	0	22	0	23	0	196	16	14	165	0
Conflicting Peds, #/hr	0	0	0	0	0	0	12	0	8	8	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	23	0	24	0	209	17	15	176	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	426	451	188	430	442	225	188	0	0	234	0	0
Stage 1	217	217	-	225	225	-	-	-	-	-	-	-
Stage 2	209	234	-	205	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	539	504	854	535	510	814	1387	-	-	1334	-	-
Stage 1	785	723	-	778	718	-	-	-	-	-	-	-
Stage 2	794	711	-	797	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	510	488	845	524	494	808	1371	-	-	1324	-	-
Mov Cap-2 Maneuver	510	488	-	524	494	-	-	-	-	-	-	-
Stage 1	766	706	-	772	712	-	-	-	-	-	-	-
Stage 2	769	706	-	787	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	11.09	0	0.61
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	-	639	141	-	-
HCM Lane V/C Ratio	-	-	-	-	0.075	0.011	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	11.1	7.8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	0	1	27	18	10
Future Vol, veh/h	30	0	1	27	18	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	1	32	21	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	70	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	934	1037
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	933	1037
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.26	8.79
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	933	1037	-	-	64	-
HCM Lane V/C Ratio	0.023	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.9	8.5	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	40	0	1	26	2	53
Future Vol, veh/h	40	0	1	26	2	53
Conflicting Peds, #/hr	0	27	27	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	0	1	37	3	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	83	0	123	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1514	-	872	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1475	-	849	951
Mov Cap-2 Maneuver	-	-	-	-	849	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.28	9.14
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	67	-
HCM Lane V/C Ratio	0.082	-	-	0.001	-
HCM Ctrl Dly (s/v)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	192	11	34	253
Future Vol, veh/h	0	3	192	11	34	253
Conflicting Peds, #/hr	1	2	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	240	14	43	316

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	652	252	0	0	257	0
Stage 1	250	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	433	787	-	-	1308	-
Stage 1	792	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	414	783	-	-	1304	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.62	0	0.93
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	783	213	-
HCM Lane V/C Ratio	-	-	0.005	0.033	-
HCM Ctrl Dly (s/v)	-	-	9.6	7.9	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	5	181	14	22	267
Future Vol, veh/h	20	5	181	14	22	267
Conflicting Peds, #/hr	0	1	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	6	221	17	27	326

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	613	234	0	0	242	0
Stage 1	233	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	456	805	-	-	1325	-
Stage 1	805	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	443	801	-	-	1320	-
Mov Cap-2 Maneuver	443	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.89	0	0.59
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	487	137	-
HCM Lane V/C Ratio	-	-	0.063	0.02	-
HCM Ctrl Dly (s/v)	-	-	12.9	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	28	0	14	0	168	18	10	261	0
Future Vol, veh/h	1	0	0	28	0	14	0	168	18	10	261	0
Conflicting Peds, #/hr	0	0	0	0	0	0	6	0	4	4	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	33	0	16	0	195	21	12	303	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	528	553	309	537	543	210	309	0	0	220	0	0
Stage 1	333	333	-	210	210	-	-	-	-	-	-	-
Stage 2	195	220	-	327	333	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	461	441	731	455	447	830	1251	-	-	1349	-	-
Stage 1	681	644	-	792	729	-	-	-	-	-	-	-
Stage 2	806	721	-	686	644	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	445	432	726	449	438	827	1244	-	-	1344	-	-
Mov Cap-2 Maneuver	445	432	-	449	438	-	-	-	-	-	-	-
Stage 1	670	634	-	789	726	-	-	-	-	-	-	-
Stage 2	791	718	-	679	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.12	12.49	0	0.28
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1244	-	-	445	529	66	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.092	0.009	-	-
HCM Ctrl Dly (s/v)	0	-	-	13.1	12.5	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	27	1	2	31	11	10
Future Vol, veh/h	27	1	2	31	11	10
Conflicting Peds, #/hr	0	5	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	1	2	36	13	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	38	0	78	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1573	-	925	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1565	-	919	1030
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.44	8.76
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	919	1030	-	-	109	-
HCM Lane V/C Ratio	0.014	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	9	8.5	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	36	1	2	27	6	41
Future Vol, veh/h	36	1	2	27	6	41
Conflicting Peds, #/hr	0	189	189	0	0	68
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	2	4	49	11	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	256	0	312	323
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	56	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1309	-	681	718
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1073	-	556	550
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	963	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.58	12.73
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	551	-	-	124	-
HCM Lane V/C Ratio	0.155	-	-	0.003	-
HCM Ctrl Dly (s/v)	12.7	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	214	12	9	245
Future Vol, veh/h	1	2	214	12	9	245
Conflicting Peds, #/hr	2	3	0	5	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	228	13	10	261

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	521	242	0	0	245	0
Stage 1	239	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	516	797	-	-	1321	-
Stage 1	801	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	508	791	-	-	1314	-
Mov Cap-2 Maneuver	508	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.42	0	0.27
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	667	64	-
HCM Lane V/C Ratio	-	-	0.005	0.007	-
HCM Ctrl Dly (s/v)	-	-	10.4	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	208	8	14	253
Future Vol, veh/h	1	3	208	8	14	253
Conflicting Peds, #/hr	0	1	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	254	10	17	309

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	606	265	0	0	268	0
Stage 1	264	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	460	774	-	-	1295	-
Stage 1	781	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	451	770	-	-	1289	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	707	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.55	0	0.41
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	654	94	-
HCM Lane V/C Ratio	-	-	0.007	0.013	-
HCM Ctrl Dly (s/v)	-	-	10.5	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	24	0	3	0	193	18	13	243	0
Future Vol, veh/h	1	0	0	24	0	3	0	193	18	13	243	0
Conflicting Peds, #/hr	0	0	0	0	0	0	12	0	8	8	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	26	0	3	0	210	20	14	264	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	514	542	276	520	532	228	276	0	0	237	0	0
Stage 1	304	304	-	228	228	-	-	-	-	-	-	-
Stage 2	210	237	-	292	304	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	471	448	763	467	453	812	1287	-	-	1330	-	-
Stage 1	705	663	-	775	716	-	-	-	-	-	-	-
Stage 2	792	709	-	716	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	458	434	754	457	439	806	1272	-	-	1320	-	-
Mov Cap-2 Maneuver	458	434	-	457	439	-	-	-	-	-	-	-
Stage 1	688	647	-	769	710	-	-	-	-	-	-	-
Stage 2	789	703	-	707	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.88	12.98	0	0.39
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1272	-	-	458	480	91	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.061	0.011	-	-
HCM Ctrl Dly (s/v)	0	-	-	12.9	13	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	1	5	25	2	5
Future Vol, veh/h	30	1	5	25	2	5
Conflicting Peds, #/hr	0	7	7	0	7	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	1	6	30	2	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	44	0	92	44
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1565	-	908	1026
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	893	1018
Mov Cap-2 Maneuver	-	-	-	-	893	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	964	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.22	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	893	1018	-	-	300	-
HCM Lane V/C Ratio	0.003	0.006	-	-	0.004	-
HCM Ctrl Dly (s/v)	9	8.6	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	2	3	25	5	4
Future Vol, veh/h	33	2	3	25	5	4
Conflicting Peds, #/hr	0	27	27	0	2	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	3	4	35	7	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	76	0	121	82
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1523	-	875	978
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	848	946
Mov Cap-2 Maneuver	-	-	-	-	848	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.8	9.11
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	-	-	193	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Ctrl Dly (s/v)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX

Level of Service Worksheets – Forecast 2028 Without Project Conditions

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	240	21	27	158
Future Vol, veh/h	1	7	240	21	27	158
Conflicting Peds, #/hr	2	3	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	7	255	22	29	168

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	494	269	0	0	278	0
Stage 1	266	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	535	769	-	-	1285	-
Stage 1	778	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	520	767	-	-	1285	-
Mov Cap-2 Maneuver	520	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.03	0	1.15
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	724	263	-
HCM Lane V/C Ratio	-	-	0.012	0.022	-
HCM Ctrl Dly (s/v)	-	-	10	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	3	216	31	20	173
Future Vol, veh/h	12	3	216	31	20	173
Conflicting Peds, #/hr	0	1	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	3	235	34	22	188

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	488	258	0	0	273	0
Stage 1	257	-	-	-	-	-
Stage 2	232	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	539	781	-	-	1290	-
Stage 1	786	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	526	776	-	-	1284	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.59	0	0.81
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	562	187	-
HCM Lane V/C Ratio	-	-	0.029	0.017	-
HCM Ctrl Dly (s/v)	-	-	11.6	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	24	0	24	0	203	16	14	170	0
Future Vol, veh/h	0	0	0	24	0	24	0	203	16	14	170	0
Conflicting Peds, #/hr	0	0	0	0	0	0	12	0	8	8	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	26	0	26	0	216	17	15	181	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	439	464	193	443	455	232	193	0	0	241	0	0
Stage 1	223	223	-	232	232	-	-	-	-	-	-	-
Stage 2	216	241	-	211	223	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	528	496	849	525	501	807	1380	-	-	1326	-	-
Stage 1	780	719	-	770	712	-	-	-	-	-	-	-
Stage 2	786	706	-	791	719	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	499	480	839	514	485	801	1365	-	-	1315	-	-
Mov Cap-2 Maneuver	499	480	-	514	485	-	-	-	-	-	-	-
Stage 1	761	702	-	765	707	-	-	-	-	-	-	-
Stage 2	761	701	-	781	702	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	11.26	0	0.59
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1365	-	-	-	626	137	-	-
HCM Lane V/C Ratio	-	-	-	-	0.082	0.011	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	11.3	7.8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	0	1	28	18	10
Future Vol, veh/h	30	0	1	28	18	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	1	33	21	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	71	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	36	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	933	1037
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	932	1037
Mov Cap-2 Maneuver	-	-	-	-	932	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.25	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	932	1037	-	-	62	-
HCM Lane V/C Ratio	0.023	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	9	8.5	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	40	0	1	27	2	53
Future Vol, veh/h	40	0	1	27	2	53
Conflicting Peds, #/hr	0	27	27	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	0	1	38	3	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	83	0	124	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1514	-	871	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1475	-	848	951
Mov Cap-2 Maneuver	-	-	-	-	848	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.27	9.14
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	64	-
HCM Lane V/C Ratio	0.082	-	-	0.001	-
HCM Ctrl Dly (s/v)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	198	11	34	262
Future Vol, veh/h	0	3	198	11	34	262
Conflicting Peds, #/hr	1	2	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	248	14	43	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	671	259	0	0	264	0
Stage 1	257	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	422	779	-	-	1300	-
Stage 1	786	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	403	775	-	-	1296	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.67	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	775	207	-
HCM Lane V/C Ratio	-	-	0.005	0.033	-
HCM Ctrl Dly (s/v)	-	-	9.7	7.9	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	5	187	14	22	276
Future Vol, veh/h	20	5	187	14	22	276
Conflicting Peds, #/hr	0	1	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	6	228	17	27	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	631	242	0	0	249	0
Stage 1	241	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	445	797	-	-	1317	-
Stage 1	799	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	793	-	-	1311	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.09	0	0.58
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	476	133	-
HCM Lane V/C Ratio	-	-	0.064	0.02	-
HCM Ctrl Dly (s/v)	-	-	13.1	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	29	0	14	0	173	19	10	269	0
Future Vol, veh/h	1	0	0	29	0	14	0	173	19	10	269	0
Conflicting Peds, #/hr	0	0	0	0	0	0	6	0	4	4	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	34	0	16	0	201	22	12	313	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	569	319	552	558	216	319	0	0	227	0	0
Stage 1	342	342	-	216	216	-	-	-	-	-	-	-
Stage 2	201	227	-	336	342	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	450	432	722	444	438	824	1241	-	-	1341	-	-
Stage 1	673	638	-	786	724	-	-	-	-	-	-	-
Stage 2	801	716	-	678	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	434	423	718	438	429	821	1234	-	-	1336	-	-
Mov Cap-2 Maneuver	434	423	-	438	429	-	-	-	-	-	-	-
Stage 1	662	628	-	783	721	-	-	-	-	-	-	-
Stage 2	785	713	-	671	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.31	12.72	0	0.28
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1234	-	-	434	516	65	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.097	0.009	-	-
HCM Ctrl Dly (s/v)	0	-	-	13.3	12.7	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	1	2	32	11	10
Future Vol, veh/h	28	1	2	32	11	10
Conflicting Peds, #/hr	0	5	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1	2	37	13	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	39	0	80	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1571	-	922	1034
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1564	-	917	1029
Mov Cap-2 Maneuver	-	-	-	-	917	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.43	8.77
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	917	1029	-	-	106	-
HCM Lane V/C Ratio	0.014	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	9	8.5	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	37	1	2	28	6	41
Future Vol, veh/h	37	1	2	28	6	41
Conflicting Peds, #/hr	0	189	189	0	0	68
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	2	4	51	11	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	258	0	315	325
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	58	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1307	-	678	716
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1071	-	554	549
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	961	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.56	12.75
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	550	-	-	120	-
HCM Lane V/C Ratio	0.155	-	-	0.003	-
HCM Ctrl Dly (s/v)	12.8	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	220	12	9	253
Future Vol, veh/h	1	2	220	12	9	253
Conflicting Peds, #/hr	2	3	0	5	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	234	13	10	269

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	536	248	0	0	252	0
Stage 1	245	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	506	790	-	-	1314	-
Stage 1	795	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	498	784	-	-	1307	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.5	0	0.27
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	658	62	-
HCM Lane V/C Ratio	-	-	0.005	0.007	-
HCM Ctrl Dly (s/v)	-	-	10.5	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	214	8	14	261
Future Vol, veh/h	1	3	214	8	14	261
Conflicting Peds, #/hr	0	1	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	261	10	17	318

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	623	272	0	0	276	0
Stage 1	271	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	450	767	-	-	1287	-
Stage 1	775	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	440	762	-	-	1281	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	700	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.63	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	644	92	-
HCM Lane V/C Ratio	-	-	0.008	0.013	-
HCM Ctrl Dly (s/v)	-	-	10.6	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	25	0	3	0	198	19	13	250	1
Future Vol, veh/h	1	0	0	25	0	3	0	198	19	13	250	1
Conflicting Peds, #/hr	0	0	0	0	0	0	12	0	8	8	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	27	0	3	0	215	21	14	272	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	528	556	284	534	547	234	285	0	0	244	0	0
Stage 1	313	313	-	234	234	-	-	-	-	-	-	-
Stage 2	215	244	-	300	313	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	461	439	755	457	445	806	1277	-	-	1322	-	-
Stage 1	698	657	-	769	711	-	-	-	-	-	-	-
Stage 2	787	704	-	709	657	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	448	425	746	448	431	799	1263	-	-	1312	-	-
Mov Cap-2 Maneuver	448	425	-	448	431	-	-	-	-	-	-	-
Stage 1	681	641	-	764	706	-	-	-	-	-	-	-
Stage 2	784	699	-	700	641	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.05	13.19	0	0.38
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1263	-	-	448	470	89	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.065	0.011	-	-
HCM Ctrl Dly (s/v)	0	-	-	13	13.2	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	1	5	26	2	5
Future Vol, veh/h	31	1	5	26	2	5
Conflicting Peds, #/hr	0	7	7	0	7	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	1	6	31	2	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	94	46
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1563	-	905	1024
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	890	1016
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.18	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	890	1016	-	-	290	-
HCM Lane V/C Ratio	0.003	0.006	-	-	0.004	-
HCM Ctrl Dly (s/v)	9.1	8.6	-	-	7.3	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	2	3	26	5	4
Future Vol, veh/h	34	2	3	26	5	4
Conflicting Peds, #/hr	0	27	27	0	2	7
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	3	4	37	7	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	78	0	123	83
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1521	-	872	976
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	975	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1482	-	845	945
Mov Cap-2 Maneuver	-	-	-	-	845	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	971	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.77	9.12
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	887	-	-	186	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Ctrl Dly (s/v)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX

Level of Service Worksheets – Forecast 2028 With Project Conditions

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	71	274	0	0	167
Future Vol, veh/h	4	71	274	0	0	167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	69	69	69	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	103	397	0	0	464

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	861	397	0	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	326	652	-	0	0	-
Stage 1	679	-	-	0	0	-
Stage 2	633	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	326	652	-	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	633	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.05	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	619	-
HCM Lane V/C Ratio	-	0.176	-
HCM Ctrl Dly (s/v)	-	12	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.6	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	21	286	38	25	137
Future Vol, veh/h	30	21	286	38	25	137
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	30	409	54	36	196

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	705	437	0	0	464	0
Stage 1	437	-	-	-	-	-
Stage 2	268	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	403	620	-	-	1097	-
Stage 1	651	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	387	619	-	-	1096	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.34	0	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	458	278	-
HCM Lane V/C Ratio	-	-	0.159	0.033	-
HCM Ctrl Dly (s/v)	-	-	14.3	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	14	0	13	0	279	49	46	148	0
Future Vol, veh/h	0	0	0	14	0	13	0	279	49	46	148	0
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	1	1	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	18	0	17	0	367	64	61	195	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	685	750	199	718	718	400	197	0	0	433	0	0
Stage 1	318	318	-	400	400	-	-	-	-	-	-	-
Stage 2	367	433	-	318	318	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	362	340	842	344	355	650	1376	-	-	1127	-	-
Stage 1	694	654	-	626	601	-	-	-	-	-	-	-
Stage 2	652	582	-	694	654	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	331	318	839	322	332	649	1373	-	-	1126	-	-
Mov Cap-2 Maneuver	331	318	-	322	332	-	-	-	-	-	-	-
Stage 1	650	613	-	625	601	-	-	-	-	-	-	-
Stage 2	635	581	-	650	613	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	14.23	0	1.99
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1373	-	-	-	426	427	-	-
HCM Lane V/C Ratio	-	-	-	-	0.083	0.054	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	14.2	8.4	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	4	0	27	0	4
Future Vol, veh/h	95	4	0	27	0	4
Conflicting Peds, #/hr	0	11	11	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	100	2	2	2	100
Mvmt Flow	125	5	0	36	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	139
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.2
Pot Cap-1 Maneuver	-	-	0	-	0	704
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	696
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.21
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	696	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Ctrl Dly (s/v)	10.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	36	59	3	27	0	0
Future Volume (Veh/h)	36	59	3	27	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.39	0.39	0.39	0.39	0.39	0.39
Hourly flow rate (vph)	92	151	8	69	0	0
Pedestrians					63	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			306		316	231
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			306		316	231
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1255		673	809

Direction, Lane #	EB 1	WB 1
Volume Total	243	77
Volume Left	0	8
Volume Right	151	0
cSH	1700	1255
Volume to Capacity	0.14	0.00*
Queue Length 95th (ft)	0	0
Control Delay (s/veh)	0.0	0.9
Lane LOS		A
Approach Delay (s/veh)	0.0	0.9
Approach LOS		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	51	216	0	0	254
Future Vol, veh/h	7	51	216	0	0	254
Conflicting Peds, #/hr	1	2	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	64	270	0	0	318

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	589	272	0	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	319	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	471	767	-	0	0	-
Stage 1	775	-	-	0	0	-
Stage 2	737	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	471	765	-	-	-	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.63	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	711	-
HCM Lane V/C Ratio	-	0.102	-
HCM Ctrl Dly (s/v)	-	10.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	18	251	16	25	231
Future Vol, veh/h	34	18	251	16	25	231
Conflicting Peds, #/hr	1	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	22	306	20	30	282

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	664	320	0	0	330	0
Stage 1	320	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	426	721	-	-	1230	-
Stage 1	736	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	411	718	-	-	1225	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.58	0	0.78
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	483	176	-
HCM Lane V/C Ratio	-	-	0.131	0.025	-
HCM Ctrl Dly (s/v)	-	-	13.6	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	18	0	8	0	228	41	46	238	0
Future Vol, veh/h	1	0	0	18	0	8	0	228	41	46	238	0
Conflicting Peds, #/hr	0	0	0	0	0	0	6	0	4	4	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	21	0	9	0	265	48	53	277	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	655	707	283	677	683	293	283	0	0	317	0	0
Stage 1	390	390	-	293	293	-	-	-	-	-	-	-
Stage 2	265	317	-	384	390	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	379	360	756	367	372	746	1280	-	-	1243	-	-
Stage 1	634	608	-	715	670	-	-	-	-	-	-	-
Stage 2	740	654	-	639	608	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	354	339	752	347	349	743	1272	-	-	1239	-	-
Mov Cap-2 Maneuver	354	339	-	347	349	-	-	-	-	-	-	-
Stage 1	599	574	-	712	668	-	-	-	-	-	-	-
Stage 2	731	652	-	607	574	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	15.22	14.36	0	1.3
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1272	-	-	354	415	292	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.073	0.043	-	-
HCM Ctrl Dly (s/v)	0	-	-	15.2	14.4	8	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	88	4	0	26	0	4
Future Vol, veh/h	88	4	0	26	0	4
Conflicting Peds, #/hr	0	5	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	100	2	2	2	100
Mvmt Flow	110	5	0	33	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	118
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.2
Pot Cap-1 Maneuver	-	-	0	-	0	725
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	722
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.02
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	722	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Ctrl Dly (s/v)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	38	54	4	26	0	0
Future Volume (Veh/h)	38	54	4	26	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	69	98	7	47	0	0
Pedestrians					189	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			356		368	307
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			356		368	307
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1203		628	733

Direction, Lane #	EB 1	WB 1
Volume Total	167	54
Volume Left	0	7
Volume Right	98	0
cSH	1700	1203
Volume to Capacity	0.10	0.00*
Queue Length 95th (ft)	0	0
Control Delay (s/veh)	0.0	1.1
Lane LOS		A
Approach Delay (s/veh)	0.0	1.1
Approach LOS		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	16.7%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	234	0	0	249
Future Vol, veh/h	7	7	234	0	0	249
Conflicting Peds, #/hr	2	3	0	5	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	7	249	0	0	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	516	252	0	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	519	787	-	0	0	-
Stage 1	792	-	-	0	0	-
Stage 2	778	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	518	784	-	-	-	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	776	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.91	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	624	-
HCM Lane V/C Ratio	-	0.024	-
HCM Ctrl Dly (s/v)	-	10.9	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	10	232	9	15	245
Future Vol, veh/h	4	10	232	9	15	245
Conflicting Peds, #/hr	0	1	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	12	283	11	18	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	629	294	0	0	299	0
Stage 1	293	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	446	745	-	-	1262	-
Stage 1	757	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	436	741	-	-	1256	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.99	0	0.46
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	618	104	-
HCM Lane V/C Ratio	-	-	0.028	0.015	-
HCM Ctrl Dly (s/v)	-	-	11	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	18	0	3	0	209	34	23	242	0
Future Vol, veh/h	1	0	0	18	0	3	0	209	34	23	242	0
Conflicting Peds, #/hr	0	0	0	0	0	0	12	0	8	8	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	20	0	3	0	227	37	25	263	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	552	597	275	567	579	254	275	0	0	272	0	0
Stage 1	325	325	-	254	254	-	-	-	-	-	-	-
Stage 2	227	272	-	313	325	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	444	416	764	434	426	785	1288	-	-	1291	-	-
Stage 1	687	649	-	751	697	-	-	-	-	-	-	-
Stage 2	776	684	-	698	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	427	399	755	421	409	779	1273	-	-	1281	-	-
Mov Cap-2 Maneuver	427	399	-	421	409	-	-	-	-	-	-	-
Stage 1	664	627	-	745	692	-	-	-	-	-	-	-
Stage 2	772	679	-	682	627	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.45	13.41	0	0.68
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1273	-	-	427	451	156	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.051	0.02	-	-
HCM Ctrl Dly (s/v)	0	-	-	13.4	13.4	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	57	0	0	21	0	0
Future Vol, veh/h	57	0	0	21	0	0
Conflicting Peds, #/hr	0	7	7	0	7	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	0	0	25	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	76
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	985
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	978
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	31	26	9	21	0	0
Future Volume (Veh/h)	31	26	9	21	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	44	37	13	30	0	0
Pedestrians	2			7	27	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			108		148	97
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			108		148	97
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1483		836	953

Direction, Lane #	EB 1	WB 1
Volume Total	81	43
Volume Left	0	13
Volume Right	37	0
cSH	1700	1483
Volume to Capacity	0.05	0.00*
Queue Length 95th (ft)	0	1
Control Delay (s/veh)	0.0	2.3
Lane LOS		A
Approach Delay (s/veh)	0.0	2.3
Approach LOS		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX
ITE Parking Generation Worksheets

Exhibit D

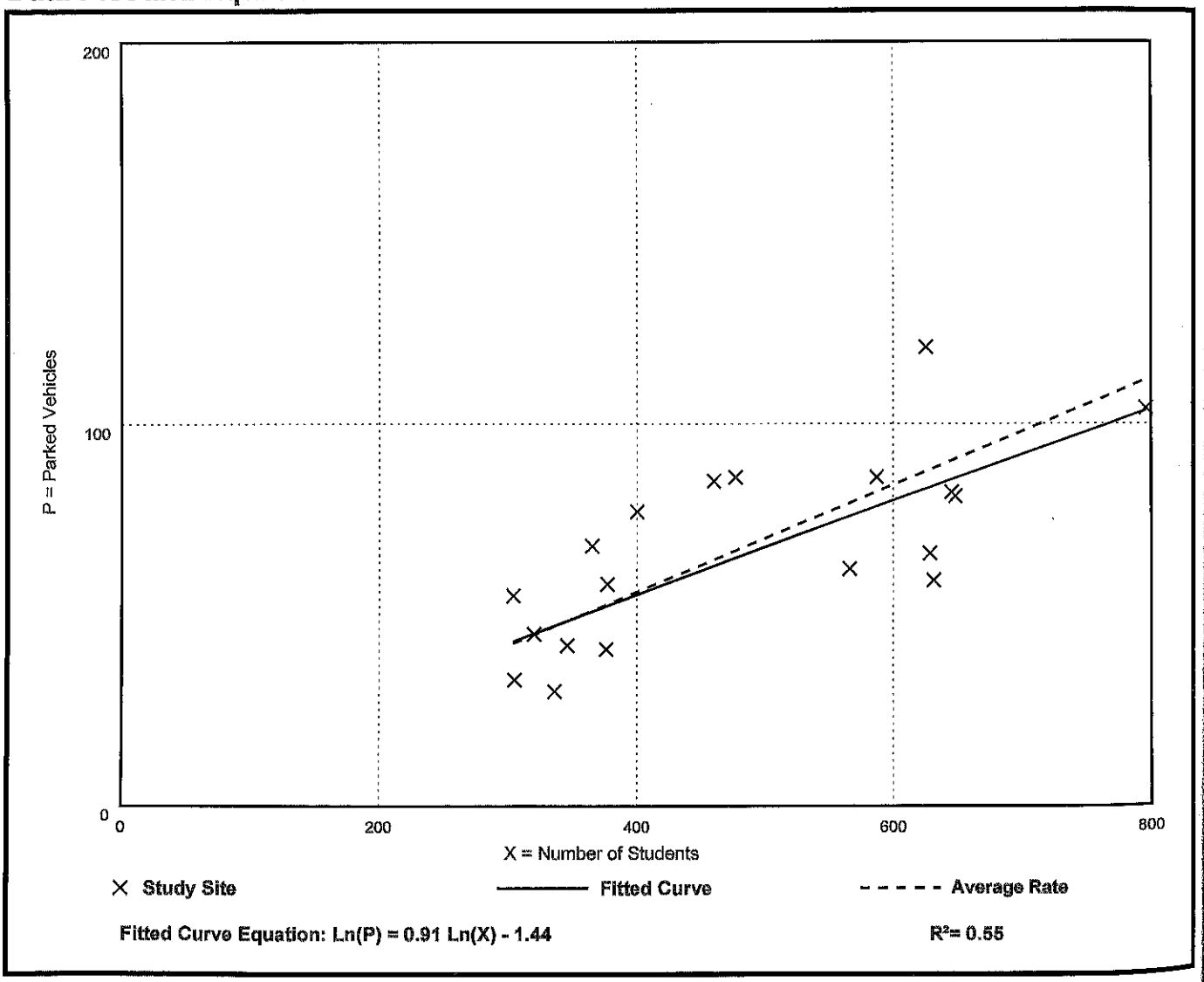
Elementary School
(520)

Peak Period Parking Demand vs: Students
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 19
Avg. Num. of Students: 484

Peak Period Parking Demand per Student

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.14	0.09 - 0.19	0.12 / 0.19	***	0.03 (21%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.91 Ln(X) - 1.44

R^2= 0.55

Exhibit D

WHITTIER ELEMENTARY SCHOOL
TRAFFIC IMPACT ANALYSIS

APPENDIX
Site Plan

COVERED PLAY STRUCTURE (3,000 SF)
STRUCTURE: STEEL COLUMN, HSS ROOF BEAMS AND STEEL DECK
ROOFING: ROOF SLOPE 1:12 w/ STANDING SEAM METAL ROOF
WALL: 10'-0" H x 30'-0" L x 12" NOM REINFORCED CMU WALL
NOTE: BIRD NETTING UNDER ENTIRE STRUCTURE

RE-SURFACED EXISTING PARKING
BUS DROP-OFF
COVERED PLAY +237.5
PAVED PLAY +236.5
HILLSIDE SLIDE
STAIRS DOWN
PLAYFIELD U8 (75'X105') +229.0
POTENTIAL MINI PITCH FIELD +236.0
5-12 AGE (RE-LOCATED) +236.0
2-5 AGE (RE-LOCATED) +236.0
BIKE PARKING
SECURITY FENCING
TRASH
SERVICE 20'x20'
SERVICE 15'x25'
LOADING SPACE
ELM TREE LN.
ALAMEDA AVE.
ANNAPOLIS ST.
PRE K 911 SF
PRE K 916 SF
LAP 473 SF
CHAMPION 867 SF
ADMIN 513 SF
PRINCIPAL 201 SF
OFFICE 121 SF
OFFICE 121 SF
OFFICE 121 SF
STAFF LOUNGE 364 SF
HEALTH / TOILET / WELLNESS 379 SF
WORKROOM 298 SF
STORAGE 143 SF
BOOK STORAGE 234 SF
CORRIDOR 2,885 SF
STORAGE 81 SF
CONFERENCE 208 SF
KINDER 915 SF
KINDER 969 SF
MDF 165 SF
KINDER 927 SF
ML 426 SF
ELEC 229.0
MECH 432 SF
KITCHEN/SERVERY/COMMONS 3,442 SF
MUSIC 938 SF
GYM 5,283 SF
TABLE/CHAIR 221 SF
CIRCULATION 720 SF
OT / PT 382 SF
OFFICE 131 SF
AV 88 SF
PLATFORM 441 SF
PE STORAGE 216 SF

0 10' 20' 40' 80'
Graphic Scale: 1" = 20'-0"

McGRANAHAN PBK
CORNERSTONE General Contractors
LYON LANDSCAPE ARCHITECTS

WHITTIER ES

777 ELM TREE LANE
FIRCREST, WA 98466

30% Estimate

TACOMA PUBLIC SCHOOLS
EVERY STUDENT. EVERY DAY.

CLIENT	
DATE	PROJECT NUMBER

DRAWING HISTORY

No.	Description	Date

CHECKED BY: EJW
DRAWN BY: ES

LANDSCAPE SITE PLAN

L-100