

# Annexation and Zone Change Application For 19701 S Leland Road

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**Date:** August 2017

**Submitted to:** City of Oregon City  
Planning Division  
221 Molalla Avenue, Suite 200  
Oregon City, OR 97045

**Property Owners:** Bruce Raymond Miller and Shelly Alane Miller  
Trustees of the Bruce and Shelly Miller Revocable Living Trust  
19701 S Leland Road  
Oregon City, OR 97045

**Applicant:** PDX Development, Inc.  
P.O. Box 2559  
Oregon City, OR 97045



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P.O. Box 2559  
Oregon City, OR 97045

**Applicant's Consultant:** AKS Engineering & Forestry, LLC  
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**Clackamas County  
Assessor's Information:** Assessor's Map: 32E18, Tax Lot 1400

**Site Size:** ±6.33 Acres (without S Leland Road R-O-W)  
±6.63 Acres (with S Leland Road R-O-W)

**City Comprehensive Plan  
Map Designation:** LR – Low Density Residential

**Existing Zoning  
Designation:** Clackamas County (holdover) Future Urban 10-Acre  
(FU-10)

**Planned Zoning  
Designation:** R-6 Single-Family Dwelling District





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## **I. Executive Summary**

The Miller property has been within the Urban Growth Boundary (UGB) since it was established by Metro in 1979. Based on the Urban Growth Management Agreement (UGMA) in place between Clackamas County and Oregon City, the property has a Low Density Residential Comprehensive Plan designation, where it is presumed that the property will ultimately annex to the City for low density residential use. The property owners have observed annexations occurring in the area over time as well as the recent creation of new residential neighborhoods adjacent to their property. This application is being submitted to emulate and follow this process by: 1) Annexing to the City, and 2) apply the City's R-6 zoning designation to the property.

A few of the factors that support approval of this application are as follows:

- The petition for annexation has been signed by 100% of the land owners
- The property is located within the Metro UGB and is contiguous to the City of Oregon City
- Annexation to the City is consistent with the County/City UGMA
- Annexation and application of the R-6 zoning district is consistent with the City's Low Density Residential Comprehensive Plan designation
- The property is mapped by the City as unconstrained vacant land, free of natural hazards, flood plains or other similar impediments to future residential use
- The property has convenient access to and is efficiently served by all necessary public services and utilities including water, sanitary sewer, storm drainage, schools, access/transportation, police, fire protection, etc.

This written narrative describes how the application is consistent with the applicable portions of the City Comprehensive Plan, Metro Code, and explains how the applicable approval criteria found in the City's Municipal Code are satisfied. The narrative is complemented by other documentation that is required for the annexation and zone change application. Considered together, this information is substantial and supports the City's approval of the application.

## **II. Site Description / Setting**

The subject property is approximately ±6.33 acres of generally flat underdeveloped land currently located within the jurisdiction of Clackamas County and zoned FU-10. The property is occupied by an existing single-family detached home and outbuildings situated adjacent to other underdeveloped land to the northwest also located in Clackamas County. Abutting properties to the southwest are located outside of the UGB. Properties adjacent to the subject site to the southeast are within Oregon City, and have been redeveloped as residential subdivisions under the City's R-6 zoning designation (Lindsay Anne Estates, Ellis Estates, and Marlo Farms). The subject property has direct frontage on S Leland Road, which the property currently takes access. Existing street stubs (Cedarwood Way and Cherrywood Way) from the adjoining Lindsay Anne Estates Subdivision abut the property's southeast boundary, which were required as part of the Lindsay Anne Estates land use approval in order to facilitate future development patterns of the area.

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### III. Applicable Review Criteria

City staff's March 8, 2017 pre-application conference notes outline the review criteria that are relevant to this application. Those criteria are addressed below.

#### CITY OF OREGON CITY MUNICIPAL CODE

##### Title 14 – ANNEXATIONS

##### Chapter 14.04: CITY BOUNDARY CHANGES AND EXTENSION OF SERVICES

##### 14.04.050 Annexation procedures.

- A. Application Filing Deadlines. Annexation elections shall be scheduled for March, May, September and November of each year. Each application shall first be approved by the city commission, which shall provide a valid ballot title in sufficient time for the matter to be submitted to the voters as provided by the election laws of the state of Oregon.

**Response:** In accordance with Senate Bill 1573, which went into effect March 16, 2016 and, “applies to a city whose laws require a petition proposing annexation of territory to be submitted to the electors of the city,” the following criteria found in Section 2 and 3 of Senate Bill 1573 have been addressed to determine the territory’s support for annexation.

##### **Section 2. (2)**

*Notwithstanding a contrary provision of the city charter or a city ordinance, upon receipt of a petition proposing annexation of territory submitted by all owners of land in the territory, the legislative body of the city shall annex the territory without submitting the proposal to the electors of the city if:*

- (a) The territory is included within an urban growth boundary adopted by the city or Metro, as defined in ORS 197.015*

**Response:** 100% of the land owners have signed the annexation petition. This petition is included in the application materials, which has been certified by the Clackamas County Assessor’s Office. The territory is included within the Portland Metropolitan UGB.

- (b) The territory is, or upon annexation of the territory into the city will be, subject to the acknowledged comprehensive plan of the city.*

**Response:** The subject property currently has an Oregon City Comprehensive Plan designation of Low Density Residential (LR), which includes the R-10, R-8, and R-6 zoning districts. Upon approval of this annexation and zone change application, the subject property is to be rezoned from the County’s FU-10 zone to the City’s R-6 zone, which is consistent with the City’s LR Comprehensive Plan designation.

- (c) At least one lot or parcel within the territory is contiguous to the city limits or is separated from the city limits only by a public right of way or a body of water.*

**Response:** As shown on the preliminary plans, and the certified legal description and map included in the application materials, the subject property’s southeast property line is contiguous to City limits.

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*(d) The proposal conforms to all other requirements of the city's ordinances.*

**Response:** All required information, forms, and documents found in Oregon City's "Annexation Application Submittal Checklist" have been included in the application materials.

**Section 2. (3)**

*The territory to be annexed under this section includes any additional territory described in ORS 222.111 (1) that must be annexed in order to locate infrastructure and right of way access for services necessary for development of the territory described in subsection (2) of this section at a density equal to the average residential density within the annexing city.*

**Response:** The territory to be annexed includes territory that must be annexed in order to locate future infrastructure and right-of-way access for services necessary for the territory to meet density equal to the average residential density within Oregon City per the R-6 zoning designation. Access is available from S Leland Road and abutting street stubs (Cedarwood Way and Cherrywood Way), and City services are available.

**Section 2. (4)**

*When the legislative body of the city determines that the criteria described in subsection (2) of this section apply to territory proposed for annexation, the legislative body may declare that the territory described in subsections (2) and (3) of this section is annexed to the city by an ordinance that contains a description of the territory annexed.*

**Response:** A legal description and map for the subject property planned for annexation prepared by a Professional Land Surveyor and certified by the Clackamas County Assessor's Office is included in the application materials.

**Section 3**

*This 2016 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2016 Act takes effect on its passage.*

**Response:** Senate Bill 1573 was signed by the Governor and became effective on March 15, 2016.

**B. Preapplication Review.** Prior to submitting an annexation application, the applicant shall confer in the manner provided by Section 17.50.050(A) with the representative of the planning division appointed by the city manager.

**Response:** A pre-application conference was held by the City March 8, 2017. Copies of the City's Pre-Application Conference Meeting Notes have been included in the application materials. This standard is met.

**C. Neighborhood Contact.** Prior to filing an annexation application, the applicant is encouraged to meet with the city-recognized neighborhood association or associations within which the property proposed to be annexed is located. If the city manager deems that more than one such association is affected, the applicant is encouraged to meet with each such association, as identified by the city manager. Unwillingness or unreasonable unavailability of a neighborhood association to meet shall not be deemed a negative factor in the evaluation of the annexation application.

**Response:** A neighborhood meeting with the Hillendale and Tower Vista Neighborhood Association was held on June 6, 2017. The required neighborhood meeting materials have been included in the application materials. This standard is met.

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- D. Signatures on Consent Form and Application. The applicant shall sign the consent form and the application for annexation. If the applicant is not the owner of the property proposed for annexation, the owner shall sign the consent form and application in writing before the city manager may accept the same for review.

**Response:** The appropriate consent form and annexation application have been signed by 100% of the property owners, a copy of which has been included in the application materials. This standard is met.

- E. Contents of Application. An applicant seeking to annex land to the city shall file with the city the appropriate application form approved by the city manager. The application shall include the following:

1. Written consent form to the annexation signed by the requisite number of affected property owners, electors or both, provided by ORS 222, if applicable;

**Response:** The appropriate consent form and annexation application have been signed by 100% of the property owners. Copies of the signed consent form and application have been included in the application materials. This standard is met.

2. A legal description of the territory to be annexed, meeting the relevant requirements of the Metro Code and ORS Ch. 308. If such a description is not submitted, a boundary survey may be required. A lot and block description may be substituted for the metes and bounds description if the area is platted. If the legal description contains any deed or book and page references, legible copies of these shall be submitted with the legal description;

**Response:** A copy of the certified legal description and map for the subject property to be annexed has been included in the application materials. This standard is met.

3. A list of property owners within three hundred feet of the subject property and, if applicable, those property owners that will be "islanded" by the annexation proposal, on mailing labels acceptable to the city manager;

**Response:** A list of property owners within a 300-foot radius of the subject property, including appropriate mailing labels have been included in the application materials. This standard is met.

4. Two full quarter-section county tax assessor's maps, with the subject property(ies) outlined;

**Response:** Two full quarter-section County Tax Assessor's Maps with the subject property outlined on each map have been included in the application materials. This standard is met.

5. A site plan, drawn to scale (not greater than one inch = fifty feet), indicating:
  - a. The location of existing structures (if any);
  - b. The location of streets, sewer, water, electric and other utilities, on or adjacent to the property to be annexed;

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- c. The location and direction of all water features on and abutting the subject property. Approximate location of areas subject to inundation, stormwater overflow or standing water. Base flood data showing elevations of all property subject to inundation in the event of one-hundred-year flood shall be shown;
  - d. Natural features, such as rock outcroppings, marshes or wetlands (as delineated by the Division of State Lands), wooded areas, identified habitat conservation areas, isolated preservable trees (trees with trunks over six inches in diameter—as measured four feet above ground), and significant areas of vegetation;
  - e. General land use plan indicating the types and intensities of the proposed, or potential development;

**Response:** Preliminary Plans containing the information required by these criteria have been included in the application materials. These criteria are met.

- 6. If applicable, a double-majority worksheet, certification of ownership and voters. Certification of legal description and map, and boundary change data sheet on forms provided by the city.

**Response:** This application is using the Petition of Owners of 100% of Land Area method of annexation, not the double majority method. Valid forms contained in Oregon City's Annexation Application Packet certifying the petition, legal description, and map have been included in the application materials. A boundary data sheet has also been included in the application materials. This standard is met.

- 7. A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:
  - a. Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;

**Response:** **Water Facilities**  
*Availability*

The subject property is currently within Clackamas River Water (CRW) District and served by the CRW's 6-inch water main located in the S Leland Road right-of-way. A separate 12-inch City water main is also located within the S Leland Road right-of-way approximately 120 feet southeast of the subject property. In addition, existing 8-inch water mains are located in both Cedarwood Way and Cherrywood Way abutting the subject property to the southeast from the existing Lindsay Anne Estates Subdivision.

*Capacity*

Based upon discussions with City staff, the City's Water Master Plan, and the Public Facilities Memorandum included in the application materials, no known capacity or pressure issues exist in the vicinity.

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### *Status*

The subject property is currently within the Clackamas River Water (CRW) District and is served by the CRW's 6-inch water main located in the S Leland Road right-of-way. The subject property is also easily served by City water as described above. The Public Facilities Memorandum included in the application materials discusses adequacy of public facilities.

### **Sanitary Sewer Facilities**

#### *Availability*

The existing residence located on the subject property is served by a private septic system. Tri-City Service District provides wastewater treatment for the City of Oregon City. The Applicant plans to file the appropriate documents for annexation into the Tri-City Service District following successful annexation of the property to the City, however, sewer connections are not planned with this application.

The City of Oregon City currently operates the sanitary sewer collection system in this area, which connects to the Tri-City Service District interceptor. An existing 8-inch sanitary sewer main is located within the S Leland Road right-of-way approximately 120 feet southeast of the subject property. Additionally, existing 8-inch sanitary sewer mains are located in Cedarwood Way and Cherrywood Way of the adjoining Lindsay Anne Estate Subdivision to the southeast.

#### *Capacity*

Based upon discussions with City staff, the City's Sanitary Sewer Master Plan, and the Public Facilities Memorandum included in the application materials, no known capacity or pressure issues exist in the vicinity.

### *Status*

As noted above, the Applicant plans to file the appropriate documents for annexation into the Tri-City Service District, following successful annexation of the subject property into the City.

### **Storm Drainage Facilities**

#### *Availability*

Existing 12-inch storm lines are located directly to the southeast within the rights-of-way of Cedarwood Way and Cherrywood Way, the two separate stub streets located within the abutting Lindsay Anne Estates Subdivision. An existing 12-inch storm line is also located within the S Leland Road right-of-way approximately 120 feet southeast of the subject property.

#### *Capacity*

Based upon comments received from City staff, and the Public Facilities Memorandum included in the application materials, no known stormwater capacity issues exist in the vicinity.

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### *Status*

Upon annexation, the property will be subject to the City's Stormwater and Grading Design Standards.

### **Transportation Facilities**

#### *Availability*

The subject property is currently accessed by way of an existing private driveway from S Leland Road. S Leland Road is classified as a minor arterial street controlled by Clackamas County. Cedarwood Way and Cherrywood Way (local streets) are stubbed to the subject property from the adjacent Lindsay Anne Subdivision to the southeast.

#### *Capacity*

Successful annexation of the subject property will not create any increase in service demands to transportation facilities. A Traffic Impact Study (TIS), which includes a Transportation Planning Rule (TPR) analysis, has been prepared by a registered professional traffic engineer based upon a scope of work provided by the City's traffic engineering consultant. The TIS includes trip generation estimates for the existing FU-10 zoning designation, the planned R-6 zoning designation, traffic count data, trip distribution and assignments, operational analysis, crash data analysis, and capacity analysis for the 20-year planning horizon consistent with the requirements of the State Transportation Planning Rule (OAR 660-012-060). The TIS concludes that study area intersections operate acceptably through the planning horizon, and that the annexation and zone change of the subject property will not significantly affect the City's transportation system. No mitigation has been recommended, and the Transportation Planning Rule is therefore satisfied. Please see the TIS included in the application materials for additional information.

### **Park Facilities**

#### *Availability*

The closest park to the subject property is Wesley Lynn Park, approximately ±540 feet to the northeast. The annexation application, by itself, will not impact the existing parks in the area.

#### *Capacity*

Annexation of the subject property will not affect the capacity of park facilities.

### *Status*

The subject property is not adjacent to existing park facilities, and the annexation application will not impact the existing parks in the area.



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## **School Facilities**

### *Availability*

The subject property is currently served by the Oregon City School District. Annexation of the subject property to the City would have no impact on the School District. The subject property is located within approximately one ( $\pm 1$ ) mile of Gaffney Lane Elementary School to the east, and John McLoughlin Elementary School to the northwest; less than two ( $\pm 2$ ) miles from Gardiner Middle School to the northeast; roughly four ( $\pm 4$ ) miles from Oregon City High School, and two and a half ( $\pm 2\frac{1}{2}$ ) miles from Clackamas Community College to the east.

### *Capacity*

Oregon City School District Superintendent, Wes Rogers attended the pre-application conference for this application. The annexation/zone change application was discussed along with potential future re-development of the subject property at R-6 residential densities. Mr. Rogers concluded that based on a variety of factors (demographic trends, the small size of the property, potential school re-opening, etc.) that this project would not negatively impact school capacity.

### *Status*

The responses to the availability, capacity, and status of existing water, sewer, storm drainage, transportation, park, and school facilities of the annexation of the subject property meet the above standard.

- b. [Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;](#)

## **Response:**

### **Water Facilities**

Annexation to the City as provided for in this application will not create an increased demand for water facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public water system at R-6 residential densities.

### **Sanitary Sewer Facilities**

Annexation to the City as provided for in this application will not create an increased demand for sanitary sewer facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public sanitary sewer system at R-6 residential densities.

### **Storm Drainage Facilities**

Annexation to the City as provided for in this application will not create an increased demand for storm drainage facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and



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experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public storm drainage system at R-6 residential densities.

#### **Transportation Facilities**

Annexation to the City as provided for in this application will not create an increased demand for transportation facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public transportation system at R-6 residential densities.

#### **Park Facilities**

Annexation to the City as provided for in this application will not create an increased demand for park facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public parks system at R-6 residential densities.

#### **School Facilities**

Annexation to the City as provided for in this application will not create an increased demand for school facilities. That said, it anticipates the potential redevelopment of the property at R-6 residential densities, consistent with several other properties in this area. Based upon discussions with City staff at the pre-application conference and experience with nearby projects, it is understood that there is sufficient capacity to satisfy potential increased demand to the public school system at R-6 residential densities.

- c. [Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;](#)

#### **Response: Water Facilities**

The subject property is currently within the Clackamas River Water (CRW) District. Annexation of the subject property to the City of Oregon City would not cause increased demand on water services. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff and CRW at the pre-application conference required for this application. Based on this conversation, written information provided by City and CRW staff, and previous experience with recent projects in the area, it is understood that the City of Oregon City will be the ultimate provider of water service in this area and that sufficient capacity exists to serve the property at R-6 residential densities. This is summarized in the Public Facilities Memorandum that is included in the application materials.

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It is also understood that potential future water main extensions are subject to compliance with applicable City design standards (and necessary permits), and that service connections to the City system are also subject to payment of required City fees (that fund plan review and inspections) and SDC's which provide funding for necessary City water system infrastructure capacity improvements.

### **Sanitary Sewer Facilities**

The existing residence located on the subject property is served by an on-site private septic system. It is understood that the ultimate provider for public sanitary sewer service is the City of Oregon City, whose system transports wastewater to the Tri-City Service District treatment plant (operated by Clackamas County Water Environment Services). Annexation of the subject property to the City of Oregon City would not cause increased demand on the existing septic system or the City Sanitary Sewer System. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on this conversation, written information provided by City staff, and previous experience with recent projects in the area, it is understood that sufficient capacity exists to serve the property at R-6 residential densities. This is summarized in the Public Facilities Memorandum that is included in the application materials.

It is also understood that potential future sanitary sewer system infrastructure improvements would be subject to compliance with applicable City design standards (and necessary permits), and that service connections to the City system are also subject to payment of required City fees (that fund plan review and inspections) and SDC's which provide funding for necessary City sanitary sewer system infrastructure capacity improvements.

### **Storm Drainage Facilities**

The property is over 6 acres, there is limited impervious areas, and the existing home was built in 1909. It is understood that the ultimate provider for public stormwater management service is the City of Oregon City. Annexation of the subject property to the City of Oregon City would not cause increased demand on the City stormwater management system. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on this conversation, the written information provided by City staff, and previous experience with recent projects in the area, it is understood that sufficient capacity exists to serve the property at R-6 residential densities. This is summarized in the Public Facilities Memorandum that is included in the application materials.

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It is also understood that potential future stormwater management system infrastructure improvements would be subject to compliance with applicable City design standards (and necessary permits), and that service connections to the City system are also subject to payment of required City fees (that fund plan review and inspections) and SDC's which provide funding for necessary City stormwater management system infrastructure capacity improvements.

### **Transportation Facilities**

The subject property fronts on S Leland Road, which is a Clackamas County arterial roadway. Annexation of the subject property to the City of Oregon City would not cause increased demand on the County/City management system. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on that conversation, a Traffic Impact Analysis has been prepared and is included in the application materials. The Traffic Impact Analysis includes a Transportation Planning Rule Analysis which analyzes capacity at certain intersections for the 20-year planning horizon as required by Oregon State Administrative Rule (OAR) 660-012-060). The analysis found that study area intersections operate acceptably through the planning horizon with the annexation and zone change.

It is also understood that potential future transportation management system infrastructure improvements would be subject to compliance with applicable City and County design standards (and necessary permits), and are also subject to payment of required City fees (that fund plan review and inspections) and SDC's which provide funding for necessary transportation system infrastructure capacity improvements.

### **Park Facilities**

Wesley Lynn Park, is located approximately ±540 feet to the northeast of the subject property. It is understood that the ultimate provider for park services is the City of Oregon City. Annexation of the subject property to the City of Oregon City would not cause increased demand on the City's parks system. In fact, once the property is annexed, taxes (including those that support parks) would be assessed and collected by the City. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on this conversation, the written information provided by City staff, and previous experience with recent projects in the area, it is understood that sufficient capacity exists to serve the property at R-6 residential densities. It is also understood that potential future SDC's and property taxes would provide funding for necessary City parks system improvements.

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### **School Facilities**

The subject property is located within the Oregon City School District. Annexation of the subject property to the City of Oregon City would not cause increased demand on the school district. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Wes Rogers, Oregon City School District Superintendent attended the pre-application conference for this application. The annexation/zone change application was discussed and Mr. Rogers concluded that based on a variety of factors (i.e. demographic trends, the small size of the property) that sufficient capacity exists to serve the property at R-6 residential densities. It is also understood that potential future construction excise taxes and property taxes would provide funding for necessary school district improvements.

### **Additional Facilities**

The subject property is currently within and served by Clackamas Fire District #1. Annexation of the subject property to the City of Oregon City would not cause increased demand on the fire district's resources. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on this conversation, the written information provided by City staff, and previous experience with recent projects in the area, it is understood that the fire district has sufficient resources to serve the property at R-6 residential densities. It is also understood that potential future property taxes, potential district bonds, etc. provide necessary funding for the fire district.

The subject property is currently within and served by the Clackamas County Sheriff's Office. It is understood that the ultimate provider of police service is the City of Oregon City Police Department. Annexation of the subject property to the City of Oregon City would not create a negligible demand on the City's Police Department resources. Therefore, additional facilities or phased facilities are not required or relevant to the annexation and zone change application.

Potential future redevelopment of the property at R-6 residential densities was discussed with City staff at the pre-application conference required for this application. Based on this conversation, the written information provided by City staff, and previous experience with recent projects in the area, it is understood that the Police Department has sufficient resources to serve the property at R-6 residential densities. It is also understood that potential future property taxes, potential district bonds, etc. will provide necessary funding for the Police Department.

### **Phasing of Facilities**

As discussed above, phasing of facilities is not necessary for any necessary service.

- d. [Statement outlining method and source of financing required to provide additional facilities, if any;](#)

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**Response:** Annexation of the subject property to the City of Oregon City would not cause increased demand on City or service provider resources. Therefore, additional facilities requiring financing are not required or relevant to the annexation and zone change application. That said, to the extent potential future redevelopment of the subject property at R-6 residential densities is relevant to this application, such financing mechanisms were described in Section c. above.

- e. Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced;

**Response:** Annexation of the subject property to the City of Oregon City will not affect a physical change of the property. That said, a conceptual shadow plat is included in the application materials that illustrates a potential vision for the property given the City's R-6 Low Density Residential designation to be applied upon annexation. The plan features a continuation of the adjacent low density residential development pattern with critical connections to adjacent developed streets. Assumed with the plan are the types of features that accompany new residential communities such as frontage improvements on S Leland Road, public sanitary sewer and stormwater management infrastructure, new public streets with sidewalks and street trees, areas to build new homes, plant landscaping, etc.

- f. Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;

**Response:** Annexation of the subject property to the City of Oregon City will not affect a physical, aesthetic, or discernable social change of the property. That said, a conceptual shadow plat is included in the application materials that illustrates a potential vision for the property given the City's R-6 Low Density Residential designation to be applied upon annexation. The plan features a continuation of the adjacent low density residential development pattern with critical connections to adjacent developed streets. Assumed with the plan are the types of features that accompany new residential communities such as frontage improvements on S Leland Road, public sanitary sewer and stormwater management infrastructure, new public streets with sidewalks and street trees, areas to build new homes, plant landscaping, etc. Therefore, negative effects are not anticipated. That said, this annexation/zone change application does not authorize any physical changes to the property. The City of Oregon City has established standards, requirements, and review procedures by which development applications are considered. That process involves a neighborhood meeting and public notice by which members of the community may provide input on the application, potential issues can be identified, and remedies created.

- g. Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;

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**Response:** In accordance with the Clackamas County/Oregon City UGMA, the subject property already exhibits an Oregon City Comprehensive Plan designation of Low Density Residential (LR). Consistent with that designation, this application includes placing the City's R-6 zoning designation on the subject property on the City zoning map. Because the R-6 designation is identified as a Low Density Residential zone, a comprehensive plan map amendment is not relevant to this application.

8. The application fee for annexations established by resolution of the city commission and any fees required by metro. In addition to the application fees, the city manager shall require a deposit, which is adequate to cover any and all costs related to the election;

**Response:** The required application fee has been included with this application submittal. That said, pursuant to Senate Bill 1573, approval of the application will not involve an election.

9. Paper and electronic copies of the complete application as required by the community development director.

**Response:** The appropriate number of application packets, and electronic copies of the application packet have been submitted.

14.04.060 Annexation factors.

- A. When reviewing a proposed annexation, the commission shall consider the following factors, as relevant:

1. Adequacy of access to the site;

**Response:** The subject property has direct access onto S Leland Road, a minor arterial controlled by Clackamas County. Local streets (Cedarwood Way and Cherrywood Way) are stubbed to the subject property from the adjacent Lindsay Anne Estates Subdivision. Therefore, the subject property has excellent site access.

2. Conformity of the proposal with the city's comprehensive plan;

***Comprehensive Plan Section 2: Land Use***

***Goal 2.1: Efficient Use of Land***

*Ensure that property planned for residential, commercial, office, and industrial uses is used efficiently and that land is developed following principles of sustainable development.*

**Response:** The subject property is located within the UGB, and has an existing Low Density Residential Comprehensive Plan designation. That said, the future anticipated use of the property is low density residential at R-6 densities as envisioned and consistent with other projects in the area, which is consistent with the City's Comprehensive Plan designation, and ensures an adequate supply of housing in an area that can be provided with urban services in an efficient and timely manner.

***Goal 2.7: Oregon City Comprehensive Plan Land-Use Map***

*Maintain the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development of the city by type, density and location.*

**Response:** The annexation/zone change of the subject property is consistent with and maintains the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide

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for development within the area of the property. This application has no impact on this policy.

**Comprehensive Plan Section 14: Urbanization**

**Goal 14.1: Urban Growth Boundary**

*Establish, and amend when appropriate, the Urban Growth Boundary in the unincorporated area around the city that contains sufficient land to accommodate growth during the planning period for a full range of city land uses, including residential, commercial, industrial, and institutional.*

**Response:** The subject property is located within the UGB and greater than 6 acres in size, which is sufficient to accommodate future residential growth at R-6 densities as envisioned and consistent with other projects in the area.

**Policy 14.1.1**

*The Urban Growth Boundary shall conform to Title 11 of the Code of the Metropolitan Service District and will provide sufficient land to accommodate 20-year urban land needs, resulting in efficient urban growth and a distinction between urban uses and surrounding rural lands, and promoting appropriate infill and redevelopment in the city.*

**Response:** The subject property has been within the UGB since it was established by Metro in 1979. Based on the property size (greater than 6 acres), it is included in the Metropolitan Service District's inventory of sufficient land to accommodate 20-year urban land needs. The annexation/zone change of the subject property to the City's R-6 zoning designation promotes appropriate infill and redevelopment in the City consistent with the City's Comprehensive Plan.

**Policy 14.1.2**

*Concept plans that provide more detail than the city's Comprehensive Plan will be required prior to development of lands within the Urban Growth Boundary.*

**Response:** Although no physical alterations of the subject property are included with this application, an Aerial Photo and Conceptual Shadow Plat of the property has been included in the application materials to show how the property can conceptually be redeveloped in the future.

**Goal 14.3: Orderly Provision of Services to Growth Areas**

*Plan for public services to lands within the Urban Growth Boundary through adoption of a concept plan and related Capital Improvement Program, as amendments to the Comprehensive Plan.*

**Response:** The subject property is located within the UGB; however, no concept plan has been adopted for the area. That said, the future anticipated use of the property is low density residential at R-6 densities as envisioned and consistent with other projects in the area. The City's Capital Improvement Program includes utility master plans that have been updated in anticipation of serving additional properties annexed in the area. The availability, capacity, and status of existing and planned services and facilities (water, sanitary sewer, storm drainage, access/transportation) in the area have been discussed previously in this narrative.



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**Policy 14.3.1**

*Minimize new public facilities and services by encouraging new development within the Urban Growth Boundary at maximum densities allowed by the Comprehensive Plan.*

**Response:** Annexation of the subject property will not affect current public facilities or services in the area. The zone change of the property to the City's R-6 zone is consistent with this policy as it allows compatible residential density within the Low Density Residential Comprehensive Plan designation of the property.

**Policy 14.3.2**

*Ensure that the extension of new services does not diminish the delivery of those same services to existing areas and residents in the city.*

**Response:** Annexation of the subject property will not affect existing utility services. That said, and as addressed above, the City's utility master plans have been updated to account for the extension of services to annexed properties within the area without diminishing the delivery of those same services to existing areas and residents within the City.

**Policy 14.3.3**

*Oppose the formation of new urban services districts and oppose the formation of new utility districts that may conflict with efficient delivery of city utilities within the Urban Growth Boundary.*

**Response:** Annexation of the subject property will not create a new service district or affect the future delivery of City utilities to the subject property or the area.

**Policy 14.3.4**

*Ensure the cost of providing new public services and improvements to existing public services resulting from new development are borne by the entity responsible for the new development to the maximum extent allowed under state law for Systems Development Charges.*

**Response:** Annexation of the subject property will not create any new service connections, therefore, no costs borne by the Applicant for new connections are required. Utility connection fees, SDC's, and ongoing user fees, are planned to be paid for by private parties with the future redevelopment of the property.

**Goal 14.4: Annexation of Lands to the City**

*Annex lands to the city through a process that considers the effects on public services and the benefits to the city as a whole and ensures that development within the annexed area is consistent with the Oregon City Comprehensive Plan, City ordinances, and the City Charter.*

**Response:** This application is required by the City to be reviewed through a Type IV land use process, which ensures consideration of the effects of annexed properties on public services and the City as a whole. Future anticipated use of the property is low density residential at R-6 densities as envisioned and consistent with other projects in the area, and the Oregon City's Low Density Comprehensive Plan designation applied to the property.

**Policy 14.4.1**

*Promote compact urban form and support efficient delivery of public services by ensuring that lands to be annexed are within the City's Urban Growth Boundary, and contiguous with the city limits. Do not consider long linear extensions, such as cherry stems and flag lots, to be contiguous with the city limits.*



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**Response:** Annexation of the subject property would support compact urban form and support efficient delivery of public services as the property is within the UGB and contiguous to City limits. No physical alterations to the property are included with this application.

***Policy 14.4.2***

*Include an assessment of the fiscal impacts of providing public services to unincorporated areas upon annexation, including the costs and benefits to the city as a whole as a requirement for concept plans.*

**Response:** The City of Oregon City does not currently have a concept plan for this area. That said, the annexation of the subject property will have no fiscal impacts on providing public services because no physical alterations to the property are included with this application. The City's various public facilities master plans include analyses of the costs associated with providing adequate levels of service in the area, which can be assessed at the time of future land application submittal for the property.

***Policy 14.4.3***

*Evaluate and in some instances require that parcels adjacent to proposed annexations be included to:*

- *avoid creating unincorporated islands within the city;*
- *enable public services to be efficiently and cost-effectively extended to the entire area;*  
*or*
- *implement a concept plan or sub-area master plan that has been approved by the Planning and City Commissions.*

**Response:** As shown on the preliminary plans, annexation of the subject property will not create unincorporated islands within the City, or interfere with the timely or efficient extension of public services to the area in the future. No concept plan or sub-area master plan currently exists.

***Policy 14.4.4***

*Expedite the annexation of property as provided by state law in order to provide sewer service to adjacent unincorporated properties when a public health hazard is created by a failing septic tank sewage system.*

**Response:** The subject property is currently on a private septic system. However, the property is not subject to a public health hazard associated with a failing septic system.

**3. Adequacy and availability of public facilities and services to service potential development;**

**Response:** As described in the preceding sections of this narrative, adequate public facilities and services are available to support potential future development of the subject property.

**4. Compliance with applicable sections of ORS Ch. 222, and Metro Code Section 3.09;**

**Response:** ORS Chapter 222 provides several options for annexing land into a City, and requires that property to be annexed be contiguous to City limits. The process by which the subject property is being annexed is in accordance with Senate Bill 1573 which, "applies to a city whose laws require a petition proposing annexation of territory to be submitted to the electors of the city." That said, the planned annexation of the subject property meets ORS Ch. 222, as it includes a petition signed by 100% of the land owners in the territory, is

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within the adopted UGB, is within an area subject to the adopted and acknowledged Oregon City Comprehensive Plan, and is contiguous to existing City limits. In addition, this application is consistent with the applicable boundary change criteria of Metro's Code Section 3.09, more specifically Section 3.09.045 D, which has been addressed below.

*Metro Code 3.09.045.D: To approve a boundary change through an expedited process, the city shall:*

1. *Find that the change is consistent with expressly applicable provisions in:*

a. *Any applicable urban service agreement adopted pursuant to ORS 195.065*

**Response:** The subject property is currently within the CRW service district, which upon annexation the property will be included in the City's service districts. The property will annex into the Tri-City Service District.

b. *Any applicable annexation plan adopted pursuant to ORS 195.205;*

**Response:** No applicable annexation plan for the area currently exists.

c. *Any applicable cooperative planning agreement adopted pursuant to ORS 195.020 (2) between the affected entity and a necessary party;*

**Response:** Annexation of the subject property is consistent with the applicable UGMA in place between Clackamas County and Oregon City.

d. *Any applicable public facility plan adopted pursuant to a statewide planning goal on public facilities and services;*

**Response:** Annexation of the subject property is consistent with the City's Capital Improvement Program, which includes utility master plans that have been updated in anticipation of serving additional properties annexed in the area.

e. *Any applicable comprehensive plan;*

**Response:** Annexation of the subject property is consistent with the City's Comprehensive Plan, which designates the property as Low Density Residential.

f. *Any applicable concept plan; and*

**Response:** No applicable concept plan for the area currently exists.

2. *Consider whether the boundary change would:*

a. *Promote the timely, orderly and economic provisions of public facilities and services;*

**Response:** The subject property is within the UGB, contiguous to City limits, and adjacent to properties currently receiving City services. Therefore, the application promotes the timely, orderly, and economic provision of public facilities.

b. *Affect the quality and quantity of urban services; and*

**Response:** Annexation of the subject property will not affect the quality and quantity of urban services in the area.

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c. *Eliminate or avoid unnecessary duplication of facilities or services.*

**Response:** As part of the annexation process, the City will notify applicable service providers as to the annexation or withdrawal of the property to or from their district to avoid duplication of facilities and/or services.

5. *Natural hazards identified by the city, such as wetlands, floodplains and steep slopes;*

**Response:** The subject property is not on or near any natural hazards identified by the City (such as wetlands, floodplains, and steep slopes).

6. *Any significant adverse effects on specially designated open space, scenic, historic or natural resource areas by urbanization of the subject property at time of annexation;*

**Response:** The annexation of the subject property will not have an effect on designated open space, scenic, historic, or natural resource areas.

7. *Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.*

**Response:** The annexation of the subject property will have no adverse effects on the economic, social, and/or physical environment of the community. Public services are available to support future land uses of the property.

## **Title 17 – ZONING**

### **Chapter 17.68: ZONE CHANGES AND AMENDMENT**

#### **17.68.020 Criteria**

*The criteria for a zone change are set forth as follows:*

A. *The proposal shall be consistent with the goals and policies of the comprehensive plan.*

**Response:** The planned zone change from Clackamas County's FU-10 to the City of Oregon City's R-6 zone meets the following applicable goals and policies of the City of Oregon City Comprehensive Plan, as described in the following responses.

#### **Section 1: Citizen Involvement**

##### **Goal 1.2: Community and Comprehensive Planning**

*Ensure that citizens, neighborhood groups and affected property owners are involved in all phases of the comprehensive planning program.*

**Response:** The Oregon City Comprehensive Plan and Municipal Code include provisions to ensure citizens, neighborhood groups, and affected property owners have an opportunity to participate in the land use process. The City Comprehensive Plan is acknowledged by the State of Oregon as compliant with the Oregon Statewide Planning Goals, including Goal 1. For this application, citizens were able to attend and participate in the Hillendale/Tower Vista Neighborhood Association meeting held on June 6, 2017, that was open to the public. In addition to the neighborhood association meeting, citizens have the opportunity to attend and participate in public hearings before the Oregon City Planning

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Commission and the Oregon City Commission. Future applications for the subject property involve additional public processes. The application is consistent with this Goal.

## Section 2: Land Use

### Goal 2.1: Efficient Use of Land

Ensure that property planned for residential, commercial, office and industrial uses is used efficiently and that land is developed following principles of sustainable development.

**Response:** This application involves a zone change from Clackamas County's FU-10 zone to the City of Oregon City's R-6 zone. This represents an increase in density while still remaining in a single-family zone. Densities corresponding to the R-6 zone represent sustainable development in a compact form that is able to capitalize on public infrastructure investment within the existing City limits, which eases external pressures to expand and sprawl beyond the current Urban Growth Boundary. The application is consistent with this Goal.

### Goal 2.7: Oregon City Comprehensive Plan Land-Use Map

Maintain the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development of the city by type, density and location.

**Response:** The subject property is designated Low Density Residential (LR) by the City's Comprehensive Plan. The LR designation includes R-10, R-8, and R-6 zoning districts. This application involves a zone change from Clackamas County's FU-10 zoning designation to the City's R-6 zoning designation. A change to the Comprehensive Plan designation of the property is not necessary. The subject property is adjacent to other properties within the City's R-6 zoning district. Therefore, the R-6 zone is consistent with, and maintains, the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development. The application is consistent with this Goal.

## Section 5: Open Spaces, Scenic and Historic Areas, and Natural Resources

### Goal 5.4: Natural Resources

**Policy 5.4.4:** Consider natural resources and their contribution to quality of life as key community value when planning, evaluating and assessing costs of City actions.

**Response:** According to City maps, the Natural Resource Overlay District (NROD) does not impact the subject property. Therefore, the application is consistent with this Goal.

## Section 6: Quality of Air, Water, and Land Resources

### Goal 6.1: Air Quality

**Policy 6.1.1:** Promote land-use patterns that reduce the need for distance travel by single-occupancy vehicles and increase opportunities for walking, biking and/or transit to destinations such as places of employment, shopping and education.

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**Response:** The planned R-6 zoning designation promotes a compact land use pattern that reduces the amount of land dedicated to public streets and other public infrastructure per dwelling unit. Compact land use patterns reduce travel distance by single-occupancy vehicles, and increases opportunities for alternative modes of transportation including walking, biking, and transit.

The subject property is located approximately one ( $\pm 1$ ) mile from Gaffney Lane Elementary School to the east and John McLoughlin Elementary School to the northwest; less than two ( $\pm 2$ ) miles from Gardiner Middle School to the northeast; roughly four ( $\pm 4$ ) miles from Oregon City High School, and two and a half ( $\pm 2\frac{1}{2}$ ) miles from Clackamas Community College to the east. In addition, the subject property is located approximately one and a half ( $\pm 1\frac{1}{2}$ ) miles from commercially zoned properties on Molalla Avenue. Thus, the R-6 zoning strategically increases opportunities for increased populations to walk and bike to places of education, shopping, and employment. The R-6 zoning designation is consistent with this Goal.

#### Goal 6.2: Water Quality

**Policy 6.2.1:** Prevent erosion and restrict the discharge of sediments into surface and groundwater by requiring erosion prevention measures and sediment control practices.

**Response:** This application does not involve any physical disturbance to land or property. In the future, applications may be submitted that involve physical changes to the property. Those types of applications are subject to City grading, drainage, and erosion control standards. Therefore, those applications are planned to include preliminary plans that ensure erosion and sedimentation control standards are satisfied. To the extent this Goal is relevant to the application, it is satisfied.

#### Section 10: Housing

##### Goal 10.1: Diverse Housing Opportunities

Provide for the planning, development and preservation of a variety of housing types and lot sizes.

**Policy 10.1.3:** Designate residential land for a balanced variety of densities and types of housing, such as single-family attached and detached, and a range of multi-family densities and types, including mixed-use development.

**Response:** The R-6 zoning district preserves the property's existing Low Density Residential Comprehensive Plan designation while also maintaining the single-family residential nature of the area, albeit in a more compact form. The R-6 density is most conducive to single-family detached development patterns rather than multi-family or single-family attached, and this is indicative as those uses are not permitted in the R-6 zone. Those types of uses would require a Comprehensive Plan Map Amendment, which is not included in this application. It is clear that R-6 densities allow for a greater number of residential units on the property, thereby increasing the number and variety of housing choices in the area. Therefore, the application is consistent with this Goal.

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## Section 11: Public Facilities

### Goal 11.1: Provisions of Public Facilities

Serve the health, safety, education, welfare and recreational needs of all Oregon City residents through the planning and provision of adequate public facilities.

**Response:** The Applicant met with City and School District staff in a pre-application conference and discussed the zone change. At the pre-application conference and in subsequent correspondence with City staff, no deficiencies in terms of the adequacy of public facilities (sanitary sewer, storm drainage, water, streets) were identified. This is in part because a change from Clackamas County's FU-10 to the City's R-6 zoning district meets the City's Low Density Residential Comprehensive Plan Map designation applied to the property, and these impacts have been previously evaluated with the adoption of the City's Comprehensive Plan. Based on a variety of factors (demographic trends, the small size of the property, potential school re-opening, etc.) the potential density of the property will not have a negative impact on school district capacity. Please refer to the Public Facilities Memorandum included in the application materials discussing the adequacy of public facilities for further information.

As a part of any future application (including subdivision review), detailed preliminary plans are planned to be submitted for review by the City and Clackamas Fire District #1, as well as the School District. The Applicant plans to sign a Non-Remonstrance Agreement for the purpose of ensuring sanitary sewer, stormwater drainage, water, and/or street improvements are extended in the future that benefit the subject property. This Goal is met.

## Section 12: Transportation

### Goal 12.6: Capacity

Develop and maintain a transportation system that has enough capacity to meet users' needs.

**Response:** A TPR analysis has been included in the attached TIS, prepared by Lancaster Engineering, based upon a scope of work provided by the City's traffic engineering consultant. The TIS includes trip generation estimates for the existing FU-10 zone and the planned R-6 zone, traffic count data, trip distribution and assignments, operational analysis, crash data analysis, and capacity analysis for the 20-year planning horizon consistent with the requirements of the State Transportation Planning Rule (OAR 660-012-060). The TIS concludes that study area intersections operate acceptably through the planning horizon, and that this application will not significantly affect the City's transportation system. No mitigation has been recommended, and the Transportation Planning Rule is therefore satisfied. Please see the TIS included in the application materials for additional information.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

**Response:** As detailed above in the response to Goal 11.1, the Applicant met with City and School District staff in a pre-application conference and discussed the zone change from

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Clackamas County's FU-10 to the City's R-6 zoning designation. At the pre-application conferences and in subsequent correspondence with City staff, no deficiencies in terms of the adequacy of public facilities (sanitary sewer, storm drainage, water, streets) were identified. This is in part because a change from Clackamas County's FU-10 to the City's R-6 zoning district is consistent with the City's Low Density Residential Comprehensive Plan Map designation, and these impacts have been previously evaluated with the adoption of the City's Comprehensive Plan. Based on a variety of factors (demographic trends, the small size of the property, potential school re-opening, etc.) the potential density of the property will not have a negative impact on school district capacity. Please refer to the Public Facilities Memorandum included in the application materials discussing the adequacy of public facilities for further information.

As part of any future application (including subdivision review), detailed preliminary plans are planned to be submitted for review by the City and Clackamas Fire District #1, as well as the School District. The Applicant plans to sign a Non-Remonstrance Agreement for the purpose of ensuring sanitary sewer, stormwater drainage, water, and/or street improvements are extended in the future that benefit the subject property. This Goal is met.

- C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

**Response:** A TPR analysis has been prepared by a registered professional traffic engineer and included in the project's TIS based upon a scope of work provided by the City traffic engineering consultant. The TIS includes trip generation estimates for the existing FU-10 zone and the planned R-6 zone, traffic count data, trip distribution and assignments, operational analysis, crash data analysis, and capacity analysis for the 20-year planning horizon consistent with the requirements of the State Transportation Planning Rule (OAR 660-012-060). The TIS concludes that study area intersections operate acceptably through the planning horizon, and that the annexation and zone change of the subject property will not significantly affect the City's transportation system. No mitigation has been recommended, and the Transportation Planning Rule is therefore satisfied. Please see the TIS included in the application materials for additional information.

- D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

**Response:** The Oregon City Comprehensive Plan is acknowledged by LCDC and contains specific policies and provisions that address zone change applications. These criteria are listed above and as described in this written statement are satisfied by the application. Therefore, this criterion is met.

#### IV. Conclusion

The above listed findings and accompanying documentation demonstrate that the planned annexation and zone change application complies with applicable approval criteria found in the Oregon City Municipal Code, including consistency with relevant provisions of the City's Comprehensive Plan and availability of adequate public facilities, services, and transportation systems. The evidence in the record is substantial and supports approval of the annexation and zone change of the subject property to the City of Oregon City and its R-6 zoning district. The City can rely upon this information in its approval of the application.



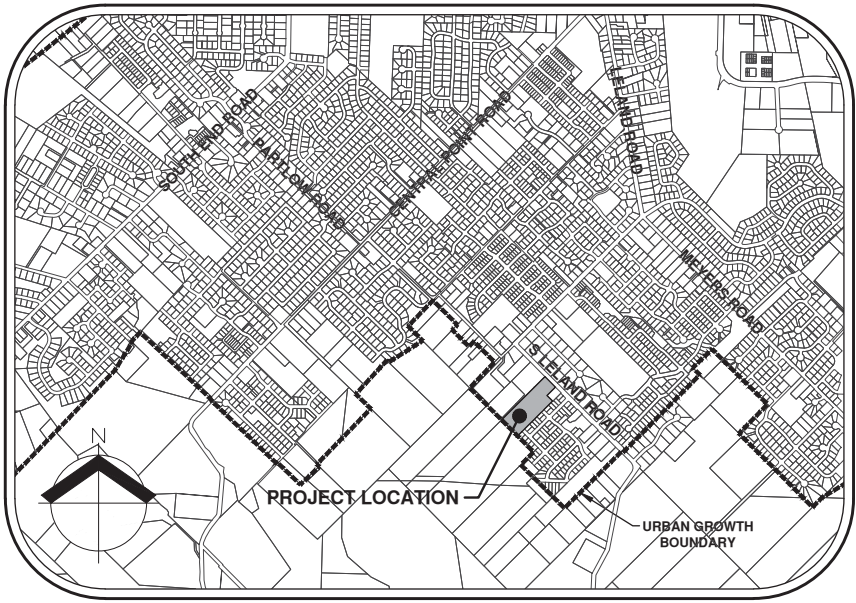
## Exhibit A: Preliminary Plans

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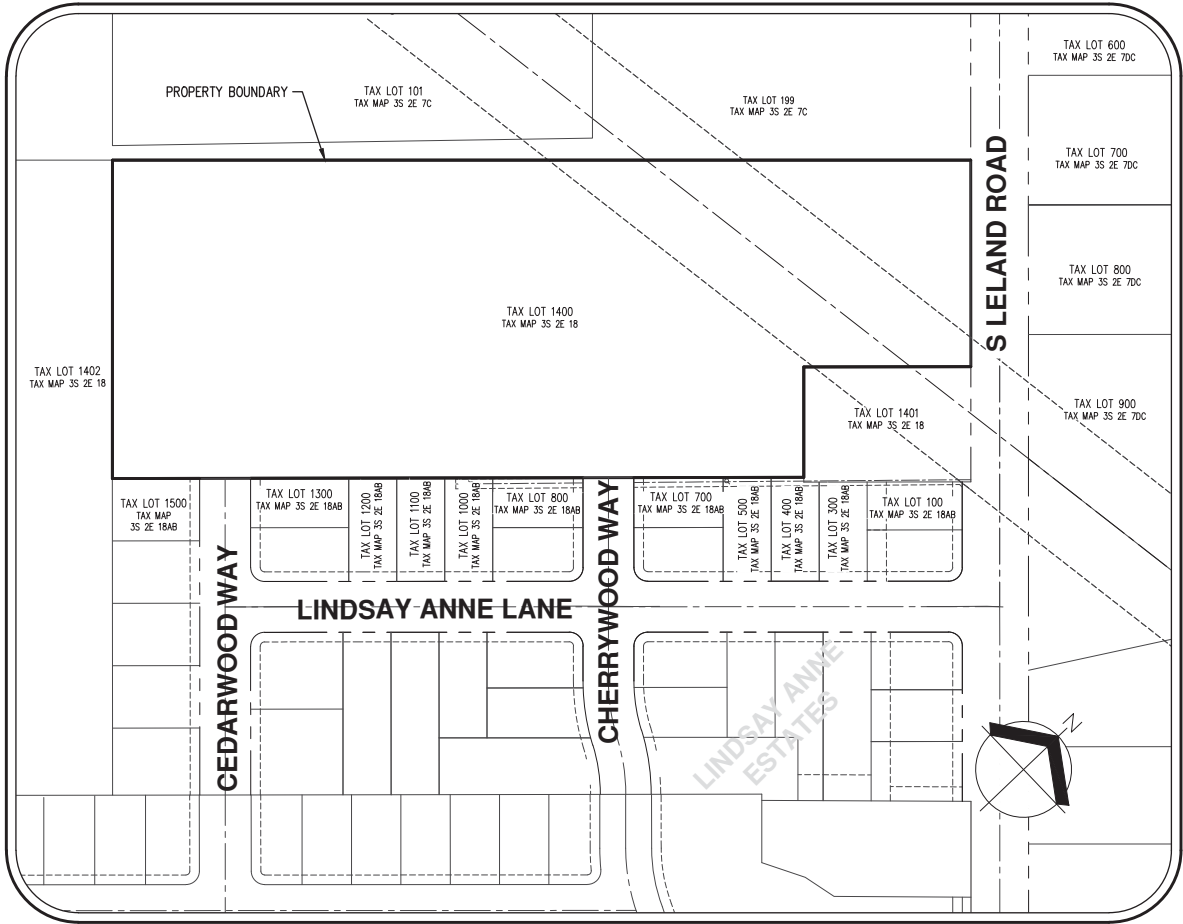


# 19701 S LELAND ROAD

## ANNEXATION / ZONE CHANGE PLANS



**VICINITY MAP**  
NOT TO SCALE



**SITE MAP**  
SCALE: 1"=100'

**OWNERS:**  
BRUCE RAYMOND MILLER AND  
SHELLY ALANE MILLER  
TRUSTEES OF THE BRUCE AND SHELLY  
MILLER REVOCABLE LIVING TRUST  
19701 S LELAND ROAD  
OREGON CITY, OR 97045

**APPLICANT:**  
PDX DEVELOPMENT, INC  
PO BOX 2559  
OREGON CITY, OREGON 97045

**PLANNING/ENGINEERING/  
SURVEYING FIRM:**  
AKS ENGINEERING & FORESTRY, LLC  
CONTACT: MONTY HURLEY  
12965 SW HERMAN ROAD, SUITE 100  
TUALATIN, OR 97062  
PH: 503-563-6151  
FAX: 503-563-6152

**PROPERTY LOCATION:**  
19701 S LELAND ROAD  
OREGON CITY, OREGON 97045

**PROPERTY DESCRIPTION:**  
TAX LOT 1400 CLACKAMAS COUNTY  
ASSESSOR'S MAP NUMBER 3-2E-18  
WILLAMETTE MERIDIAN, CITY OF OREGON  
CITY, CLACKAMAS COUNTY, OREGON.

**EXISTING LAND USE:**  
EXISTING HOME AND OUTBUILDINGS/  
FARM LAND

**PROJECT PURPOSE:**  
ANNEXATION/ZONE CHANGE OF TAX  
LOT 1400

**VERTICAL DATUM:**  
ELEVATIONS ARE BASED ON THE ELEVATION  
OF THE SOUTHWEST INVERT OF THE  
SANITARY SEWER MANHOLE ON JESSIE  
AVENUE PER CITY OF OREGON CITY  
AS-BUILT CONSTRUCTION PLANS. AS-BUILT  
PLANS BY SISUL ENGINEERING, SANITARY  
PLAN AND PROFILE (LINE 'C') SHEET, MAY  
2004. RIM ELEVATION 437.01', SW INVERT  
ELEVATION 419.96'.

- SHEET INDEX**
- COVER SHEET WITH VICINITY AND SITE MAPS
  - EXISTING CONDITIONS PLAN
  - AERIAL PHOTO AND CONCEPTUAL SHADOW PLAT

**AKS**  
AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
P: 503.563.6151  
F: 503.563.6152  
aks-eng.com  
ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

**19701 S LELAND ROAD**  
**OREGON CITY**  
CLACKAMAS COUNTY TAX MAP 3-2E-18  
TAX LOT 1400

**COVER SHEET WITH  
VICINITY AND SITE MAPS**

DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
SCALE: AS NOTED  
DATE: 08/01/2017  
REGISTERED PROFESSIONAL  
PEL 00000000000000000000  
NOT FOR  
CONSTRUCTION  
MONTY B. HURLEY  
RENEWAL DATE: 6/30/19  
REVISIONS

JOB NUMBER  
**5837**  
SHEET  
**1**

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PER UTILITY LOCATE TICKET NUMBERS 17084633, 17084644, 17084717, AND 17094430. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.



**OREGON**  
CLACKAMAS COUNTY TAX MAP 3-2E-18

**OREGON CITY**  
TAX LOT 1400

SIGNED BY: \_\_\_\_\_  
 PRINTED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_ AS NOTED  
 DATE: 08/01/2017

ED 0005

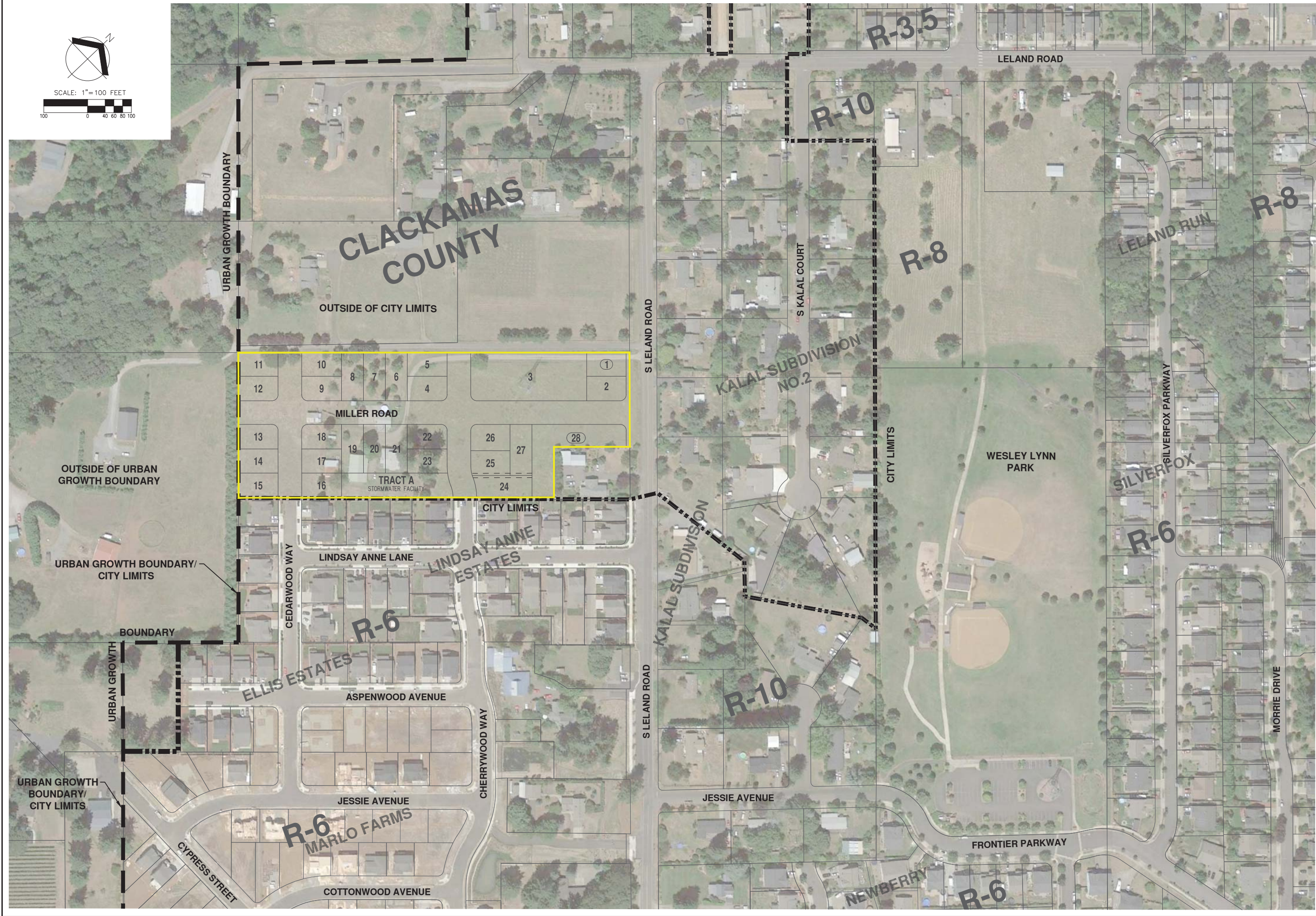
RENEWAL DATE: 6/30/19  
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EET

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AKS DRAWING FILE: 5837 CO40 AERIAL [ANNEX].DWG | LAYOUT: 3



AKS

AKS ENGINEERING & FORESTRY, LLC  
12065 SW HERMAN RD. STE 100  
TUALATIN, OR 97062  
P: 503.563.6151  
F: 503.563.6152  
aks-eng.com

ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

19701 S LELAND ROAD

OREGON CITY

OREGON

CLACKAMAS COUNTY TAX MAP 3-2E-18  
TAX LOT 1400

AERIAL PHOTO AND  
CONCEPTUAL SHADOW  
PLAT

DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
SCALE: AS NOTED  
DATE: 08/10/2017

REGISTERED PROFESSIONAL  
PAUL M. HURLEY  
NOT FOR  
CONSTRUCTION  
GOMOMERY B. HURLEY  
RENEWAL DATE: 6/30/19

REVISIONS

JOB NUMBER  
5837

SHEET  
3



## Exhibit B: City Land Use Application Form and Checklists

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# LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C)
<input type="checkbox"/> Compatibility Review	<input type="checkbox"/> Extension	<input checked="" type="checkbox"/> Annexation
<input type="checkbox"/> Lot Line Adjustment	<input type="checkbox"/> Detailed Development Review	<input type="checkbox"/> Code Interpretation / Similar Use
<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Geotechnical Hazards	<input type="checkbox"/> Concept Development Plan
<input type="checkbox"/> Natural Resource (NROD) Verification	<input type="checkbox"/> Minor Partition (<4 lots)	<input type="checkbox"/> Conditional Use
<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Minor Site Plan & Design Review	<input type="checkbox"/> Comprehensive Plan Amendment (Text/Map)
	<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Detailed Development Plan
	<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Historic Review
	<input type="checkbox"/> Subdivision (4+ lots)	<input type="checkbox"/> Municipal Code Amendment
	<input type="checkbox"/> Minor Variance	<input type="checkbox"/> Variance
	<input type="checkbox"/> Natural Resource (NROD) Review	<input checked="" type="checkbox"/> Zone Change

**File Number(s):** PA 17-07 (Pre-Application Conference)

Proposed Land Use or Activity: Annexation /Zone Change (Clackamas County holdover FU-10 to Oregon City R-6).

Project Name: 19701 S. Leland Road Annexation/Zone Change Number of Lots Proposed (If Applicable): N/A

Physical Address of Site: 19701 S. Leland Road, Oregon City, OR 97045

Clackamas County Map and Tax Lot Number(s): Map: 32E18 Tax Lot: 1400

**Applicant(s):**

Applicant(s) Signature: [Signature]

Applicant(s) Name Printed: PDX Development, Inc.

Date: 7/17/17

Mailing Address: P.O. Box 2559, Oregon City, OR 97045

Phone: Contact Applicant's Consultant Fax: Contact Applicant's Consultant Email: Contact Applicant's Consultant

**Property Owner(s):**

Property Owner(s) Signature: \_\_\_\_\_

Property Owner(s) Name Printed: Bruce Raymond Miller and Shelly Alane Miller (Trustee) Date: \_\_\_\_\_

Mailing Address: 19701 S. Leland Road, Oregon City, OR 97045

Phone: Contact Applicant's Consultant Fax: Contact Applicant's Consultant Email: Contact Applicant's Consultant

**Representative(s):**

Representative(s) Signature: [Signature]

Representative (s) Name Printed: AKS Engineering & Forestry, LLC (Monty Hurley)

Date: July 2017

Mailing Address: 12965 SW Herman Road, Suite 100

Phone: 503-563-6151

Fax: 503-563-6152

Email: monty@aks-eng.com

*All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.*





# LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C)
<input type="checkbox"/> Compatibility Review	<input type="checkbox"/> Extension	<input checked="" type="checkbox"/> Annexation
<input type="checkbox"/> Lot Line Adjustment	<input type="checkbox"/> Detailed Development Review	<input type="checkbox"/> Code Interpretation / Similar Use
<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Geotechnical Hazards	<input type="checkbox"/> Concept Development Plan
<input type="checkbox"/> Natural Resource (NROD) Verification	<input type="checkbox"/> Minor Partition (<4 lots)	<input type="checkbox"/> Conditional Use
<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Minor Site Plan & Design Review	<input type="checkbox"/> Comprehensive Plan Amendment (Text/Map)
	<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Detailed Development Plan
	<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Historic Review
	<input type="checkbox"/> Subdivision (4+ lots)	<input type="checkbox"/> Municipal Code Amendment
	<input type="checkbox"/> Minor Variance	<input type="checkbox"/> Variance
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**File Number(s):** PA 17-07 (Pre-Application Conference)

**Proposed Land Use or Activity:** Annexation /Zone Change (Clackamas County holdover FU-10 to Oregon City R-6).

**Project Name:** 19701 S. Leland Road Annexation/Zone Change **Number of Lots Proposed (If Applicable):** N/A

**Physical Address of Site:** 19701 S. Leland Road, Oregon City, OR 97045

**Clackamas County Map and Tax Lot Number(s):** Map: 32E18 Tax Lot: 1400

### **Applicant(s):**

**Applicant(s) Signature:** \_\_\_\_\_

**Applicant(s) Name Printed:** PDX Development, Inc. **Date:** \_\_\_\_\_

**Mailing Address:** P.O. Box 2559, Oregon City, OR 97045

**Phone:** Contact Applicant's Consultant **Fax:** Contact Applicant's Consultant **Email:** Contact Applicant's Consultant

### **Property Owner(s):**

**Property Owner(s) Signature:** Bruce Raymond Miller (Trustee) *Shelly Alane Miller, Trustee*

**Property Owner(s) Name Printed:** Bruce Raymond Miller and Shelly Alane Miller (Trustee) **Date:** 7/25/17

**Mailing Address:** 19701 S. Leland Road, Oregon City, OR 97045

**Phone:** Contact Applicant's Consultant **Fax:** Contact Applicant's Consultant **Email:** Contact Applicant's Consultant

### **Representative(s):**

**Representative(s) Signature:** Monty B Hurley

**Representative (s) Name Printed:** AKS Engineering & Forestry, LLC (Monty Hurley) **Date:** July 2017

**Mailing Address:** 12965 SW Herman Road, Suite 100

**Phone:** 503-563-6151 **Fax:** 503-563-6152 **Email:** monty@aks-eng.com

*All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.*








# CITY OF OREGON CITY

Community Development Department, 320 Warner-Milne Road  
P.O. Box 3040, Oregon City, OR 97045 (503) 657-0891  
www.ci.oregon-city.or.us

## ANNEXATION APPLICATION SUBMITTAL CHECKLIST

Quoted from OCMC 14.04.050.

Contents of Application. An applicant seeking to annex land to the city shall file with the city the appropriate application form approved by the city manager. The application shall include the following:

1.  Written consent form to the annexation signed by the requisite number of affected property owners, electors or both, provided by ORS 222, if applicable;
2.  A legal description of the territory to be annexed, meeting the relevant requirements of the Metro Code and ORS Ch. 308. If such a description is not submitted, a boundary survey may be required. A lot and block description may be substituted for the metes and bounds description if the area is platted. If the legal description contains any deed or book and page references, legible copies of these shall be submitted with the legal description;
3.  A list of property owners within three hundred feet of the subject property and if applicable, those property owners that will be "islanded" by the annexation proposal, on mailing labels acceptable to the city manager (equal to 30 labels per 8.5-inch by 11-inch sheet);
4.  Two full quarter-section county tax assessor's maps, with the subject property(ies) outlined;
5.  Twenty-five copies of a site plan, drawn to scale (not greater than one inch = fifty feet), indicating:
  - a. The location of existing structures (if any),
  - b. The location of streets, sewer, water, electric and other utilities, on or adjacent to the property to be annexed,
  - c. The location and direction of all water features on and abutting the subject property. Approximate location of areas subject to inundation, stormwater overflow or standing water. Base flood data showing elevations of all property subject to inundation in the event of one hundred year flood shall be shown,
  - d. Natural features, such as rock outcroppings, marshes or wetlands (as delineated by the Division of State Lands) wooded areas, isolated preservable trees (trees with trunks over six inches in diameter--as measured four feet above ground), and significant areas of vegetation,
  - e. General land use plan indicating the types and intensities of the proposed, or potential development;
6.  If applicable, a double-majority worksheet, certification of ownership and voters. Certification of legal description and map, and boundary change data sheet on forms provided by the city.
7.  A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:
  - a. Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities,

# CITY OF OREGON CITY

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Community Development Department, 320 Warner-Milne Road  
P.O. Box 3040, Oregon City, OR 97045 (503) 657-0891  
[www.ci.oregon-city.or.us](http://www.ci.oregon-city.or.us)

b. Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time,


c. Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand,

d. Statement outlining method and source of financing required to provide additional facilities, if any,

e. Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced,

f. Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any,

g. Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;












8.  The application fee for annexations established by resolution of the city commission and any fees required by Metro. In addition to the application fees, the city manager shall require a deposit, which is adequate to cover any and all costs related to the election. (Ord. 99-1030 §5, 1999)





## Comprehensive Plan Amendment / Zone Change Checklist

The following information is required for a complete Zone Change application. Incomplete applications will be rejected.

1.  **A Completed Application Form with Contact Information and All Property Owner Signatures**
2.  **Narrative**  
A complete and detailed narrative description of the proposed development and an explanation addressing all applicable approval criteria. A template is provided by the City at the Pre-Application Conference.
3.  **Pre-Application Conference Summary Sheet**
4.  **Traffic Study or Analysis Letter**
5.  **Neighborhood Association Meeting Documentation**
  - a. A sign-in sheet of meeting attendees
  - b. A summary of issues discussed, and
  - c. A letter from the neighborhood association or citizen involvement committee indicating that a neighborhood meeting was held. If the applicant held a separately noticed meeting, the applicant shall submit a copy of the meeting flyer, a sign in sheet of attendees and a summary of issues discussed.
6.  **Annexation Agreement, if Applicable**
7.  **A Current Preliminary Title Report or Trio for the Subject Property(ies)**
8.  **Mailing Labels for Owners Within 300 Feet of the Subject Site**  
The names and addresses of property owners within 300 feet of the site indicated on the most recent property tax rolls. The Planning Division can produce the mailing labels for a fee.
9.  **Copies**  
Three (3) copies of all information, reports, and drawings (full-sized and 8.5" by 11") pertaining to this application. Additional copies may be required during the review process.
10.  **Electronic Version of All Application Materials**
11.  **All Required Application Fees**
12. N/A **Additional Information or Reports**

## **Exhibit C: Property Ownership Information**

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**Fidelity National Title\***  
Company of Oregon

## **PRELIMINARY REPORT**

In response to the application for a policy of title insurance referenced herein Fidelity National Title Company of Oregon hereby reports that it is prepared to issue, or cause to be issued, as of the specified date, a policy or policies of title insurance describing the land and the estate or interest hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.

The printed Exceptions and Exclusions from the coverage of said policy or policies are set forth in Exhibit One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a/an California corporation.

**Please read the exceptions shown or referred to herein and the Exceptions and Exclusions set forth in Exhibit One of this report carefully. The Exceptions and Exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.**

**It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.**

This preliminary report is for the exclusive use of the parties to the contemplated transaction, and the Company does not have any liability to any third parties nor any liability until the full premium is paid and a policy is issued. Until all necessary documents are placed of record, the Company reserves the right to amend or supplement this preliminary report.

*Countersigned*



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# Fidelity National Title<sup>®</sup>

Company of Oregon

12809 SE 93rd Avenue, Clackamas, OR 97015  
(503)786-0340 FAX (503)786-0424

## PRELIMINARY REPORT

**ESCROW OFFICER:** Melissa McSperitt  
melissa.mcsperitt@fnf.com  
**TITLE OFFICER:** David Boutin

**ORDER NO.:** 45141703211  
**Supplement 2nd - removing #'s 6, 7  
and 9**

**TO:** Fidelity National Title Company of Oregon  
12809 SE 93rd Avenue  
Clackamas, OR 97015

**ESCROW LICENSE NO.:** 900400383

**OWNER/SELLER:** Bruce Raymond Miller Trustee and Shelly Alane Miller Trustee

**BUYER/BORROWER:** PDX Development, Inc., an Oregon Corporation

**PROPERTY ADDRESS:** 19701 S Leland Road, Oregon City, OR 97045

**EFFECTIVE DATE:** March 3, 2017, 08:00 AM

1. THE POLICY AND ENDORSEMENTS TO BE ISSUED AND THE RELATED CHARGES ARE:

	<u>AMOUNT</u>	<u>PREMIUM</u>
ALTA Owner's Policy 2006	\$ 1,000,000.00	\$ 1,365.00
Owner's Standard (Builder's Rate)		

2. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

A Fee

3. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

Bruce Raymond Miller and Shelly Alane Miller, Trustees of the Bruce and Shelly Miller Revocable Living Trust dated the 4th day of February, 1997

4. THE LAND REFERRED TO IN THIS REPORT IS SITUATED IN THE COUNTY OF CLACKAMAS, STATE OF OREGON, AND IS DESCRIBED AS FOLLOWS:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

**EXHIBIT "A"**  
Legal Description

Parcel 1, PARTITION PLAT NO. 1992-78, County of Clackamas and State of Oregon.

**AS OF THE DATE OF THIS REPORT, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN THE POLICY FORM WOULD BE AS FOLLOWS:**

**GENERAL EXCEPTIONS:**

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien or right to a lien for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

**SPECIFIC ITEMS AND EXCEPTIONS**

6. [Intentionally Deleted]
7. [Intentionally Deleted]
8. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:  

In favor of:	Portland General Electric Company, an Oregon Corporation
Purpose:	Electric transmission line
Recording Date:	March 21, 1963
Recording No.:	Book 619, Page 42
Affects:	Reference is hereby made to said document for full particulars
9. [Intentionally Deleted]

10. The search did not disclose any open mortgages or deeds of trust of record, therefore the Company reserves the right to require further evidence to confirm that the property is unencumbered, and further reserves the right to make additional requirements or add additional items or exceptions upon receipt of the requested evidence.
11. Any invalidity or defect in the title of the vestees in the event that the trust referred to herein is invalid or fails to grant sufficient powers to the trustee(s) or in the event there is a lack of compliance with the terms and provisions of the trust instrument.
- If title is to be insured in the trustee(s) of a trust (or if their act is to be insured), this Company will require a copy of said Trust Agreement or a Trust Certification pursuant to ORS Chapter 130.860.
- The Company reserves the right to make additional requirements or add additional items or exceptions after review of the requested documentation.
12. If requested to issue an extended coverage ALTA loan policy, the following matters must be addressed:
- a) The rights of tenants holding under unrecorded leases or tenancies
  - b) Matters disclosed by a statement as to parties in possession and as to any construction, alterations or repairs to the Land within the last 75 days. The Company must be notified in the event that any funds are to be used for construction, alterations or repairs.
  - c) Any facts which would be disclosed by an accurate survey of the Land

**ADDITIONAL REQUIREMENTS/NOTES:**

- A. Property taxes for the fiscal year shown below are paid in full.

Fiscal Year:	2016-2017
Amount:	\$2,413.48
Levy Code:	062-084
Account No.:	00885625
Map No.:	32E18 01400

Prior to close of escrow, please contact the Tax Collector's Office to confirm all amounts owing, including current fiscal year taxes, supplemental taxes, escaped assessments and any delinquencies.

- B. In addition to the standard policy exceptions, the exceptions enumerated above shall appear on the final 2006 ALTA policy unless removed prior to issuance.

- C. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance by the corporation named below.

Name of Corporation: PDX Development, Inc.

- a) A Copy of the corporation By-laws and Articles of Incorporation
- b) An original or certified copy of a resolution authorizing the transaction contemplated herein.
- c) If the Articles and/or By-laws require approval by a "parent" organization, a copy of the Articles and By-laws of the parent.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

- D. Note: There are no matters against the party(ies) shown below which would appear as exceptions to coverage in a title insurance product:

Parties: PDX Development, Inc., an Oregon Corporation

- E. Note: There are NO conveyances affecting said Land recorded within 24 months of the date of this report.

- F. Note: No search has been made or will be made for water, sewer, or storm drainage charges unless the city/service district claims them as liens (i.e., foreclosable) and reflects them on its lien docket at the date of closing. Buyers should check with the appropriate city bureau or water/service district and obtain a billing cutoff. Such charges must be adjusted outside of escrow.

- G. THE FOLLOWING NOTICE IS REQUIRED BY STATE LAW: YOU WILL BE REVIEWING, APPROVING AND SIGNING IMPORTANT DOCUMENTS AT CLOSING. LEGAL CONSEQUENCES FOLLOW FROM THE SELECTION AND USE OF THESE DOCUMENTS. YOU MAY CONSULT AN ATTORNEY ABOUT THESE DOCUMENTS. YOU SHOULD CONSULT AN ATTORNEY IF YOU HAVE QUESTIONS OR CONCERNS ABOUT THE TRANSACTION OR ABOUT THE DOCUMENTS. IF YOU WISH TO REVIEW TRANSACTION DOCUMENTS THAT YOU HAVE NOT SEEN, PLEASE CONTACT THE ESCROW AGENT.

- H. Recording Charge (Per Document) is the following:

County	First Page	Each Additional Page
Multnomah	\$42.00	\$5.00
Washington	\$41.00	\$5.00
Clackamas	\$53.00	\$5.00

Note: When possible the company will record electronically. An additional charge of \$5.00 applies to each document that is recorded electronically.



- I. Note: Effective January 1, 2008, Oregon law (ORS 314.258) mandates withholding of Oregon income taxes from sellers who do not continue to be Oregon residents or qualify for an exemption. Please contact your Escrow Closer for further information.
  
- J. Note: This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances or acreage shown thereon.

## EXHIBIT ONE

### 2006 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (06-17-06) EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

- (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
  - the occupancy, use, or enjoyment of the Land;
  - the character, dimensions or location of any improvement erected on the land;
  - the subdivision of land; or
  - environmental protection;or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
- Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- Defects, liens, encumbrances, adverse claims, or other matters
  - created, suffered, assumed or agreed to by the Insured Claimant;
  - not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

- resulting in no loss or damage to the Insured Claimant;
  - attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
  - resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
- Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with the applicable doing-business laws of the state where the Land is situated.
  - Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
  - Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
    - a fraudulent conveyance or fraudulent transfer, or
    - a preferential transfer for any reason not stated in the Covered Risk 13(b) of this policy.
  - Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

### SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

- Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
- Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
- Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
- Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

### 2006 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (06-17-06) EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

- (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
  - the occupancy, use, or enjoyment of the Land;
  - the character, dimensions or location of any improvement erected on the land;
  - the subdivision of land; or
  - environmental protection;or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
- Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- Defects, liens, encumbrances, adverse claims, or other matters
  - created, suffered, assumed or agreed to by the Insured Claimant;
  - not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

- resulting in no loss or damage to the Insured Claimant;
  - attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
  - resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
- Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
    - a fraudulent conveyance or fraudulent transfer, or
    - a preferential transfer for any reason not stated in the Covered Risk 9 of this policy.
  - Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

### SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

- Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
- Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
- Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
- Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

**FIDELITY NATIONAL FINANCIAL  
PRIVACY NOTICE**

**Effective: May 1, 2015; Last Updated: March 1, 2017**

At Fidelity National Financial, Inc., we respect and believe it is important to protect the privacy of consumers and our customers. This Privacy Notice explains how we collect, use, and protect any information that we collect from you, when and to whom we disclose such information, and the choices you have about the use of that information. A summary of the Privacy Notice is below, and we encourage you to review the entirety of the Privacy Notice following this summary. You can opt-out of certain disclosures by following our opt-out procedure set forth at the end of this Privacy Notice.

<p><b><u>Types of Information Collected.</u></b> You may provide us with certain personal information about you, like your contact information, address demographic information, social security number (SSN), driver's license, passport, other government ID numbers and/or financial information. We may also receive browsing information from your Internet browser, computer and/or mobile device if you visit or use our websites or applications.</p>	<p><b><u>How Information is Collected.</u></b> We may collect personal information from you via applications, forms, and correspondence we receive from you and others related to our transactions with you. When you visit our websites from your computer or mobile device, we automatically collect and store certain information available to us through your Internet browser or computer equipment to optimize your website experience.</p>
<p><b><u>Use of Collected Information.</u></b> We request and use your personal information to provide products and services to you, to improve our products and services, and to communicate with you about these products and services. We may also share your contact information with our affiliates for marketing purposes.</p>	<p><b><u>When Information Is Disclosed.</u></b> We may disclose your information to our affiliates and/or nonaffiliated parties providing services for you or us, to law enforcement agencies or governmental authorities, as required by law, and to parties whose interest in title must be determined.</p>
<p><b><u>Choices With Your Information.</u></b> Your decision to submit information to us is entirely up to you. You can opt-out of certain disclosure or use of your information or choose to not provide any personal information to us.</p>	<p><b><u>Information From Children.</u></b> We do not knowingly collect information from children who are under the age of 13, and our website is not intended to attract children.</p>
<p><b><u>Privacy Outside the Website.</u></b> We are not responsible for the privacy practices of third parties, even if our website links to those parties' websites.</p>	<p><b><u>International Users.</u></b> By providing us with your information, you consent to its transfer, processing and storage outside of your country of residence, as well as the fact that we will handle such information consistent with this Privacy Notice.</p>
<p><b><u>The California Online Privacy Protection Act.</u></b> Some FNF companies provide services to mortgage loan servicers and, in some cases, their websites collect information on behalf of mortgage loan servicers. The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through those websites.</p>	
<p><b><u>Your Consent To This Privacy Notice.</u></b> By submitting information to us or by using our website, you are accepting and agreeing to the terms of this Privacy Notice.</p>	<p><b><u>Access and Correction; Contact Us.</u></b> If you desire to contact us regarding this notice or your information, please contact us at <a href="mailto:privacy@fnf.com">privacy@fnf.com</a> or as directed at the end of this Privacy Notice.</p>

**FIDELITY NATIONAL FINANCIAL  
PRIVACY NOTICE**

**Effective: May 1, 2015; Last Updated: March 1, 2017**

Fidelity National Financial, Inc. and its majority-owned subsidiary companies providing title insurance, real estate- and loan-related services (collectively, "FNF", "our" or "we") respect and are committed to protecting your privacy. We will take reasonable steps to ensure that your Personal Information and Browsing Information will only be used in compliance with this Privacy Notice and applicable laws. This Privacy Notice is only in effect for Personal Information and Browsing Information collected and/or owned by or on behalf of FNF, including Personal Information and Browsing Information collected through any FNF website, online service or application (collectively, the "Website").

**Types of Information Collected**

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- social security number (SSN), driver's license, passport, and other government ID numbers;
- financial account information; and
- other personal information needed from you to provide title insurance, real estate- and loan-related services to you.

Browsing Information. FNF may collect the following categories of Browsing Information:

- Internet Protocol (or IP) address or device ID/UDID, protocol and sequence information;
- browser language and type;
- domain name system requests;
- browsing history, such as time spent at a domain, time and date of your visit and number of clicks;
- http headers, application client and server banners; and
- operating system and fingerprinting data.

**How Information is Collected**

In the course of our business, we may collect *Personal Information* about you from the following sources:

- applications or other forms we receive from you or your authorized representative;
- the correspondence you and others send to us;
- information we receive through the Website;
- information about your transactions with, or services performed by, us, our affiliates or nonaffiliated third parties; and
- information from consumer or other reporting agencies and public records maintained by governmental entities that we obtain directly from those entities, our affiliates or others.

If you visit or use our Website, we may collect *Browsing Information* from you as follows:

- Browser Log Files. Our servers automatically log each visitor to the Website and collect and record certain browsing information about each visitor. The Browsing Information includes generic information and reveals nothing personal about the user.
- Cookies. When you visit our Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. When you visit a website again, the cookie allows the website to recognize your computer. Cookies may store user preferences and other information. You can choose whether or not to accept cookies by changing your Internet browser settings, which may impair or limit some functionality of the Website.

**Use of Collected Information**

Information collected by FNF is used for three main purposes:

- To provide products and services to you or any affiliate or third party who is obtaining services on your behalf or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you and to inform you about our, our affiliates' and third parties' products and services, jointly or independently.

### **When Information Is Disclosed**

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) and Browsing Information to various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Please see the section "Choices With Your Personal Information" to learn how to limit the discretionary disclosure of your Personal Information and Browsing Information.

Disclosures of your Personal Information may be made to the following categories of affiliates and nonaffiliated third parties:

- to third parties to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to our affiliate financial service providers for their use to market their products or services to you;
- to nonaffiliated third party service providers who provide or perform services on our behalf and use the disclosed information only in connection with such services;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to market financial products or services to you;
- to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoena or court order;
- to lenders, lien holders, judgment creditors, or other parties claiming an interest in title whose claim or interest must be determined, settled, paid, or released prior to closing; and
- other third parties for whom you have given us written authorization to disclose your Personal Information.

We may disclose Personal Information and/or Browsing Information when required by law or in the good-faith belief that such disclosure is necessary to:

- comply with a legal process or applicable laws;
- enforce this Privacy Notice;
- investigate or respond to claims that any material, document, image, graphic, logo, design, audio, video or any other information provided by you violates the rights of a third party; or
- protect the rights, property or personal safety of FNF, its users or the public.

We maintain reasonable safeguards to keep your Personal Information secure. When we provide Personal Information to our affiliates or third party service providers as discussed in this Privacy Notice, we expect that these parties process such information in compliance with our Privacy Notice or in a manner that is in compliance with applicable privacy laws. The use of your information by a business partner may be subject to that party's own Privacy Notice. Unless permitted by law, we do not disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of our bankruptcy, reorganization, insolvency, receivership or an assignment for the benefit of creditors. You expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings. We cannot and will not be responsible for any breach of security by a third party or for any actions of any third party that receives any of the information that is disclosed to us.

### **Choices With Your Information**

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you. The uses of your Personal Information and/or Browsing Information that, by law, you cannot limit, include:

- for our everyday business purposes – to process your transactions, maintain your account(s), to respond to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders, or report to credit bureaus;
- for our own marketing purposes;
- for joint marketing with financial companies; and
- for our affiliates' everyday business purposes – information about your transactions and experiences.

You may choose to prevent FNF from disclosing or using your Personal Information and/or Browsing Information under the following circumstances ("opt-out"):

- for our affiliates' everyday business purposes – information about your creditworthiness; and
- for our affiliates to market to you.

To the extent permitted above, you may opt-out of disclosure or use of your Personal Information and Browsing Information by notifying us by one of the methods at the end of this Privacy Notice. We do not share your personal information with non-affiliates for their direct marketing purposes.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law. Currently, our policy is that we do not recognize "do not track" requests from Internet browsers and similar devices.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by Vermont law, such as to process your transactions or to maintain your account. In addition, we will not share information about your creditworthiness with our affiliates except with your authorization. For joint marketing in Vermont, we will only disclose your name, contact information and information about your transactions.

#### **Information From Children**

The Website is meant for adults and is not intended or designed to attract children under the age of thirteen (13). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian. By using the Website, you affirm that you are over the age of 13 and will abide by the terms of this Privacy Notice.

#### **Privacy Outside the Website**

The Website may contain links to other websites. FNF is not and cannot be responsible for the privacy practices or the content of any of those other websites.

#### **International Users**

FNF's headquarters is located within the United States. If you reside outside the United States or are a citizen of the European Union, please note that we may transfer your Personal Information and/or Browsing Information outside of your country of residence or the European Union for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection and transfer of such information in accordance with this Privacy Notice.

#### **The California Online Privacy Protection Act**

For some FNF websites, such as the Customer CareNet ("CCN"), FNF is acting as a third party service provider to a mortgage loan servicer. In those instances, we may collect certain information on behalf of that mortgage loan servicer via the website. The information which we may collect on behalf of the mortgage loan servicer is as follows:

- first and last name;
- property address;
- user name and password;
- loan number;
- social security number - masked upon entry;
- email address;
- three security questions and answers; and
- IP address.

The information you submit through the website is then transferred to your mortgage loan servicer by way of CCN.

**The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through this website. For example, if you believe that your payment or user information is incorrect, you must contact your mortgage loan servicer.**

CCN does not share consumer information with third parties, other than (1) those with which the mortgage loan servicer has contracted to interface with the CCN application, or (2) law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders. All sections of this Privacy Notice apply to your interaction with CCN, except for the sections titled "Choices with Your Information" and "Access and Correction." If you have questions regarding the choices you have with regard to your personal information or how to access or correct your personal information, you should contact your mortgage loan servicer.

**Your Consent To This Privacy Notice**

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information by us in compliance with this Privacy Notice. Amendments to the Privacy Notice will be posted on the Website. Each time you provide information to us, or we receive information about you, following any amendment of this Privacy Notice will signify your assent to and acceptance of its revised terms for all previously collected information and information collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

**Accessing and Correcting Information; Contact Us**

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing with our affiliates for their marketing purposes, please send your requests to [privacy@fnf.com](mailto:privacy@fnf.com) or by mail or phone to:

Fidelity National Financial, Inc.  
601 Riverside Avenue  
Jacksonville, Florida 32204  
Attn: Chief Privacy Officer  
(888) 934-3354

## **Exhibit D: Certified Annexation Petition**

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**CERTIFICATION OF PROPERTY OWNERSHIP OF**

**100% OF LAND AREA**

**(City 100% Ownership Method)**

I hereby certify that the attached petition for a proposed boundary change involving the territory described in the petition contains the names of the owners\* of 100% of the land area within the annexation area described in the petition, as shown on the last available complete assessment roll.



NAME Mary Neigel  
TITLE GIS Cartographer II  
DEPARTMENT Assessment & Tax  
COUNTY OF Clackamas  
DATE 07.26.17

- \* "Owner" means the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If there is a multiple ownership in a parcel of land each consenting owner shall be counted as a fraction to the same extent as the interest of the owner in the land bears in relation to the interest of the other owners and the same fraction shall be applied to the parcel's land mass and assessed value for purposes of the consent petition. If a corporation owns land in territory proposed to be annexed, the corporation shall be considered the individual owner of that land.



## **Exhibit E: Certified Legal Description and Map**

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**CERTIFICATION OF LEGAL DESCRIPTION AND MAP**

I hereby certify that the description of the property included within the attached petition (located on Assessor's Map 3 2E18) has been checked by me and it is a true and exact description of the property under consideration, and the description corresponds to the attached map indicating the property under consideration.



NAME Mary Neigel  
TITLE GIS Cartographer II  
DEPARTMENT Assessment & Tax  
COUNTY OF Clackamas  
DATE 08.01.2017





AKS ENGINEERING & FORESTRY, LLC  
12965 SW Herman Road, Suite 100, Tualatin, OR 97062  
P: (503) 563-6151 F: (503) 563-6152

AKS Job #5837

OFFICES IN: TUALATIN, OR - VANCOUVER, WA - SALEM-KEIZER, OR

## EXHIBIT A

### Annexation Description

Parcel 1 of Partition Plat 1992-078, Clackamas County Plat Records, and a portion of right-of-way, located in the Southeast One-Quarter and Southwest One-Quarter of Section 7, Township 3 South, Range 2 East, Willamette Meridian, City of Oregon City, Clackamas County, Oregon, and being more particularly described as follows:

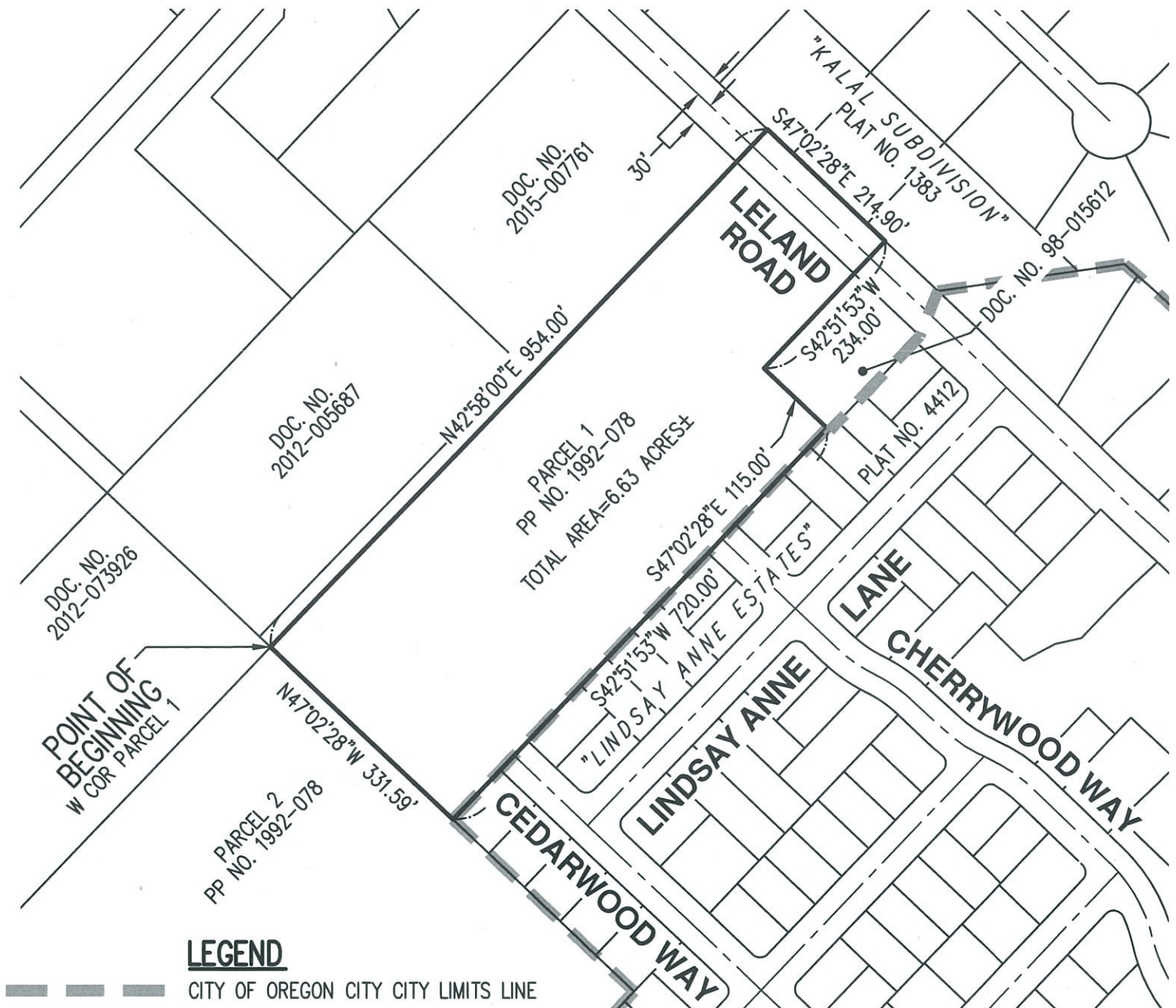
Beginning at the westerly corner of said Parcel 1; thence along the northwesterly line of said Parcel 1 and the northeasterly extension thereof, North 42°58'00" East 954.00 feet to the northeasterly right-of-way line of Leland Road (30.00 feet from centerline); thence along said northeasterly right-of-way line, South 47°02'28" East 214.90 feet to the northeasterly extension of the northwesterly line of Document Number 98-015612; thence leaving said northeasterly right-of-way line along said northeasterly extension and the northwesterly line of said deed, South 42°51'53" West 234.00 feet to the southwesterly line of said deed; thence along said southwesterly line, South 47°02'28" East 115.00 feet to the southeasterly line of said Parcel 1 and the City of Oregon City city limits line; thence along said southeasterly line and said city limits line, South 42°51'53" West 720.00 feet to the southwesterly line of said Parcel 1; thence leaving said city limits line along said southwesterly line, North 47°02'28" West 331.59 feet to the Point of Beginning.

The above tract of land contains 6.63 acres, more or less.



# EXHIBIT B

PARCEL 1 OF PARTITION PLAT 1992-078, AND A PORTION OF RIGHT-OF-WAY,  
LOCATED IN THE SOUTHEAST 1/4 AND SOUTHWEST 1/4 OF  
SECTION 7, TOWNSHIP 3 SOUTH, RANGE 2 EAST, WILLAMETTE MERIDIAN,  
CITY OF OREGON CITY, CLACKAMAS COUNTY, OREGON



08-01-17

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JANUARY 11, 2005  
ROBERT D. RETTIG  
60124LS

RENEWS: 12/31/18

## PREPARED FOR

PDX DEVELOPMENT, INC.  
P. O. BOX 2559  
OREGON CITY, OR 97045

## MAP OF ANNEXATION

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062

P: 503.563.6151 F: 503.563.6152 aks-eng.com

**AKS**

EXHIBIT  
**B**

DRWN: WCB

CHKD: RDR

AKS JOB:

5837

## **Exhibit F: Boundary Change Information Sheet**

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## BOUNDARY CHANGE INFORMATION SHEET

### I. EXISTING CONDITIONS IN AREA TO BE ANNEXED

- A. General location 19701 S Leland Road
- B. Land Area: Acres ±6.33 acres (without R-O-W) or Square Miles                       
±6.63 acres (with R-O-W)
- C. General description of territory. (Include topographic features such as slopes, vegetation, drainage basins, floodplain areas, which are pertinent to this proposal).  
Generally flat property with existing single-family residence and associated outbuildings. Vegetation consists  
of pasture grasses and a number of trees used as landscaping.
- D. Describe land uses on surrounding parcels. Use tax lots as reference points.
- North: Abutting properties to the northwest are underdeveloped with a single-family residence,  
outbuilding, and pasture land located within Clackamas County's (holdover) Future Urban 10-Acre (FU-10) zone.
- East: Properties to the northeast of the subject property are part of a single-family residential subdivision  
within Clackamas County's (holdover) FU-10 zone.
- South: Abutting properties to the southeast were created as part of the Lindsay Anne Estates  
Subdivision and are located in the City of Oregon City's R-6 zone.
- West: Abutting property to the southwest is occupied by single-family residences and outbuildings,  
and are located outside the Urban Growth Boundary.
- E. Existing Land Use:
- Number of single-family units 1 Number of multi-family units 0
- Number commercial structures 0 Number industrial structures 0
- Public facilities or other uses N/A
- What is the current use of the land proposed to be annexed: Single-family residential.
- F. Total current year Assessed Valuation \$ 162,140
- G. Total existing population N/A



## II. REASON FOR BOUNDARY CHANGE (See attached written narrative)

- ✓ A. The City Code (Section 6) and the Metro Code (3.09.050 (d) & (e)) spell out criteria for consideration (see copies attached). Please provide a narrative which addresses these criteria. With regard to the City criteria, please provide a narrative statement explaining the conditions surrounding the proposal and addressing the factors in Section 6, as relevant, including:

- ✓ 1. Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;
- ✓ 2. Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;
- ✓ 3. Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;
- ✓ 4. Statement outlining method and source of financing required to provide additional facilities, if any;
- ✓ 5. Statement of overall development concept and methods by which physical and related social environment of the site, surrounding area and community will be enhanced;
- ✓ 6. Statement of potential physical, aesthetic and related social effects of the proposed or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;
- ✓ 7. Statement indicating the type and nature of any Comprehensive Plan text or map amendments or Zoning text or map amendments that may be required to complete the proposed development.

- ✓ B. Please submit 25 copies of a site plan, drawn to scale (not greater than 1" = 50') indicating:

- ✓ 1. The location of existing structures (if any);
- ✓ 2. The location of streets, sewer, water, electric and other utilities, on or adjacent to the property to be annexed.
- ✓ 3. The location and direction of all water features on and abutting the subject property. Approximate location of areas subject to inundation, stormwater overflow or standing water. Base flooding data showing elevations of all property subject to inundation in the event of one-hundred year flood shall be shown;
- ✓ 4. Natural features, such as rock outcroppings, marshes or wetlands (as delineated by the Division of State Lands) wooded areas, isolated preservable trees (trees with trunks over 6" in diameter - - as measured 4 feet above the ground) and significant areas of vegetation.
- ✓ 5. General land use plan indicating the types and intensities of the proposed or potential development;

### III. LAND USE AND PLANNING

- A. What is the applicable County Planning Designation? Future Urban  
What City Planning Designation is being sought? LR - Low Density Residential
- B. What is the zoning on the territory to be served?  
Clackamas County Future Urban 10-Acre (FU-10)  
What zoning designation is being sought? City of Oregon City R-6 Single-Family Dwelling District
- C. Is the subject territory to be developed at this time? No (A future application would need to be submitted)
- D. Generally describe the anticipated development (building types, facilities, number of units).  
Although development is not included in this annexation application, single-family detached homes are  
consistent with the LR (Low Density Residential) and the R-6 zoning designation, and anticipated.

- E. Can the proposed development be accomplished under current county zoning?  
☐ Yes ☒ No (Development not included with this application)

If No,---has a zone change been sought from the county either formally or informally.

- ☐ Yes ☒ No (City of Oregon City zone change application included)

Please describe outcome of zone change request if answer to previous questions was Yes. Zone change application submitting concurrently with annexation application.

- F. Is the proposed development compatible with the city's comprehensive land use plan for the area? (Development not included with this application. Requested zone change to City of Oregon City R-6 zoning designation is compatible with City's Comprehensive Plan designation of Low Density Residential (LR))  
☒ Yes ☐ No ☐ City has no Plan for the area.

Has the proposed development been discussed either formally or informally with any of the following? (Please indicate)

- |   |  |
|---|--|
| <input type="checkbox"/> City Planning Commission | <input checked="" type="checkbox"/> City Planning Staff      |
| <input type="checkbox"/> City Council             | <input type="checkbox"/> City Manager                        |
|   | <input checked="" type="checkbox"/> Neighborhood Association |

Please describe the reaction to the proposed development from the persons or agencies indicated above.

Positive and supportive.

- G. Please indicate all permits and/or approvals from a City, County, or Regional Government which will be needed for the proposed development. If already granted, please indicate date of approval and identifying number:

APPROVAL	PROJECT FILE #	DATE OF APPROVAL	FUTURE REQUIREMENT
Metro UGB Amendment			N/A
City or County Plan Amendment			N/A
Pre-Application Hearing (City or County)	PA 17-07	05/10/16 03/08/17	
Preliminary Subdivision Approval			✓
Final Plat Approval			✓
Land Partition			N/A
Conditional Use			N/A
Variance			N/A
Sub-Surface Sewage Disposal			N/A
Building Permit			✓

Please submit copies of proceedings relating to any of the above permits or approvals which are pertinent to the annexation.

- H. Does the proposed development comply with applicable regional, county or city comprehensive plans? Please describe.

Future residential development. Annexation and zone change are consistent with the applicable County and

City Comprehensive Plans. Both recommend low density residential use of the property.

- I. If a city and/or county-sanctioned citizens' group exists in the area of the annexation, please list its name and address of a contact person.

Hillendale Neighborhood Association - Roy Harris - royandanna@centurylink.net

Tower-Vista Neighborhood Association - Vern Johnson - verndonnajohnson@yahoo.com

#### IV. SERVICES AND UTILITIES

- A. Please indicate the following:

1. Location and size of nearest water line which can serve the subject area.

The subject property is currently within and served by the Clackamas River Water (CRW) District's 6-inch water main located in S Leland Road. A separate 12-inch City water main is also located in S Leland Road. Additional City water mains are located in abutting Cedarwood Way and Cherrywood Way to the southeast.

As part of a future land use application, the CRW water main will be abandon and extension and new connections to the City's water main would be established.

2. Location and size of nearest sewer line which can serve the subject area.

The existing residence located on the subject property is served by private septic system. Existing 8-inch sanitary sewer mains are located in the abutting Cedarwood Way and Cherrywood Way rights-of-way to the southeast. Additionally an existing 8-inch sanitary sewer main is also located in the S Leland Road right-of-way, which will be required to be extended with future land use applications.

3. Proximity of other facilities (storm drains, fire engine companies, etc.) which can serve the subject area An existing public stormwater system exists directly to the southeast within the abutting Cedarwood Way and Cherrywood Way and S Leland rights-of-way. The closest park is Wesley Lynn Park, approximately ±540 feet to the northeast. The property is within the Oregon City School District, and the property is served by the Clackamas Fire District No. 1. and Clackamas County Sheriff's Office. Future development of this property would continue to use these same services, except that the property will receive service from the City of Oregon City Police Department.

4. The time at which services can be reasonably provided by the city or district. Services are able to be extended to serve the future land use of the property. Existing services will continue to serve the property until such time as the property is subject to additional land use actions.
5. The estimated cost of extending such facilities and/or services and what is to be the method of financing. (Attach any supporting documents.) The estimated cost of extending services will be determined once additional land use applications are submitted for the subject property.

6. Availability of the desired service from any other unit of local government. (Please indicate the government.)

N/A

- B. If the territory described in the proposal is presently included within the boundaries of or being served extraterritorially or contractually by, any of the following types of governmental units, please so indicate by stating the name or names of the governmental units involved.

City <u>N/A</u>	Rural Fire Dist <u>Clackamas Fire District No.1</u>
<u>Clackamas County</u> County Service Dist. <u>Sheriff's Office</u>	Sanitary District <u>N/A</u>
Hwy. Lighting Dist. <u>N/A</u>	Water District <u>Clackamas River Water</u>
Grade School Dist. <u>Oregon City School District</u>	Drainage District <u>N/A</u>
High School Dist. <u>Oregon City School District</u>	Diking District <u>N/A</u>
Library Dist. <u>N/A</u>	Park & Rec. Dist. <u>N/A</u>
Special Road Dist. <u>N/A</u>	Other Dist. Supplying Water Service <u>N/A</u>

- C. If the territory is proposed to be served by any of the above units or any other units of government please note. Oregon City Police Department, Oregon City School District, Clackamas Fire District No.1, Tri-City Service District, City of Oregon City Water Division
- D. If any of the above units are presently servicing the territory (for instance, are

residents in the territory hooked up to a public sewer or water system), please so describe.

The subject property currently benefits from from Clackamas River Water, Clackamas Fire District No.1,

Clackamas County Sheriff's Office, and the Oregon City School District.

APPLICANT'S NAME PDX Development, Inc.

MAILING ADDRESS P.O. Box 2559

Oregon City, OR 97045

TELEPHONE NUMBER Applicant's Consultant: (503) 563-6151 (Work)

(Res.)

REPRESENTING Applicant's Consultant: AKS Engineering & Forestry, LLC (Monty Hurley)

DATE: August, 2017

## Exhibit G: Traffic Impact Study

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# Lindsay Anne Estates Too Annexation and Zone Change

Traffic Impact Study  
Oregon City, Oregon

**Date:**

August 3, 2017

**Prepared for:**

PDX Development, Inc.

**Prepared by:**

Todd Mobley, PE

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RENEWS: 12/31/2018







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## ***Executive Summary***

1. A 6.32-acre property south and west of S Leland Road between S McCord Road and S Jessie Avenue is proposed for annexation into the City of Oregon City. Upon annexation, the property will be rezoned from FU-10 to R-6 zoning. A subdivision is proposed under the R-6 zoning that would accommodate 28 lots for construction of single-family homes.
2. Based on trip generation for the proposed development, the new subdivision could result in up to 20 additional trips during the morning peak hour, with 5 entering and 15 exiting the site. During the evening peak hour, 27 additional site trips are projected, with 17 entering and 10 exiting the site.
3. The operational analysis shows that the study area intersections are projected to meet the relevant operational standards of Oregon City under year 2019 (build out) and 2037 (planning horizon) traffic conditions either with or without the addition of site trips from the proposed subdivision.
4. Since all study area intersections will operate acceptably through the planning horizon either with or without the proposed rezone and development, the Transportation Planning Rule is satisfied, and the proposed zone change does not significantly affect the transportation system.



## ***Introduction***

A 6.32-acre property south and west of S Leland Road between S McCord Road and S Jessie Avenue is proposed for annexation into the City of Oregon City. Upon annexation, the property will be rezoned to R-6 zoning for the purpose of developing a subdivision, in conformance with the city's Comprehensive Plan.

The purpose of this study is to assess the potential impacts of the proposed annexation and address the transportation analysis requirements of Oregon City, the Oregon Department of Transportation (ODOT), and Oregon's Transportation Planning Rule. The report will identify the potential net increase in traffic and examine the transportation impacts of the added trips at the planning horizon. The report will include level of service calculations and volume-to-capacity calculations for existing conditions as well as year 2037 traffic conditions both with and without the proposed annexation. The analysis will also include a detailed examination of crash history at the study intersections.

This report addresses the impacts of the proposed project on the traffic and transportation conditions in the vicinity of the project site. The report includes safety and capacity analyses at three intersections:

- Leland Road at S McCord Road
- Leland Road at Lindsay Anne Lane
- Leland Road at the proposed site access

The purpose of the study is to determine whether the transportation system in the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses, and to determine any mitigations that might be necessary to do so.

Detailed information on traffic counts, crash data, and level of service calculations are included in the appendix to this report.

## ***Location Description***

The proposed development is in the southern part of Oregon City on the southwest side of Leland Road. Access to Leland Road will be available via a planned new roadway to be named Miller Road that intersects Leland Road approximately 330 feet northwest of its intersection with Lindsay Anne Lane. Further access will be provided by extensions to Cherrywood Way and Cedarwood Way. The configuration of these new streets is shown in the site plan in the appendix. In addition, lots 1 & 2 on the proposed site plan are proposed to take access directly to Leland Road. Based on preliminary conversations with the City of Oregon City, it is understood that these two driveways may need to share a common curb cut and be coordinated with Clackamas County. The final configuration of these driveways will be examined in further detail at the time of subdivision plan review.

Leland Road is classified as a Minor Arterial in the Oregon City Transportation System Plan. It is a two-lane facility with a posted speed limit of 35 mph. There are no bike lanes or sidewalks along Leland Road in the



vicinity of the site, although sidewalks and bike lanes exist on the more developed parts of Leland Road north of the project site.

A vicinity map showing the project site and the study area intersections is shown in Figure 1 on page 4.

### *Study Intersections*

McCord Road, which is classified as a collector, intersects Leland Road northwest of the subject site. The intersection is three-legged, and controlled with a stop sign along McCord Road, which approaches the intersection from the southwest. Leland Road bends 90 degrees at the intersection, and so approaches the intersection from the southeast and northeast. There are no sidewalks or marked crosswalks, and each approach has one lane for all movements.

Lindsay Anne Lane, which is classified as a Local Road, creates a three-legged intersection with Leland Road. The northeast bound approach of Lindsay Anne Lane is stop controlled at the through road of Leland Road running southeast. There is an unmarked intersection available at the intersection across the Lindsay Anne Lane approach. Along this section of Leland Road there is on-street parking available on the southwest side of the road.

The proposed primary site access at Leland Road will occur along the new Miller Road. Miller Road will be classified as a Local Road and will create a three-legged intersection with Leland Road. The northeast bound approach of Miller Road will be stop controlled, while Leland Road will be a through movement in both directions. Each leg of the intersection will have one lane for all turning movements. Sidewalks and unmarked pedestrian crossings will be available along the length of Miller Road in the site vicinity.

### *Existing Traffic Volumes*

To determine existing traffic volumes at the study intersections, traffic counts were conducted on Tuesday, April 18, 2017. Traffic was counted from 7:00 to 9:00 AM to obtain data for the morning peak hour and from 4:00 to 6:00 PM to obtain data for the evening peak hour. These existing volumes are shown in Figure 2 on page 5. The raw data is provided in the technical appendix.

### *Transit*

There are no public transit facilities in the site vicinity. The nearest bus facilities run along Warner Milne Road, Molalla Avenue, and Highway 99E.

# LEGEND

STUDY INTERSECTION  
(EXISTING)

STUDY INTERSECTION  
(PROPOSED)

STOP SIGN

TRAFFIC SIGNAL

BIKE LANE

PROJECT SITE

ARTERIAL ROADWAY

COLLECTOR ROADWAY

LOCAL ROADWAY

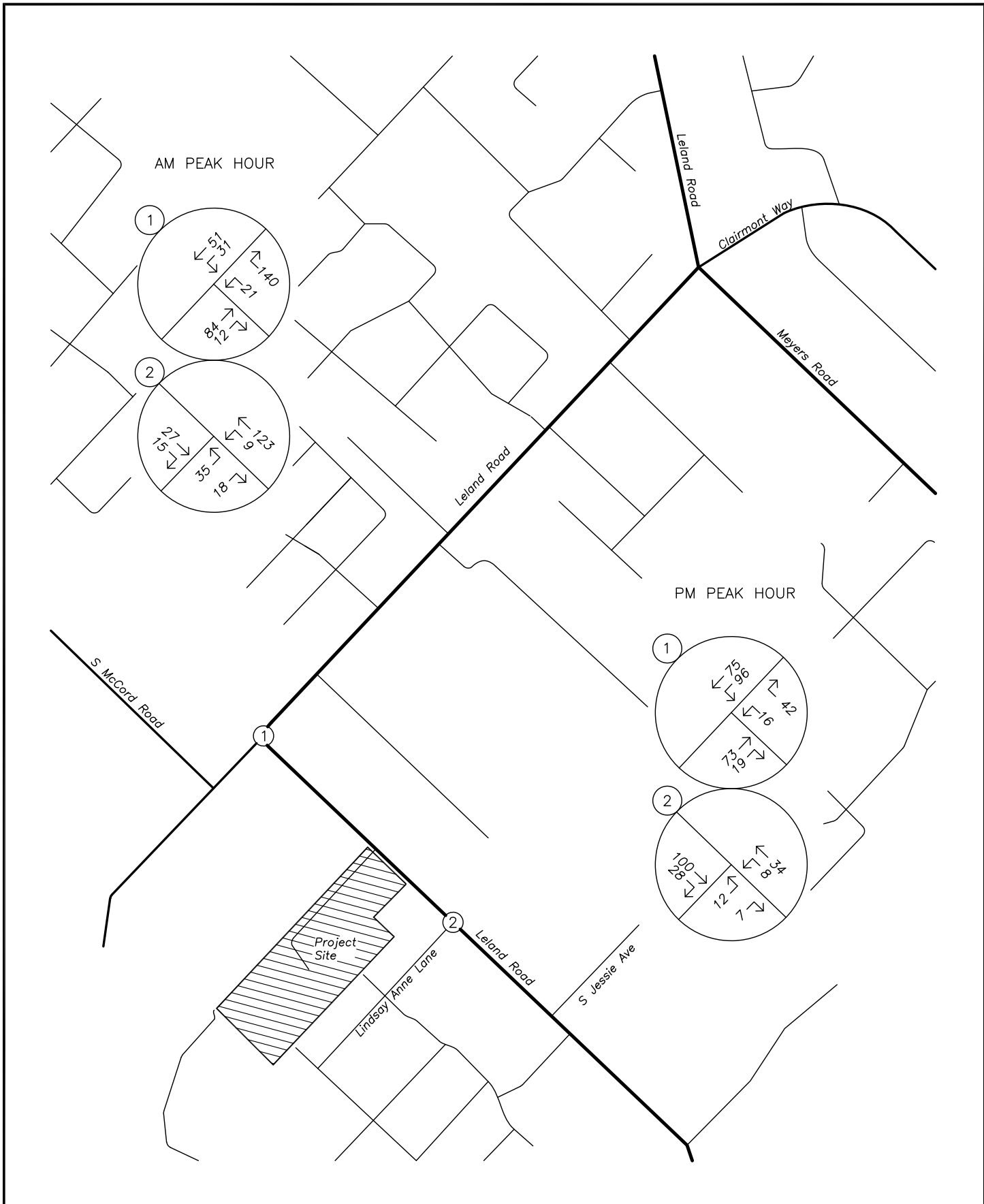


VICINITY MAP



FIGURE  
1

PAGE  
4





## Site Trips

### Trip Generation

To estimate the number of trips that will be generated by the proposed development, trip rates from the manual *TRIP GENERATION*<sup>1</sup> were used. The data utilized are for *Single-Family Detached Housing*, which is based on the number of dwelling units. The trip generation was calculated for the 28 single-family homes.

The trip generation calculations show that the proposed development is projected to result in a total of 20 additional trips during the morning peak hour and 27 additional trips during the evening peak hour. The development will generate 256 new trips each weekday. The trip generation estimates are summarized in Table 1 and detailed trip generation calculations are included in the technical appendix to this report.

Table 1: Trip Generation Calculations: Proposed Subdivision

	ITE Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
			In	Out	Total	In	Out	Total	
<b>Single-Family Detached Housing</b>									
Proposed Development	210	28 units	5	16	21	18	10	28	266
Existing House	210	1 unit	0	1	1	1	0	1	10
<b>Potential Net Increase in Trips</b>		<b>27 units</b>	<b>5</b>	<b>15</b>	<b>20</b>	<b>17</b>	<b>10</b>	<b>27</b>	<b>256</b>

Because a change in zoning is proposed for the site, a comparison of the reasonable worst-case development potential under both the R-10 zoning currently proposed for future development in the Oregon City TSP and the proposed R-6 zoning. Under the R-10 zoning, a total of 17 single-family dwelling units could be constructed. Under the proposed R-6 zoning, a total of 28 dwelling units are possible, for a net increase of 11 homes. The comparative trip generation analysis for the zone change is shown in Table 2 below.

Table 2: Trip Generation Comparison: Worst-Case Development

	ITE Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
			In	Out	Total	In	Out	Total	
<b>Single-Family Detached Housing</b>									
R-6 Zoning Potential	210	28 units	5	16	21	18	10	28	266
R-10 Zoning Potential	210	17 units	3	10	13	11	6	17	162
<b>Potential Net Increase in Trips</b>		<b>11 units</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>4</b>	<b>11</b>	<b>104</b>

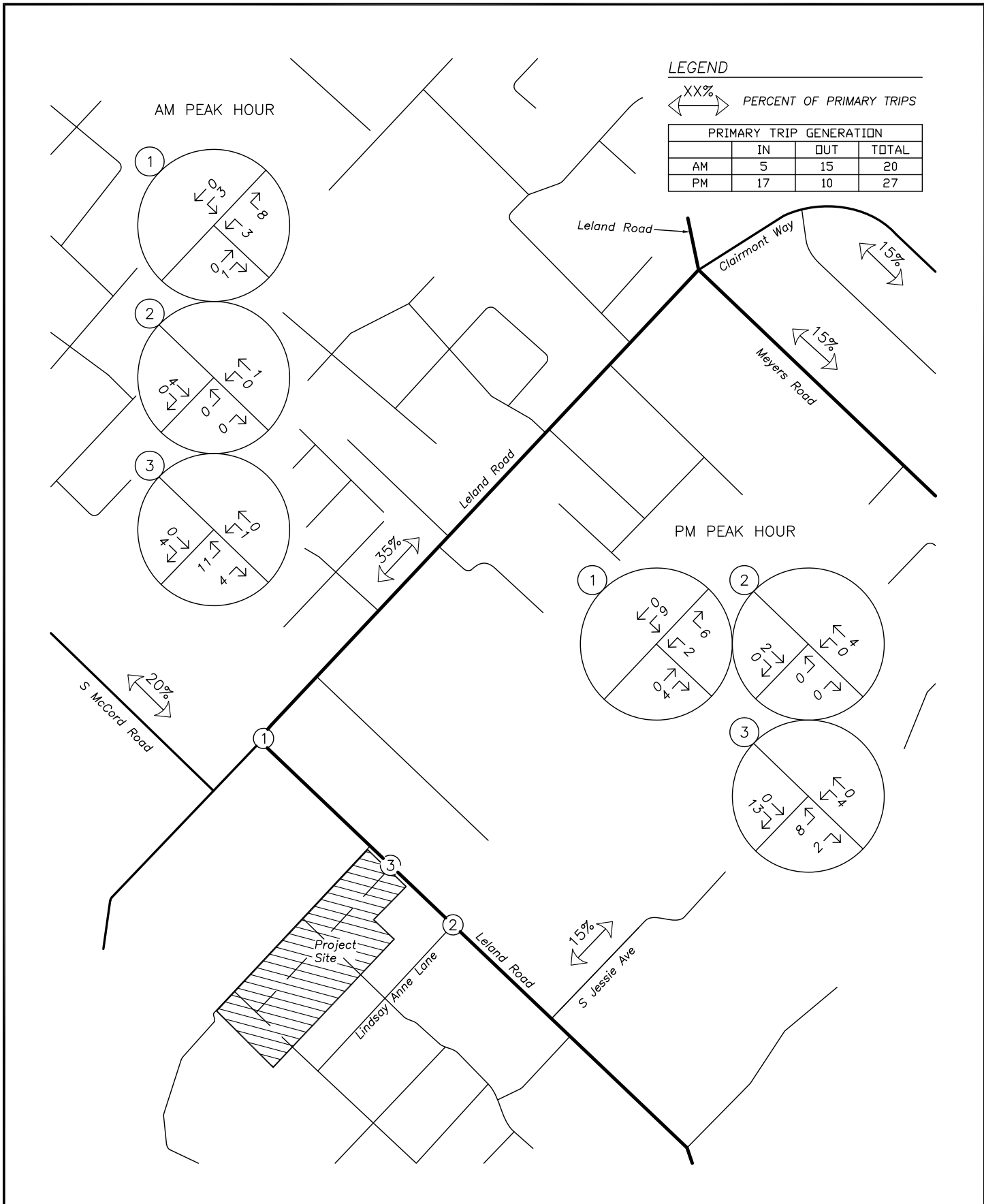
<sup>1</sup> Institute of Transportation Engineers (ITE), *TRIP GENERATION*, 9th Edition, 2012.



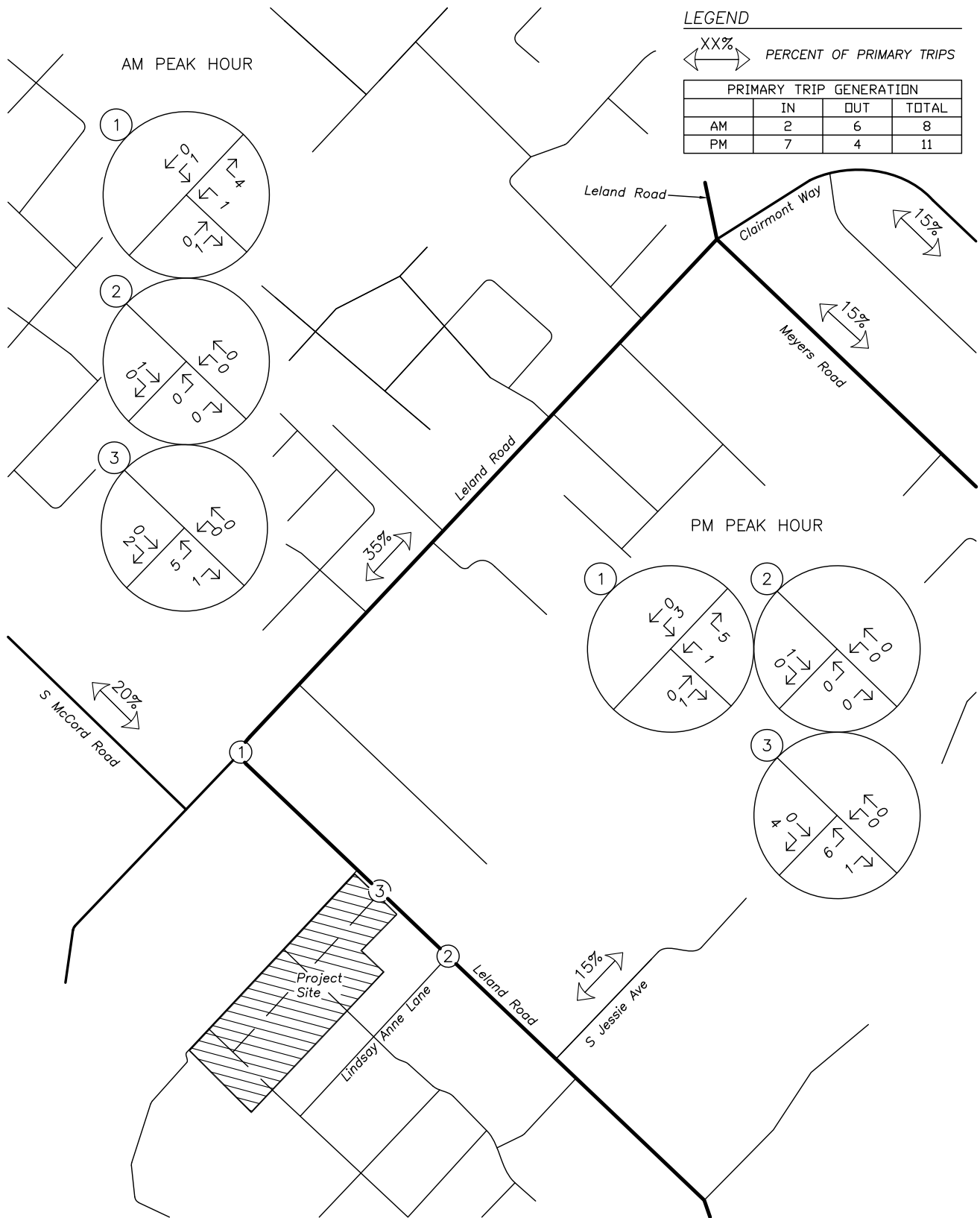
### *Trip Distribution and Assignment*

It is expected that 20% of site trips will utilize McCord Road to access Central Point Road and other connections and destinations to the west of the site. It is expected that 35% of all site trips will arrive from and depart toward the north along Leland Road in the direction of downtown Oregon City, 15% will arrive from and depart toward the northeast along Clairmont Way, and 15% will arrive from and depart toward the northeast along Meyers Road. Another 15% of all site trips will arrive from and depart toward the southeast along Meyers Road by utilizing Jessie Avenue/Frontier Way.

Figure 3 on page 8 shows the trip assignment for site trips generated by the proposed 28-lot development along with the trip distribution assumptions. Figure 4 on page 9 shows the net increase in trips from the zone change.







**SITE TRIP DISTRIBUTION & ASSIGNMENT**  
**Net Increase in Trips from Zone Change**  
**AM & PM Peak Hour**



**FIGURE**  
**4**

**PAGE**  
**9**

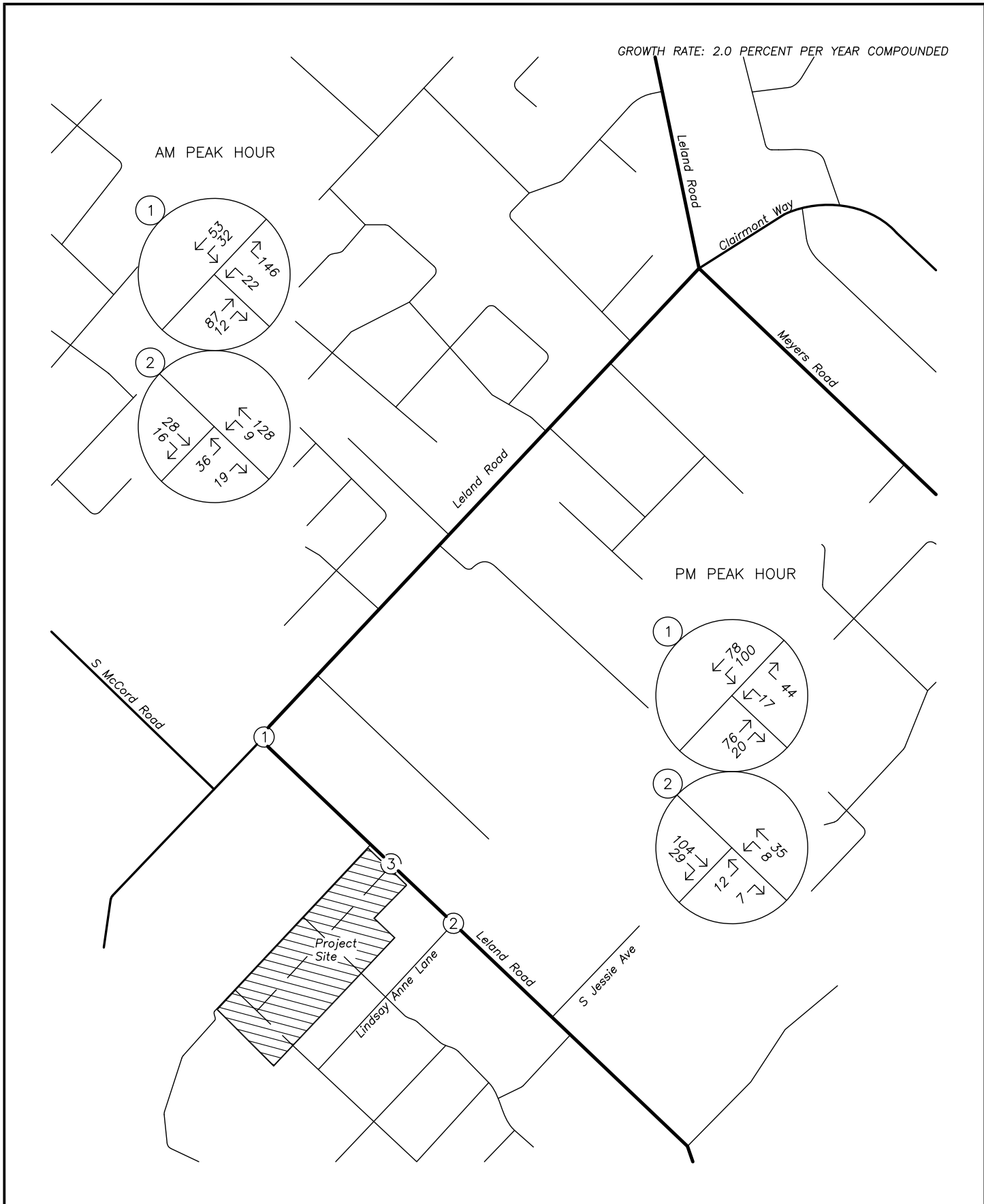


## ***Operational Analysis***

### ***Background Traffic Volumes***

To gauge the effect on the proposed development relative to a *no-build* scenario, background volumes were calculated assuming a two-year build-out period and a 2% year-over-year growth in traffic volumes. The 2019 background conditions are represented in Figure 6 on page 12, while the 2019 background plus site trips conditions are represented in Figure 6 on page 12.

Since the proposed project includes a change in zoning, an analysis of conditions at the planning horizon is also required. To estimate growth during the 20-year planning period, the same 2% year-over-year growth assumption was used to estimate 2037 conditions. The 2037 background conditions are represented in Figure 7 on page 13, and the 2037 background plus the net increase in trips conditions are represented in Figure 8 on page 14.

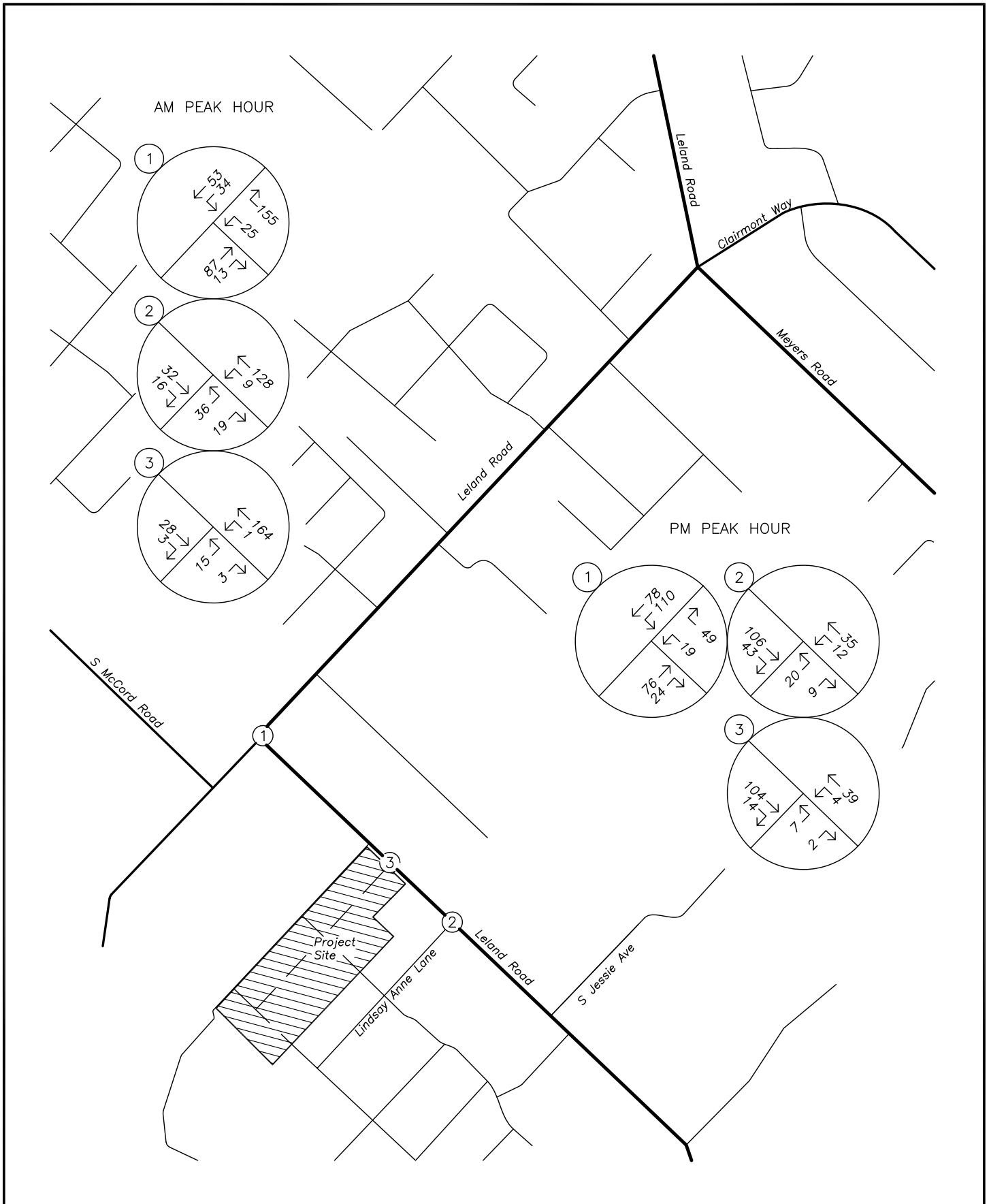


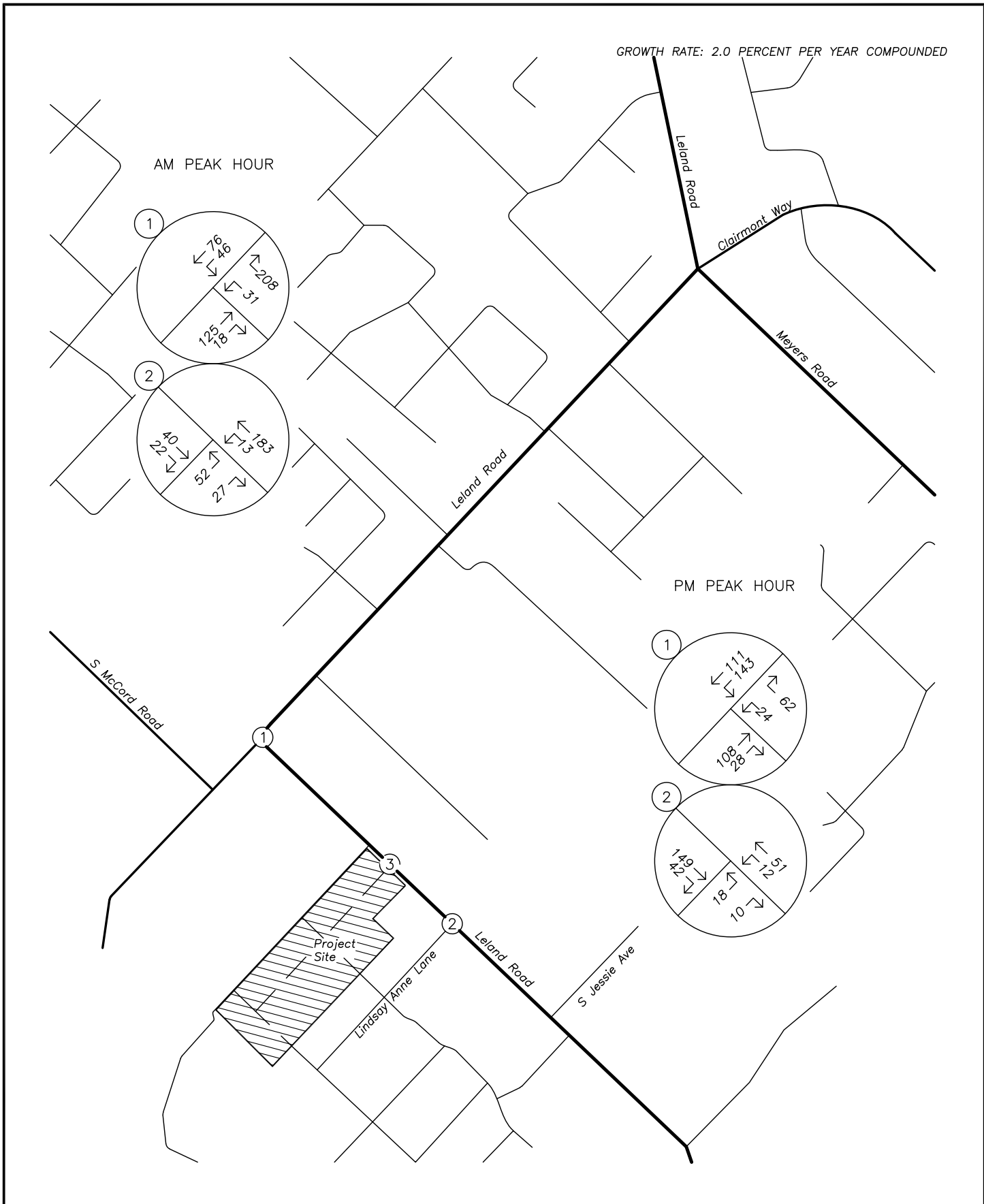
TRAFFIC VOLUMES  
Year 2019 Background Conditions  
AM & PM Peak Hours

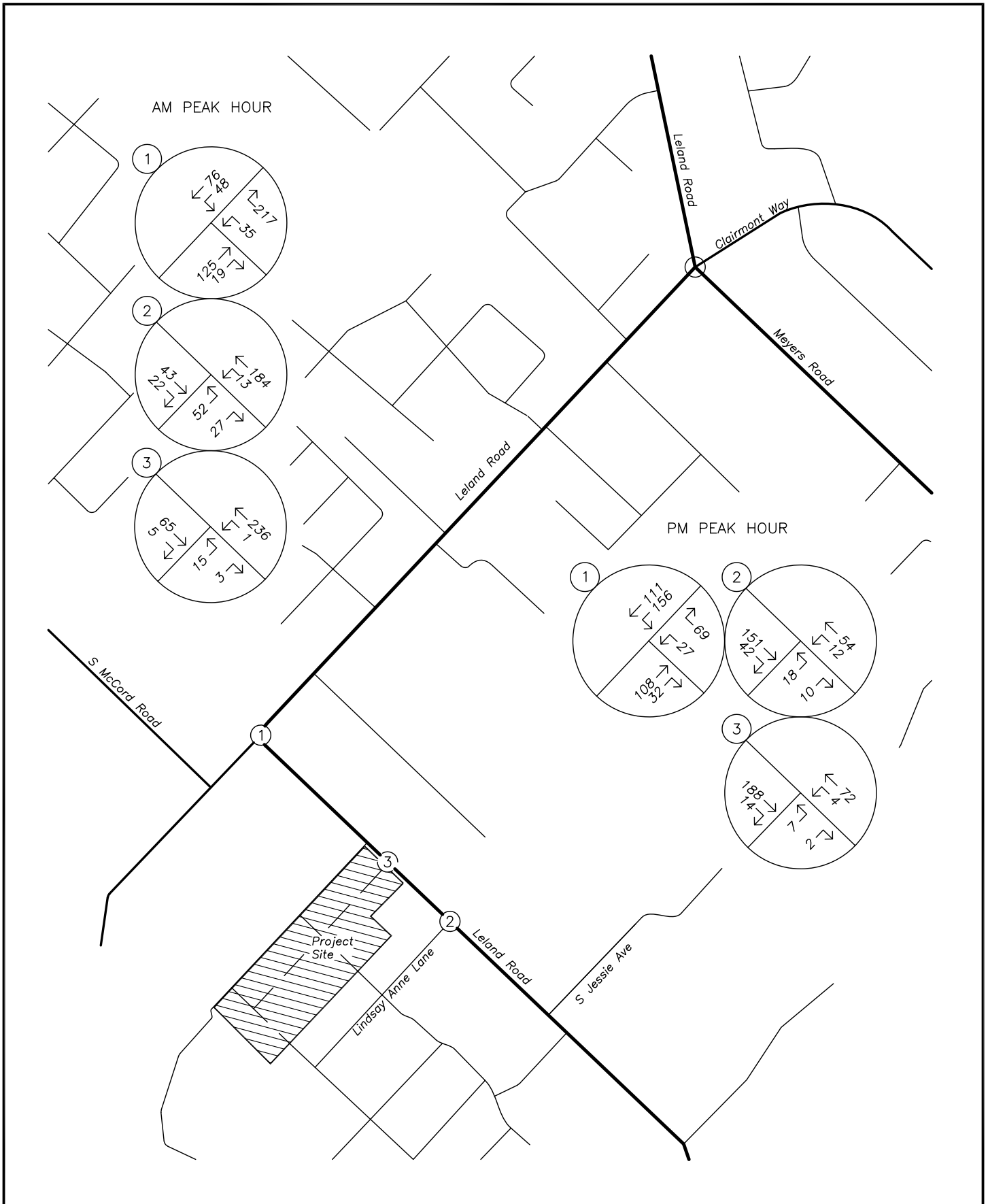


FIGURE  
5

PAGE  
11









## Capacity Analysis

To determine the capacity and level-of-service at the study intersections, a capacity analysis was conducted. The analysis was conducted using the intersection analysis methodologies in the *Highway Capacity Manual (HCM)*<sup>2</sup>. Level-of-service (LOS) can range from A, which indicates little or no delay, to F, which indicates a significant amount of congestion and delay. Oregon City's operational standards require LOS D or better at both signalized and unsignalized intersections. Detailed LOS descriptions are included in the appendix to this report.

The results of the capacity analysis show that the intersection of Leland Road at McCord Road is currently operating at LOS A during both the morning and evening peak hours. Following the background growth and the addition of new trips from the proposed development, the intersection will continue to operate at LOS A during both peak hours.

The results of the capacity analysis show that the intersection of Leland Road at Lindsay Anne Lane is currently operating at LOS A during the morning and evening peak hours. Following the background growth and the addition of new trips from the proposed development, the intersection will continue to operate at LOS A during both peak hours.

The addition of site trips will not change the level of service of any study area intersection, which conforms to the operational standards outlined in the Oregon City TSP. As such, no mitigations are recommended.

Table 3 shows a summary of the capacity and level-of-service calculations at the study intersections under each of the scenarios examined. Detailed capacity analysis results are included in the appendix to this report.

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<sup>2</sup> Transportation Research Board, *Highway Capacity Manual*, 4th Edition, 2000.

Table 3: Intersection Capacity and LOS Summary

	Morning Peak Hour		Evening Peak Hour	
	LOS	Delay (s)	LOS	Delay (s)
<b>Leland Road at McCord Road</b>				
Existing Conditions	A	9	A	9
2019 Background Conditions	A	9	A	9
2019 Background + Site Conditions	A	9	A	9
2037 Background Conditions	A	9	A	10
2037 Background + Site Conditions	A	9	A	10
<b>Leland Road at Lindsay Anne Lane</b>				
Existing Conditions	A	10	A	9
2019 Background Conditions	A	10	A	9
2019 Background + Site Conditions	A	10	A	10
2037 Background Conditions	B	10	A	10
2037 Background + Site Conditions	B	10	B	10
<b>Leland Road at Site Access</b>				
2019 Background + Site Conditions	A	9	A	9
2037 Background + Site Conditions	B	10	B	10





## **Safety Analysis**

### ***Sight Distance***

The planned development will take access to the existing street system via the intersection of Leland Road at Miller Road, a new public intersection. To ensure that this intersection can operate safely and efficiently, sight distance measurements were taken according to guidelines specified in *A Policy on Geometric Design of Highways and Streets*<sup>3</sup>. The measurements use driver's eye heights of 3.5 feet above the road for both vehicles exiting the driveway and vehicles on the main roadway, with the driver's eye 14.5 feet behind the edge of the near-side travel lane. The intersection sight distance necessary (ISD) at the driveways is based on the speed of traffic on Leland Road, and represents the sight distance needed such that traffic would not have to slow down excessively on Leland Road to accommodate vehicles entering the roadway from the driveways.

The proposed development will also have two lots taking direct access to Leland Road. During review of the application for the development that includes the access road, Clackamas County identified a necessary ISD of 445 feet at any site access to, and based upon the travel speeds along, Leland Road. Following construction of the site access as planned, the line of sight available will exceed the required 445 feet. Exhibits showing the available lines of sight at the access along with the grade of Leland Road in both directions are shown in the appendix.

### ***Crash History***

Using data obtained from ODOT's Crash Data System, a review of the most recent available five years of crash history (2011-2015) at the study intersections was performed. Crash rates were calculated under the common assumption that traffic counted during the PM peak period represents 10% of annual average daily traffic (AADT) at the intersection.

There were no reported crashes at the intersections of Leland Road at McCord Road and Leland Road at Lindsay Anne Lane during the analysis period.

Crash rates greater than 1.0 CMEV are generally indicative of a need for further investigation and possible mitigation. Since both study intersections have a crash rate well below this threshold, with one of the study intersections having no reported crashes during the analysis period, there are no apparent safety deficiencies at any study intersection, and on-site observations and available data suggest that all intersections will continue to operate safely in the future.

Detailed crash reports for the study intersections are included in the appendix to this report.

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<sup>3</sup> American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition, 2011.



### *Jessie Avenue & Frontier Parkway Traffic*

The 15% of all site trips expected to arrive from and depart to the southeast along Meyers Road can do so by utilizing either of two routes: connecting directly to Meyers Road via Leland Road, or utilizing Jessie Avenue / Frontier Parkway. Jessie Avenue intersects Leland Road southeast of the site access, and becomes Frontier Parkway before intersecting with Meyers Road northeast of the intersection of Leland Road at Jessie Avenue. Both Jessie Avenue and Frontier Parkway are classified as Local Streets by Oregon City's Transportation System Plan.

The Jessie Avenue/Frontier Parkway route provides a more direct connection to traffic arriving from and departing to the southeast along Meyers, reducing the total travel distance by approximately 2,200 feet. However, the slower speed limits, culture, geometry and traffic-calming features of Jessie Avenue and Frontier Parkway serve to increase travel times and reduce cut-through traffic to Meyers Road along this route. Assuming that drivers travel at the legal speed limits on each road (except when slowing and stopping), the route utilizing Jessie Avenue and Frontier Parkway would result in a negligible difference in travel time. However, Jessie Avenue and Frontier Parkway have traffic calming measures including several horizontal curves and two speed humps, likely limiting average speeds to below the legal speed limit. While the average total travel time is expected to be similar along both routes, the Jessie Avenue/Frontier Parkway route will have a greater variation in control delay due to the fact that it is controlled by two-way (rather than four way) stop signs. Thus, travel times are likely to be more reliable along the Leland Road route.

Based on the geometry and travel speeds, it is anticipated that three site trips will utilize Jessie Avenue/Frontier Parkway during the morning peak hour, and four site trips will utilize this route during the evening peak hour.

As described above, Jessie Avenue and Frontier Way feature traffic calming, so the small number of new trips added to these roads would be expected to travel at safe and reasonable streets. Further, since the subject site is very close to these roads, these trips are local trips which is consistent with the classification of the streets.

The proposed development is not projected to adversely affect the safety, culture, or operation of Jessie Avenue or Frontier Parkway, and no mitigations are needed or recommended.



## **Transportation Planning Rule**

The Transportation Planning Rule (TPR) is in place to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land-use regulations. Because the proposed project includes a change in zoning, the TPR must be addressed. The applicable elements of the TPR are each quoted directly in *italics* below, with a response directly following.

*Oregon Administrative Rule 660-12-0600*

- (1) *If an amendment to a functional plan, an acknowledge comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of the rule, unless the amendment is allowed under section (3), (9), or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*
- (a) *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan;*
  - (b) *Change standards implementing a functional classification system; or*
  - (c) *Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.*
    - (A) *Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
    - (B) *Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or*
    - (C) *Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet performance standards identified in the TSP or comprehensive plan.*

In the case of this report, subsections (a) and (b) are not triggered, since the proposed zone change will not impact or alter the functional classification of any existing or planned facility and the proposal does not include a change to any functional classification standards.

Subsection (c) is also not triggered since even with the addition of the net increase in trips from the zone change, all study area intersections will operate acceptably through the planning horizon.

The TPR is satisfied, since the proposed zone change does not significantly affect the transportation system.



## ***Conclusions***

A 28-lot development is proposed at tax lot #1400, on the south side of Leland Road between the intersections with McCord Road and Lindsay Anne Lane in Oregon City, Oregon. When fully built-out, the development will generate 20 new trips during the morning peak hour, and 27 new trips during the evening peak hour.

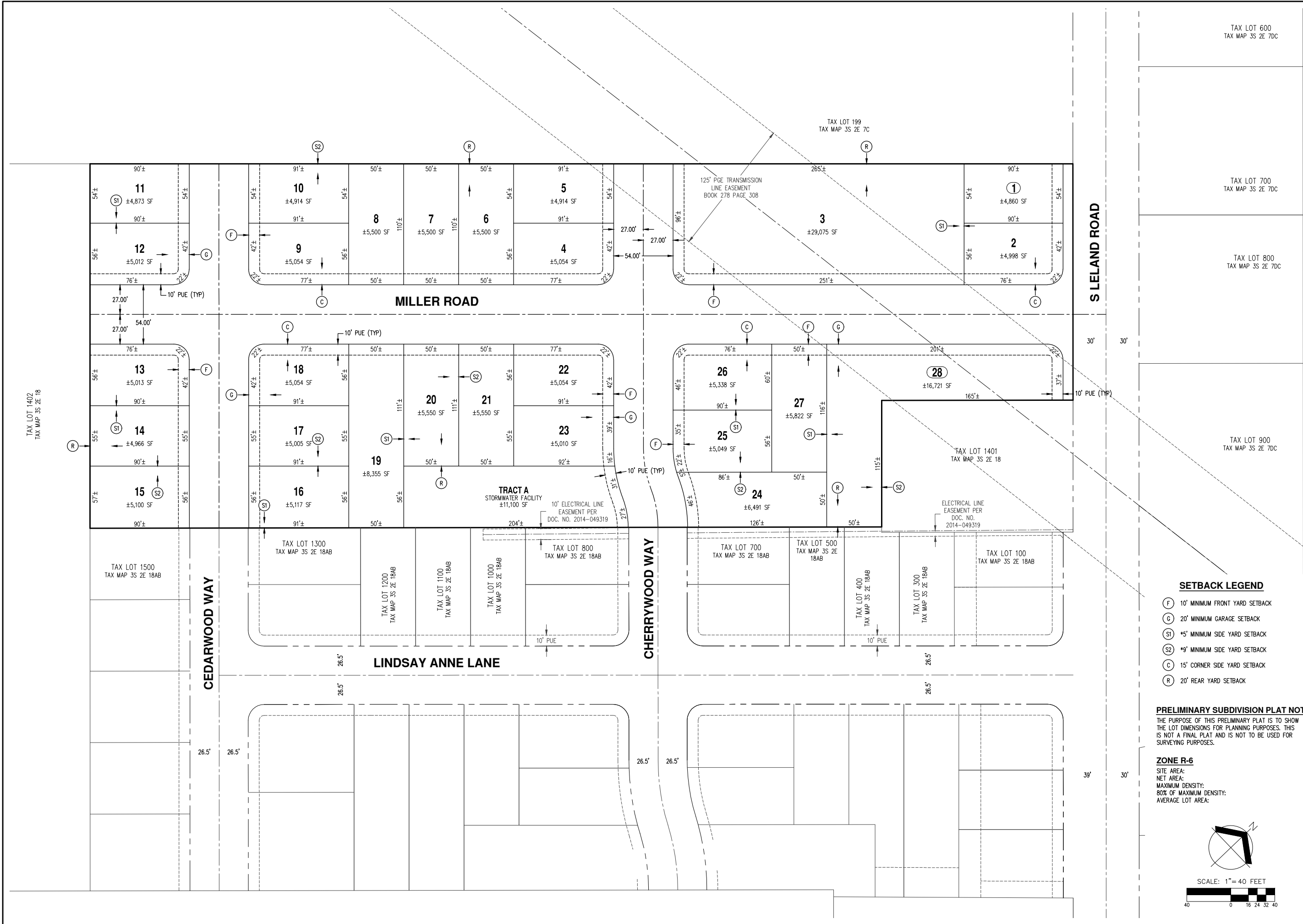
The intersections of Leland Road at McCord Road, Leland Road at Lindsay Anne Lane, and the planned intersection of Leland Road at the proposed site access between Lindsay Anne Lane and McCord Road, and other facilities in the vicinity were found to have ample capacity to support the proposed development. No safety deficiencies were identified within the nearby transportation system, and none arise as a result of the proposed development.

The Transportation Planning Rule was analyzed and found to be satisfied, as the proposed zone change does not significantly affect the transportation system. The Oregon City Transportation System Plan accounts for growth as developments zoned FU-10 are rezoned for development.

The transportation system in the vicinity of the subject site can safely and efficiently accommodate the proposed development. No mitigations are needed or recommended.

Le

## ***Appendix***



AKS

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ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

LELAND ROAD  
SUBDIVISION

OREGON CITY  
OREGON

PRELIMINARY SUBDIVISION  
PLAT

DESIGNED BY: VHN  
DRAWN BY: NMC  
CHECKED BY:  
SCALE: AS NOTED  
DATE: 07/11/2017

REVISIONS

JOB NUMBER  
5837

SHEET  
####

## Total Vehicle Summary

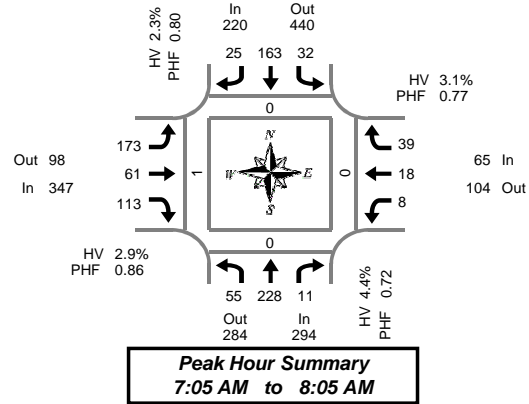


Clay Carney  
(503) 833-2740

## Leland Rd & Clairmont Way

Tuesday, April 18, 2017

7:00 AM to 9:00 AM



### 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	1	10	1	0	0	4	2	0	4	5	8	0	0	2	2	0	39	0	0	0	0
7:05 AM	4	8	0	0	4	10	0	0	10	7	9	0	2	2	6	0	62	0	0	0	0
7:10 AM	3	10	1	0	2	12	2	0	16	3	11	0	2	1	1	0	64	0	0	0	0
7:15 AM	3	12	0	0	1	14	0	0	10	6	13	0	1	1	5	0	66	0	0	0	0
7:20 AM	1	21	0	0	1	14	3	0	19	4	7	0	1	3	4	0	78	0	0	0	0
7:25 AM	6	14	0	0	3	18	0	0	17	2	12	0	0	0	1	0	73	0	0	0	0
7:30 AM	3	22	0	0	2	21	2	0	9	2	11	0	0	4	2	0	78	0	0	0	0
7:35 AM	5	22	1	0	2	13	7	0	25	6	11	0	0	0	3	0	95	0	0	0	1
7:40 AM	3	25	1	0	5	14	3	0	18	4	12	0	0	1	4	0	90	0	0	0	0
7:45 AM	9	21	4	0	6	9	1	0	17	2	6	0	1	1	6	0	83	0	0	0	0
7:50 AM	5	25	1	0	4	15	3	0	11	6	5	0	0	1	1	0	77	0	0	0	0
7:55 AM	8	27	2	0	1	14	2	0	10	11	9	0	0	2	1	0	87	0	0	0	0
8:00 AM	5	21	1	0	1	9	2	0	11	8	7	0	1	2	5	0	73	0	0	0	0
8:05 AM	2	25	0	0	2	9	0	0	7	5	5	0	0	3	2	0	60	0	0	0	0
8:10 AM	6	28	0	0	0	4	1	0	4	3	3	0	0	1	4	0	54	0	0	0	0
8:15 AM	2	17	0	0	5	11	3	0	13	5	3	0	0	1	2	0	62	0	0	0	0
8:20 AM	3	21	1	0	1	9	3	0	6	3	3	0	0	3	4	1	57	0	0	0	0
8:25 AM	3	18	0	0	3	7	1	0	7	2	2	0	0	3	3	0	49	0	0	0	0
8:30 AM	2	9	1	0	2	18	3	0	10	5	5	0	0	3	2	0	60	0	0	0	0
8:35 AM	4	11	0	0	0	13	1	0	9	3	2	0	0	4	3	0	50	0	0	0	0
8:40 AM	1	23	0	0	0	9	3	0	6	3	6	0	1	4	0	0	56	0	0	0	0
8:45 AM	3	18	1	0	0	15	4	0	3	2	6	0	0	4	5	0	61	0	0	0	0
8:50 AM	1	18	0	0	5	8	2	0	7	4	3	0	0	3	1	0	52	0	0	0	0
8:55 AM	4	9	0	0	2	8	2	0	4	2	4	0	0	6	3	0	44	0	0	0	0
Total Survey	87	435	15	0	52	278	50	0	253	103	163	0	9	55	70	1	1,570	0	0	0	1

### 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	8	28	2	0	6	26	4	0	30	15	28	0	4	5	9	0	165	0	0	0	0
7:15 AM	10	47	0	0	5	46	3	0	46	12	32	0	2	4	10	0	217	0	0	0	0
7:30 AM	11	69	2	0	9	48	12	0	52	12	34	0	0	5	9	0	263	0	0	0	1
7:45 AM	22	73	7	0	11	38	6	0	38	19	20	0	1	4	8	0	247	0	0	0	0
8:00 AM	13	74	1	0	3	22	3	0	22	16	15	0	1	6	11	0	187	0	0	0	0
8:15 AM	8	56	1	0	9	27	7	0	26	10	8	0	0	7	9	1	168	0	0	0	0
8:30 AM	7	43	1	0	2	40	7	0	25	11	13	0	1	11	5	0	166	0	0	0	0
8:45 AM	8	45	1	0	7	31	8	0	14	8	13	0	0	13	9	0	157	0	0	0	0
Total Survey	87	435	15	0	52	278	50	0	253	103	163	0	9	55	70	1	1,570	0	0	0	1

### Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	294	284	578	0	220	440	660	0	347	98	445	0	65	104	169	0	926	0	0	0	1
%HV	4.4%				2.3%				2.9%				3.1%				3.2%				
PHF	0.72				0.80				0.86				0.77				0.86				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	55	228	11	294	32	163	25	220	173	61	113	347	8	18	39	65	926
%HV	7.3%	3.9%	0.0%	4.4%	6.3%	1.2%	4.0%	2.3%	1.2%	4.9%	4.4%	2.9%	0.0%	0.0%	5.1%	3.1%	3.2%
PHF	0.63	0.78	0.39	0.72	0.53	0.77	0.52	0.80	0.72	0.61	0.83	0.86	0.40	0.64	0.75	0.77	0.86

### Rolling Hour Summary

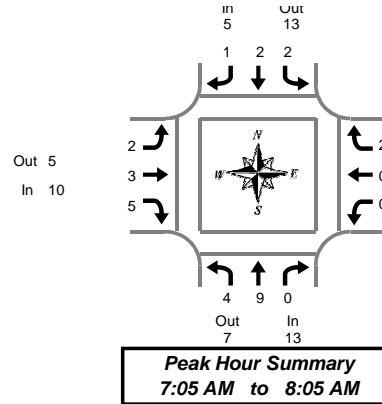
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	51	217	11	0	31	158	25	0	166	58	114	0	7	18	36	0	892	0	0	0	1
7:15 AM	56	263	10	0	28	154	24	0	158	59	101	0	4	19	38	0	914	0	0	0	1
7:30 AM	54	272	11	0	32	135	28	0	138	57	77	0	2	22	37	1	865	0	0	0	1
7:45 AM	50	246	10	0	25	127	23	0	111	56	56	0	3	28	33	1	768	0	0	0	0
8:00 AM	36	218	4	0	21	120	25	0	87	45	49	0	2	37	34	1	678	0	0	0	0

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & Clairmont Way

Tuesday, April 18, 2017

7:00 AM to 9:00 AM

### Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
7:05 AM	1	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
7:10 AM	0	3	0	3	0	0	0	0	1	0	0	1	0	0	0	0	4
7:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
7:20 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:25 AM	1	1	0	2	1	0	0	1	0	1	1	1	0	0	0	0	4
7:30 AM	0	1	0	1	0	1	0	1	1	0	2	3	0	0	0	0	5
7:35 AM	0	0	0	0	0	0	1	1	0	1	1	2	0	0	1	1	4
7:40 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
7:45 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7:50 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
7:55 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
8:10 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	1	1	0	2	0	0	1	1	0	1	1	2	0	0	0	0	5
8:20 AM	1	2	0	3	0	1	0	1	0	0	0	0	0	0	1	1	5
8:25 AM	1	1	0	2	0	1	0	1	1	0	0	1	0	0	1	1	5
8:30 AM	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0	3
8:35 AM	0	0	0	0	0	5	0	5	1	0	1	2	0	0	0	0	7
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	1	2	0	2	1	3	0	0	0	0	0	0	0	0	5
8:50 AM	0	2	0	2	0	1	1	2	0	0	0	0	0	0	0	0	4
8:55 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
Total Survey	9	19	1	29	2	16	4	22	4	5	8	17	0	2	4	6	74

### Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	4	0	5	1	0	0	1	1	1	0	2	0	1	0	1	9
7:15 AM	1	3	0	4	1	0	0	1	0	0	2	2	0	0	0	0	7
7:30 AM	0	1	0	1	0	1	1	2	1	2	3	6	0	0	2	2	11
7:45 AM	2	2	0	4	0	1	0	1	0	0	0	0	0	0	0	0	5
8:00 AM	2	2	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
8:15 AM	3	4	0	7	0	2	1	3	1	1	1	3	0	0	2	2	15
8:30 AM	0	0	0	0	0	7	0	7	1	1	1	3	0	0	0	0	10
8:45 AM	0	3	1	4	0	4	2	6	0	0	1	1	0	0	0	0	11
Total Survey	9	19	1	29	2	16	4	22	4	5	8	17	0	2	4	6	74

### Heavy Vehicle Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound Clairmont Way			Westbound Clairmont Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	13	7	20	5	13	18	10	5	15	2	5	7	30
PHF	0.65			0.42			0.42			0.25			0.58

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	4	9	0	13	2	2	1	5	2	3	5	10	0	1	2	3	30
PHF	0.50	0.45	0.00	0.65	0.50	0.50	0.25	0.42	0.50	0.38	0.31	0.42	0.00	0.00	0.25	0.25	0.58

### Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	4	10	0	14	2	2	1	5	2	3	5	10	0	1	2	3	32
7:15 AM	5	8	0	13	1	3	1	5	1	2	5	8	0	1	2	3	29
7:30 AM	7	9	0	16	0	5	2	7	2	3	4	9	0	1	4	5	37
7:45 AM	7	8	0	15	0	11	1	12	2	2	2	6	0	1	2	3	36
8:00 AM	5	9	1	15	0	14	3	17	2	2	3	7	0	1	2	3	42



## Peak Hour Summary

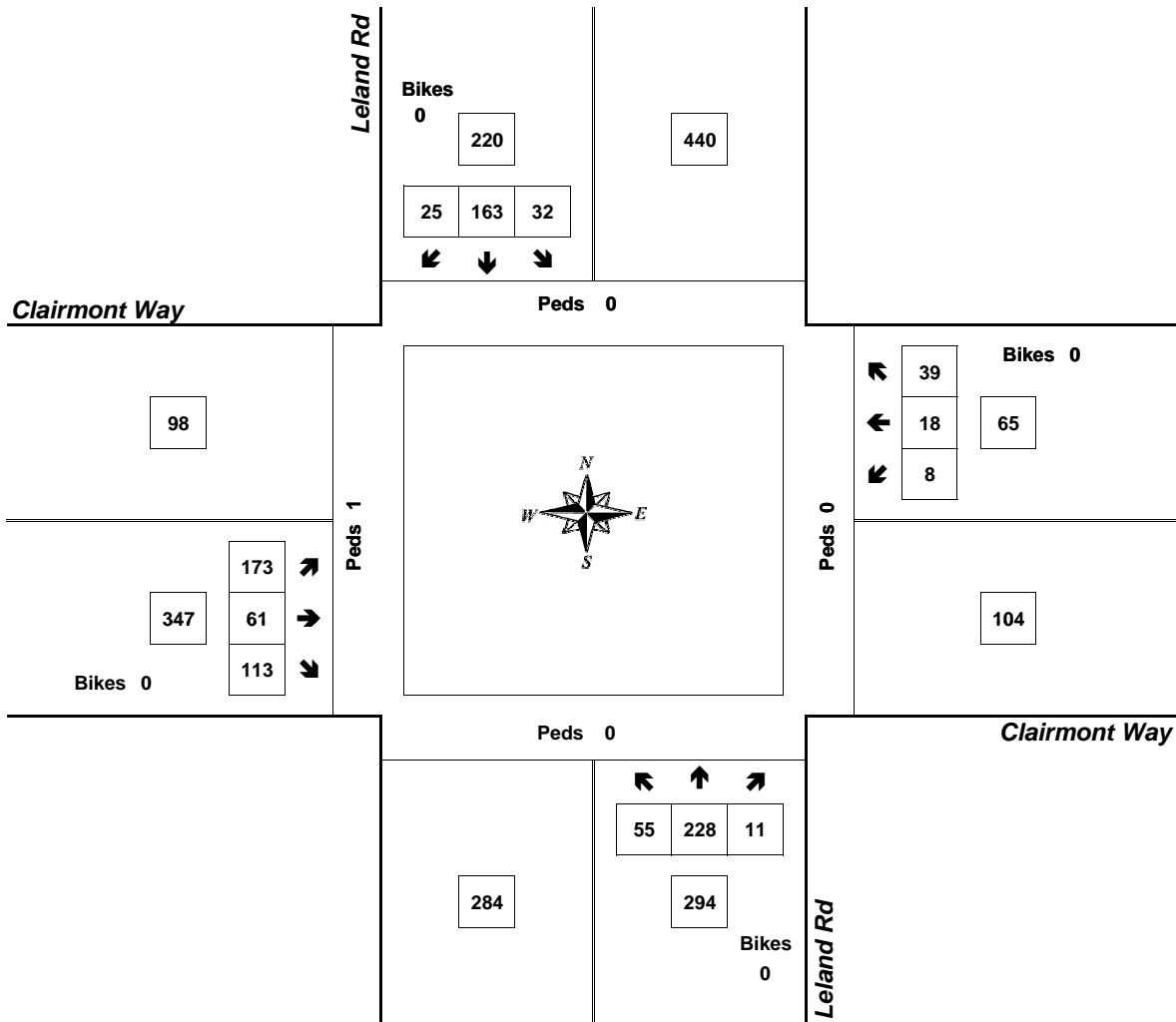


Clay Carney  
(503) 833-2740

### Leland Rd & Clairmont Way

7:05 AM to 8:05 AM

Tuesday, April 18, 2017



Approach	PHF	HV%	Volume
EB	0.86	2.9%	347
WB	0.77	3.1%	65
NB	0.72	4.4%	294
SB	0.80	2.3%	220
<b>Intersection</b>	<b>0.86</b>	<b>3.2%</b>	<b>926</b>

Count Period: 7:00 AM to 9:00 AM

## Total Vehicle Summary



Clay Carney  
(503) 833-2740

## Leland Rd & Clairmont Way

Tuesday, April 18, 2017

4:00 PM to 6:00 PM

### 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	5	11	1	0	4	19	5	0	1	5	2	0	2	6	3	0	64	0	0	0	0
4:05 PM	16	10	1	0	6	18	6	0	3	4	2	0	0	6	3	0	75	0	0	0	0
4:10 PM	2	10	1	0	6	16	2	0	9	10	4	0	1	8	6	0	75	0	0	0	0
4:15 PM	3	14	3	0	7	14	6	0	3	6	3	0	1	12	3	1	75	0	0	0	0
4:20 PM	6	14	0	0	2	18	14	0	5	7	9	0	1	3	4	0	83	0	0	0	0
4:25 PM	4	15	0	0	7	15	4	0	3	7	7	0	1	6	3	0	68	2	0	0	0
4:30 PM	9	12	1	0	3	21	7	0	4	3	6	0	0	12	5	0	83	0	0	0	0
4:35 PM	7	17	1	0	6	23	14	0	4	5	14	0	1	5	5	0	102	0	0	0	0
4:40 PM	5	9	2	0	7	13	10	0	1	6	1	0	0	3	6	0	63	0	0	0	0
4:45 PM	3	18	0	0	7	17	14	0	6	5	6	0	0	10	6	0	92	0	0	0	0
4:50 PM	7	15	1	0	5	14	9	0	6	3	6	0	2	8	2	0	78	0	0	0	0
4:55 PM	6	21	2	0	6	16	17	0	4	4	3	0	2	3	11	0	95	0	0	0	1
5:00 PM	9	16	0	0	3	15	12	0	3	2	5	0	2	4	9	0	80	0	0	0	0
5:05 PM	4	17	0	0	6	15	8	0	6	3	4	0	1	12	8	0	84	0	0	0	0
5:10 PM	6	21	2	0	4	25	9	0	3	2	12	0	0	7	3	0	94	0	0	0	0
5:15 PM	15	11	3	0	11	23	11	0	4	5	6	0	0	1	6	0	96	1	0	0	0
5:20 PM	3	14	2	0	5	28	13	0	8	3	4	0	1	3	4	0	88	0	0	0	0
5:25 PM	6	15	0	0	5	17	12	0	8	2	1	0	1	4	3	0	74	0	0	0	0
5:30 PM	5	11	3	0	8	21	11	0	3	1	5	0	2	10	1	0	81	0	0	0	0
5:35 PM	4	14	2	0	4	17	19	0	3	4	3	0	2	6	1	0	79	0	0	0	0
5:40 PM	8	17	1	0	3	28	10	0	3	5	10	0	0	8	5	0	98	0	0	0	0
5:45 PM	4	18	2	0	11	17	11	0	9	8	5	0	2	7	5	0	99	3	0	0	0
5:50 PM	2	12	1	0	4	22	7	0	6	4	3	0	0	7	3	0	71	0	1	0	0
5:55 PM	11	16	4	0	5	18	4	0	5	3	9	0	1	6	7	0	89	0	0	0	0
Total Survey	150	348	33	0	135	450	235	0	110	103	130	0	23	157	112	1	1,986	6	1	0	1

### 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	23	31	3	0	16	53	13	0	13	19	8	0	3	20	12	0	214	0	0	0	0
4:15 PM	13	43	3	0	16	47	24	0	11	16	19	0	3	21	10	1	226	2	0	0	0
4:30 PM	21	38	4	0	16	57	31	0	9	14	21	0	1	20	16	0	248	0	0	0	0
4:45 PM	16	54	3	0	18	47	40	0	16	12	15	0	4	21	19	0	265	0	0	0	1
5:00 PM	19	54	2	0	13	55	29	0	12	7	21	0	3	23	20	0	258	0	0	0	0
5:15 PM	24	40	5	0	21	68	36	0	20	10	11	0	2	8	13	0	258	1	0	0	0
5:30 PM	17	42	6	0	15	66	40	0	9	10	18	0	4	24	7	0	258	0	0	0	0
5:45 PM	17	46	7	0	20	57	22	0	20	15	17	0	3	20	15	0	259	3	1	0	0
Total Survey	150	348	33	0	135	450	235	0	110	103	130	0	23	157	112	1	1,986	6	1	0	1

### Peak Hour Summary

4:50 PM to 5:50 PM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	285	315	600	0	449	308	757	0	166	292	458	0	146	131	277	0	1,046	4	0	0	1
%HV	0.7%				0.2%				0.6%				0.7%				0.5%				
PHF	0.90				0.87				0.83				0.70				0.94				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	77	190	18	285	71	236	142	449	60	42	64	166	15	73	58	146	1,046
%HV	1.3%	0.5%	0.0%	0.7%	0.0%	0.4%	0.0%	0.2%	0.0%	0.0%	1.6%	0.6%	0.0%	1.4%	0.0%	0.7%	0.5%
PHF	0.77	0.88	0.64	0.90	0.85	0.78	0.85	0.87	0.75	0.62	0.73	0.83	0.63	0.76	0.52	0.70	0.94

### Rolling Hour Summary

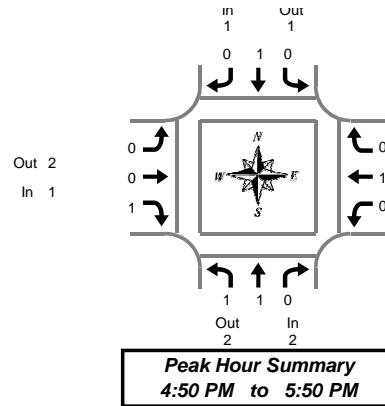
4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	73	166	13	0	66	204	108	0	49	61	63	0	11	82	57	1	953	2	0	0	1
4:15 PM	69	189	12	0	63	206	124	0	48	49	76	0	11	85	65	1	997	2	0	0	1
4:30 PM	80	186	14	0	68	227	136	0	57	43	68	0	10	72	68	0	1,029	1	0	0	1
4:45 PM	76	190	16	0	67	236	145	0	57	39	65	0	13	76	59	0	1,039	1	0	0	1
5:00 PM	77	182	20	0	69	246	127	0	61	42	67	0	12	75	55	0	1,033	4	1	0	0

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & Clairmont Way

Tuesday, April 18, 2017

4:00 PM to 6:00 PM

### Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
4:05 PM	1	0	0	1	0	1	0	1	0	1	1	2	0	0	0	0	4
4:10 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
4:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	0	1	0	1	1	1	0	2	0	0	1	1	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3
4:35 PM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Survey	2	3	0	5	1	8	1	10	1	2	7	10	0	1	0	1	26

### Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	0	3	0	3	1	1	2	4	0	0	0	0	8
4:15 PM	0	2	0	2	1	1	0	2	0	0	1	1	0	0	0	0	5
4:30 PM	0	0	0	0	0	2	1	3	0	1	2	3	0	0	0	0	6
4:45 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
5:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Survey	2	3	0	5	1	8	1	10	1	2	7	10	0	1	0	1	26

### Heavy Vehicle Peak Hour Summary

4:50 PM to 5:50 PM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound Clairmont Way			Westbound Clairmont Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	2	4	1	1	2	1	2	3	1	0	1	5
PHF	0.25			0.25			0.25			0.25			0.63

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	1	0	2	0	1	0	1	0	0	1	1	0	1	0	1	5
PHF	0.25	0.25	0.00	0.25	0.00	0.25	0.00	0.25	0.00	0.00	0.25	0.25	0.00	0.25	0.00	0.25	0.63

### Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Clairmont Way				Westbound Clairmont Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	3	0	4	1	6	1	8	1	2	6	9	0	0	0	0	21
4:15 PM	1	3	0	4	1	3	1	5	0	1	4	5	0	0	0	0	14
4:30 PM	1	1	0	2	0	3	1	4	0	1	3	4	0	1	0	1	11
4:45 PM	1	1	0	2	0	1	0	1	0	0	2	2	0	1	0	1	6
5:00 PM	1	0	0	1	0	2	0	2	0	0	1	1	0	1	0	1	5

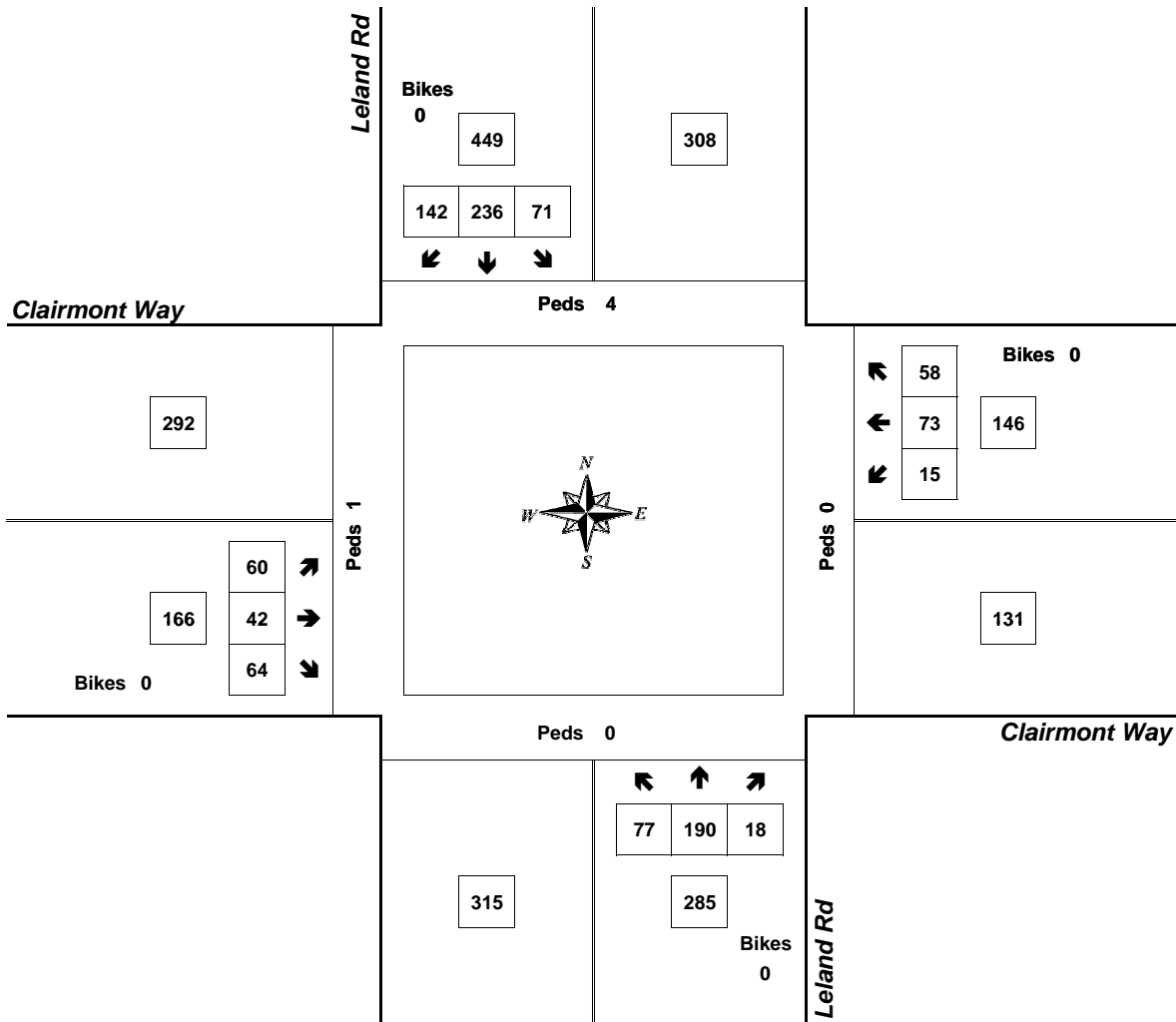
## Peak Hour Summary



Clay Carney  
(503) 833-2740

### Leland Rd & Clairmont Way

4:50 PM to 5:50 PM  
Tuesday, April 18, 2017



Approach	PHF	HV%	Volume
EB	0.83	0.6%	166
WB	0.70	0.7%	146
NB	0.90	0.7%	285
SB	0.87	0.2%	449
<b>Intersection</b>	<b>0.94</b>	<b>0.5%</b>	<b>1,046</b>

Count Period: 4:00 PM to 6:00 PM

## Total Vehicle Summary

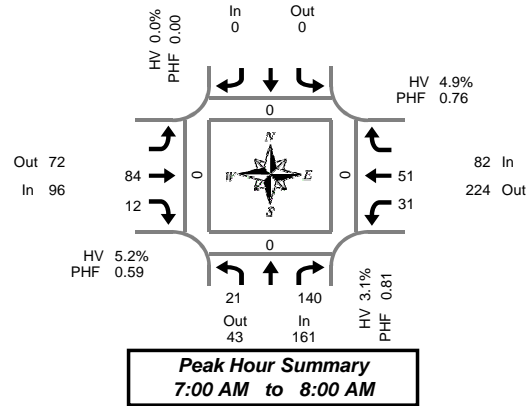


Clay Carney  
(503) 833-2740

## Leland Rd & S Mccord Rd

Tuesday, April 18, 2017

7:00 AM to 9:00 AM



### 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
7:00 AM	2	6	1				0		6	1	0		3	1		0	19	0	0	0	0
7:05 AM	2	8	0				0		11	0	0		0	4		0	25	0	0	0	0
7:10 AM	0	8	0				0		10	1	0		4	4		0	27	0	0	0	0
7:15 AM	3	11	0				0		16	3	0		1	2		0	36	0	0	0	0
7:20 AM	3	17	0				0		11	0	0		4	2		1	37	0	0	0	0
7:25 AM	2	11	0				0		5	1	0		1	7		0	27	0	0	0	0
7:30 AM	1	10	0				0		2	0	0		3	6		0	22	0	0	0	0
7:35 AM	3	16	0				0		6	2	0		2	3		0	32	0	0	0	0
7:40 AM	0	12	0				0		3	0	0		5	6		0	26	0	0	0	0
7:45 AM	5	14	0				0		3	3	0		1	10		0	36	0	0	0	0
7:50 AM	0	10	0				0		5	0	0		1	4		0	20	0	0	0	0
7:55 AM	0	17	0				0		6	1	0		6	2		0	32	0	0	0	0
8:00 AM	1	6	0				0		4	0	0		3	4		0	18	0	0	0	0
8:05 AM	0	7	0				0		3	0	0		0	3		0	13	0	0	0	0
8:10 AM	1	6	0				0		2	1	0		2	6		0	18	0	0	0	0
8:15 AM	0	9	0				0		0	1	0		2	0		0	12	0	0	0	0
8:20 AM	1	7	0				0		4	0	0		3	5		1	20	0	0	0	0
8:25 AM	2	2	0				0		2	2	0		2	2		0	12	0	0	0	0
8:30 AM	1	3	0				0		3	0	0		7	2		0	16	0	0	0	0
8:35 AM	1	6	0				0		4	1	0		1	4		0	17	0	0	0	0
8:40 AM	0	4	0				0		3	2	0		0	5		0	14	0	0	0	0
8:45 AM	1	2	0				0		5	1	0		7	3		0	19	0	0	0	0
8:50 AM	0	8	0				0		2	2	0		1	3		0	16	0	0	0	0
8:55 AM	0	3	0				0		3	1	0		3	4		0	14	0	0	0	0
Total Survey	29	203	1				0		119	23	0		62	92		2	528	0	0	0	0

### 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
7:00 AM	4	22	1				0		27	2	0		7	9		0	71	0	0	0	0
7:15 AM	8	39	0				0		32	4	0		6	11		1	100	0	0	0	0
7:30 AM	4	38	0				0		11	2	0		10	15		0	80	0	0	0	0
7:45 AM	5	41	0				0		14	4	0		8	16		0	88	0	0	0	0
8:00 AM	2	19	0				0		9	1	0		5	13		0	49	0	0	0	0
8:15 AM	3	18	0				0		6	3	0		7	7		1	44	0	0	0	0
8:30 AM	2	13	0				0		10	3	0		8	11		0	47	0	0	0	0
8:45 AM	1	13	0				0		10	4	0		11	10		0	49	0	0	0	0
Total Survey	29	203	1				0		119	23	0		62	92		2	528	0	0	0	0

### Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	161	43	204	1	0	0	0	0	96	72	168	0	82	224	306	1	339	0	0	0	0
%HV	3.1%				0.0%				5.2%				4.9%				4.1%				
PHF	0.81				0.00				0.59				0.76				0.85				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Total
	L	R	Total				Total		T	R	Total		L	T	Total		
Volume	21	140	161				0		84	12	96		31	51	82		339
%HV	4.8%	NA	2.9%	3.1%	NA	NA	NA	0.0%	NA	4.8%	8.3%	5.2%	3.2%	5.9%	NA	4.9%	4.1%
PHF	0.66	0.83	0.81				0.00		0.57	0.60	0.59		0.78	0.64	0.76		0.85

### Rolling Hour Summary

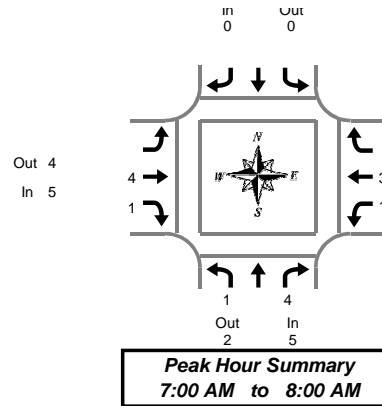
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
7:00 AM	21	140	1				0		84	12	0		31	51		1	339	0	0	0	0
7:15 AM	19	137	0				0		66	11	0		29	55		1	317	0	0	0	0
7:30 AM	14	116	0				0		40	10	0		30	51		1	261	0	0	0	0
7:45 AM	12	91	0				0		39	11	0		28	47		1	228	0	0	0	0
8:00 AM	8	63	0				0		35	11	0		31	41		1	189	0	0	0	0

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & S Mccord Rd

Tuesday, April 18, 2017

7:00 AM to 9:00 AM

### Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L	R	Total				Total		T	R	Total	L	T	Total	
7:00 AM	0	1	1	0			0		1	0	1	0	0	0	2
7:05 AM	0	0	0	0			0		0	0	0	0	0	0	0
7:10 AM	0	0	0	0			0		1	0	1	0	0	0	1
7:15 AM	0	0	0	0			0		0	0	0	0	1	1	1
7:20 AM	0	0	0	0			0		0	0	0	0	0	0	0
7:25 AM	1	1	2	0			0		0	1	1	0	1	1	4
7:30 AM	0	2	2	0			0		0	0	0	0	1	1	3
7:35 AM	0	0	0	0			0		1	0	1	0	0	0	1
7:40 AM	0	0	0	0			0		0	0	0	1	0	1	1
7:45 AM	0	0	0	0			0		0	0	0	0	0	0	0
7:50 AM	0	0	0	0			0		1	0	1	0	0	0	1
7:55 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:00 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:05 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:10 AM	0	0	0	0			0		0	0	0	1	1	2	2
8:15 AM	0	1	1	0			0		0	1	1	0	0	0	2
8:20 AM	0	1	1	0			0		0	0	0	0	1	1	2
8:25 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:30 AM	0	0	0	0			0		0	0	0	2	0	2	2
8:35 AM	1	2	3	0			0		0	0	0	0	0	0	3
8:40 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:45 AM	1	0	1	0			0		0	0	0	0	0	0	1
8:50 AM	0	0	0	0			0		0	0	0	0	0	0	0
8:55 AM	0	1	1	0			0		1	0	1	0	0	0	2
Total Survey	3	9	12	0			0		5	2	7	4	5	9	28

### Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L	R	Total				Total		T	R	Total	L	T	Total	
7:00 AM	0	1	1	0			0		2	0	2	0	0	0	3
7:15 AM	1	1	2	0			0		0	1	1	0	2	2	5
7:30 AM	0	2	2	0			0		1	0	1	1	1	2	5
7:45 AM	0	0	0	0			0		1	0	1	0	0	0	1
8:00 AM	0	0	0	0			0		0	0	0	1	1	2	2
8:15 AM	0	2	2	0			0		0	1	1	0	1	1	4
8:30 AM	1	2	3	0			0		0	0	0	2	0	2	5
8:45 AM	1	1	2	0			0		1	0	1	0	0	0	3
Total Survey	3	9	12	0			0		5	2	7	4	5	9	28

### Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound S Mccord Rd			Westbound S Mccord Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	2	7	0	0	0	5	4	9	4	8	12	14
PHF	0.31			0.00			0.63			0.50			0.44

By Movement	Northbound Leland Rd			Southbound Leland Rd			Eastbound S Mccord Rd			Westbound S Mccord Rd			Total
	L	R	Total			Total	T	R	Total	L	T	Total	
Volume	1	4	5			0	4	1	5	1	3	4	14
PHF	0.25	0.33	0.31			0.00	0.50	0.25	0.63	0.25	0.38	0.50	0.44

### Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L	R	Total				Total		T	R	Total	L	T	Total	
7:00 AM	1	4	5	0			0		4	1	5	1	3	4	14
7:15 AM	1	3	4	0			0		2	1	3	2	4	6	13
7:30 AM	0	4	4	0			0		2	1	3	2	3	5	12
7:45 AM	1	4	5	0			0		1	1	2	3	2	5	12
8:00 AM	2	5	7	0			0		1	1	2	3	2	5	14

## Peak Hour Summary



Clay Carney  
(503) 833-2740

### Leland Rd & S Mccord Rd

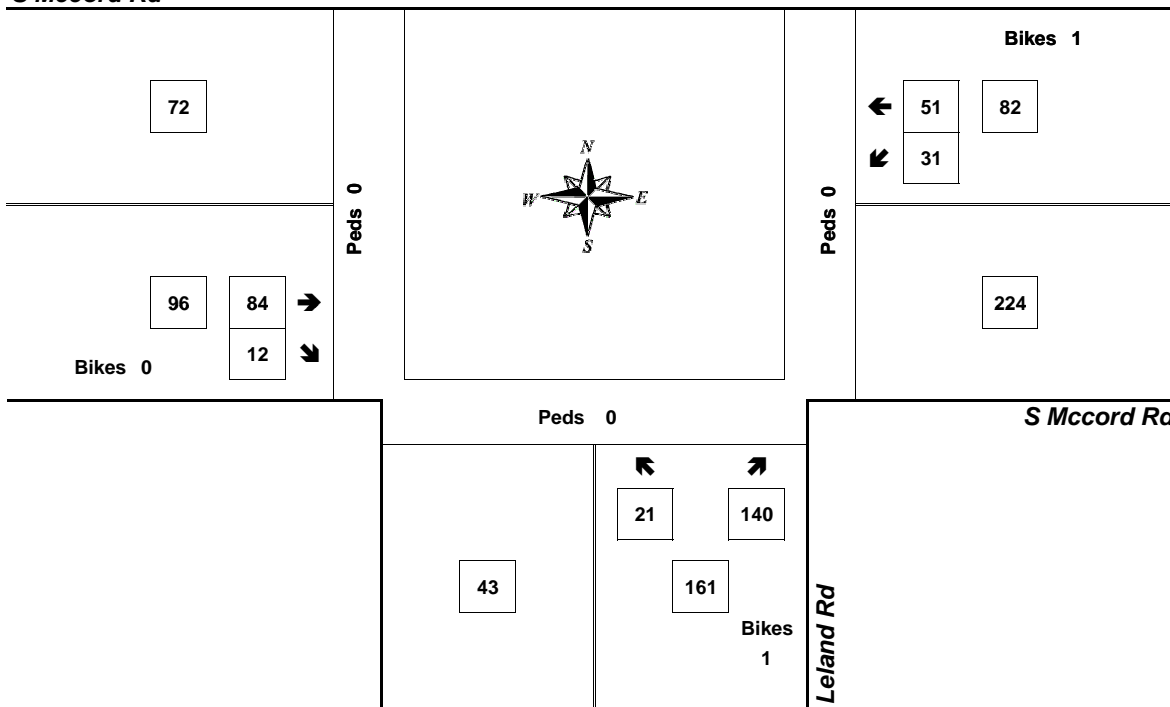
7:00 AM to 8:00 AM

Tuesday, April 18, 2017

Bikes  
0

**S Mccord Rd**

Peds 0



Approach	PHF	HV%	Volume
EB	0.59	5.2%	96
WB	0.76	4.9%	82
NB	0.81	3.1%	161
SB	0.00	0.0%	0
<b>Intersection</b>	<b>0.85</b>	<b>4.1%</b>	<b>339</b>

Count Period: 7:00 AM to 9:00 AM

## Total Vehicle Summary

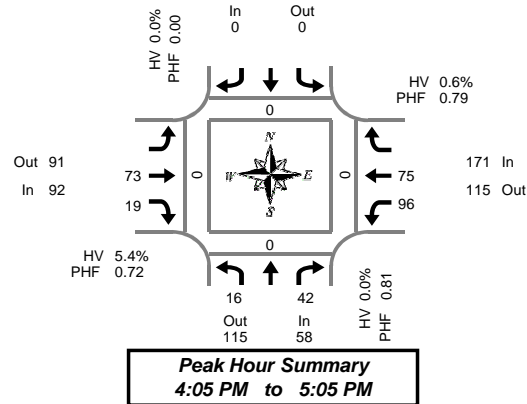


Clay Carney  
(503) 833-2740

## Leland Rd & S Mccord Rd

Tuesday, April 18, 2017

4:00 PM to 6:00 PM



**Peak Hour Summary**  
4:05 PM to 5:05 PM

### 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
4:00 PM	0	2	0				0		5	0	0		6	5		0	18	0	0	0	0
4:05 PM	2	6	0				0		4	1	0		8	9		0	30	0	0	0	0
4:10 PM	2	5	1				0		8	0	0		4	10		0	29	0	0	0	0
4:15 PM	1	2	0				0		6	2	0		6	5		0	22	0	0	0	0
4:20 PM	1	6	0				0		12	4	0		8	7		0	38	0	0	0	0
4:25 PM	2	2	0				0		5	0	0		3	4		0	16	0	0	0	0
4:30 PM	1	3	0				0		6	2	0		6	5		0	23	0	0	0	0
4:35 PM	0	2	0				0		8	2	0		14	7		0	33	0	0	0	0
4:40 PM	1	1	0				0		5	2	0		11	6		0	26	0	0	0	0
4:45 PM	2	9	0				0		5	2	0		13	3		0	34	0	0	0	0
4:50 PM	1	1	0				0		3	2	0		7	7		0	21	0	0	0	0
4:55 PM	1	2	0				0		6	1	0		10	6		1	26	0	0	0	0
5:00 PM	2	3	0				0		5	1	0		6	6		0	23	0	0	0	0
5:05 PM	2	3	0				0		4	1	0		9	7		0	26	0	0	0	0
5:10 PM	0	2	0				0		8	1	0		5	6		0	22	0	0	0	0
5:15 PM	1	3	0				0		7	4	0		8	8		0	31	0	0	0	0
5:20 PM	1	3	0				0		2	3	0		7	3		1	19	0	0	0	0
5:25 PM	1	3	0				0		1	1	0		12	7		0	25	0	0	0	0
5:30 PM	0	2	0				0		3	3	0		4	10		0	22	0	0	0	0
5:35 PM	1	4	0				0		5	1	0		8	7		1	26	0	0	0	0
5:40 PM	1	5	0				0		8	3	0		15	6		0	38	0	0	0	0
5:45 PM	2	6	0				0		6	0	0		10	3		0	27	0	0	0	0
5:50 PM	2	1	0				0		6	1	0		9	2		0	21	0	0	0	0
5:55 PM	0	3	0				0		9	1	0		7	9		0	29	0	0	0	0
Total Survey	27	79	1				0		137	38	0		196	148		3	625	0	0	0	0

### 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
4:00 PM	4	13	1				0		17	1	0		18	24		0	77	0	0	0	0
4:15 PM	4	10	0				0		23	6	0		17	16		0	76	0	0	0	0
4:30 PM	2	6	0				0		19	6	0		31	18		0	82	0	0	0	0
4:45 PM	4	12	0				0		14	5	0		30	16		1	81	0	0	0	0
5:00 PM	4	8	0				0		17	3	0		20	19		0	71	0	0	0	0
5:15 PM	3	9	0				0		10	8	0		27	18		1	75	0	0	0	0
5:30 PM	2	11	0				0		16	7	0		27	23		1	86	0	0	0	0
5:45 PM	4	10	0				0		21	2	0		26	14		0	77	0	0	0	0
Total Survey	27	79	1				0		137	38	0		196	148		3	625	0	0	0	0

### Peak Hour Summary

4:05 PM to 5:05 PM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	58	115	173	1	0	0	0	0	92	91	183	0	171	115	286	1	321	0	0	0	0
%HV	0.0%				0.0%				5.4%				0.6%				1.9%				
PHF	0.81				0.00				0.72				0.79				0.86				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Total
	L	R	Total				Total		T	R	Total		L	T		Total	
Volume	16	42	58				0		73	19	92		96	75		171	321
%HV	0.0%	NA	0.0%	0.0%	NA	NA	NA	0.0%	NA	5.5%	5.3%	5.4%	0.0%	1.3%	NA	0.6%	1.9%
PHF	0.80	0.81	0.81				0.00		0.70	0.79	0.72		0.63	0.78		0.79	0.86

### Rolling Hour Summary

4:00 PM to 6:00 PM

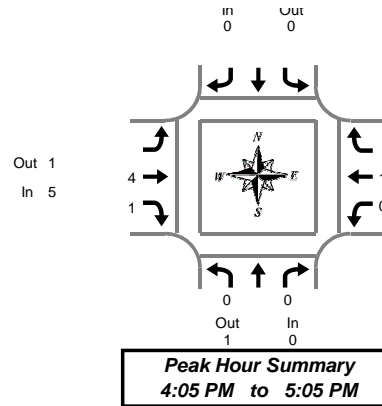
Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd				Westbound S Mccord Rd				Interval Total	Pedestrians Crosswalk			
	L	R	Bikes				Bikes		T	R	Bikes		L	T		Bikes		North	South	East	West
4:00 PM	14	41	1				0		73	18	0		96	74		1	316	0	0	0	0
4:15 PM	14	36	0				0		73	20	0		98	69		1	310	0	0	0	0
4:30 PM	13	35	0				0		60	22	0		108	71		2	309	0	0	0	0
4:45 PM	13	40	0				0		57	23	0		104	76		3	313	0	0	0	0
5:00 PM	13	38	0				0		64	20	0		100	74		2	309	0	0	0	0



# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & S Mccord Rd

Tuesday, April 18, 2017

4:00 PM to 6:00 PM

### Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L		R	Total				Total	T	R	Total	L	T		Total
4:00 PM	0		0	0				0	0	0	0	0	0		0
4:05 PM	0		0	0				0	1	0	1	0	0		0
4:10 PM	0		0	0				0	1	0	1	0	1		1
4:15 PM	0		0	0				0	0	0	0	0	0		0
4:20 PM	0		0	0				0	0	1	1	0	0		0
4:25 PM	0		0	0				0	0	0	0	0	0		0
4:30 PM	0		0	0				0	1	0	1	0	0		0
4:35 PM	0		0	0				0	0	0	0	0	0		0
4:40 PM	0		0	0				0	0	0	0	0	0		0
4:45 PM	0		0	0				0	0	0	0	0	0		0
4:50 PM	0		0	0				0	0	0	0	0	0		0
4:55 PM	0		0	0				0	0	0	0	0	0		0
5:00 PM	0		0	0				0	1	0	1	0	0		0
5:05 PM	0		0	0				0	0	0	0	0	0		0
5:10 PM	0		0	0				0	0	0	0	0	0		0
5:15 PM	0		0	0				0	0	0	0	0	0		0
5:20 PM	0		0	0				0	0	0	0	0	0		0
5:25 PM	0		0	0				0	0	0	0	0	1		1
5:30 PM	0		0	0				0	0	0	0	0	0		0
5:35 PM	0		1	1				0	0	0	0	1	0		1
5:40 PM	0		0	0				0	0	0	0	0	0		0
5:45 PM	0		0	0				0	0	0	0	0	0		0
5:50 PM	0		0	0				0	0	0	0	0	0		0
5:55 PM	0		0	0				0	0	0	0	0	0		0
Total Survey	0		1	1				0	4	1	5	1	2		3

### Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L		R	Total				Total	T	R	Total	L	T		Total
4:00 PM	0		0	0				0	2	0	2	0	1		1
4:15 PM	0		0	0				0	0	1	1	0	0		0
4:30 PM	0		0	0				0	1	0	1	0	0		0
4:45 PM	0		0	0				0	0	0	0	0	0		0
5:00 PM	0		0	0				0	1	0	1	0	0		0
5:15 PM	0		0	0				0	0	0	0	0	1		1
5:30 PM	0		1	1				0	0	0	0	1	0		1
5:45 PM	0		0	0				0	0	0	0	0	0		0
Total Survey	0		1	1				0	4	1	5	1	2		3

### Heavy Vehicle Peak Hour Summary 4:05 PM to 5:05 PM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound S Mccord Rd			Westbound S Mccord Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	0	0	0	5	1	6	1	4	5	6
PHF	0.00			0.00			0.63			0.25			0.50

By Movement	Northbound Leland Rd			Southbound Leland Rd			Eastbound S Mccord Rd			Westbound S Mccord Rd			Total
	L		R			Total	T	R	Total	L	T	Total	
Volume	0		0			0	4	1	5	0	1	1	6
PHF	0.00		0.00			0.00	0.50	0.25	0.63	0.00	0.25	0.25	0.50

### Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound S Mccord Rd			Westbound S Mccord Rd			Interval Total
	L		R	Total				Total	T	R	Total	L	T		Total
4:00 PM	0		0	0				0	3	1	4	0	1		1
4:15 PM	0		0	0				0	2	1	3	0	0		0
4:30 PM	0		0	0				0	2	0	2	0	1		1
4:45 PM	0		1	1				0	1	0	1	1	1		2
5:00 PM	0		1	1				0	1	0	1	1	1		2

## Peak Hour Summary



Clay Carney  
(503) 833-2740

### Leland Rd & S Mccord Rd

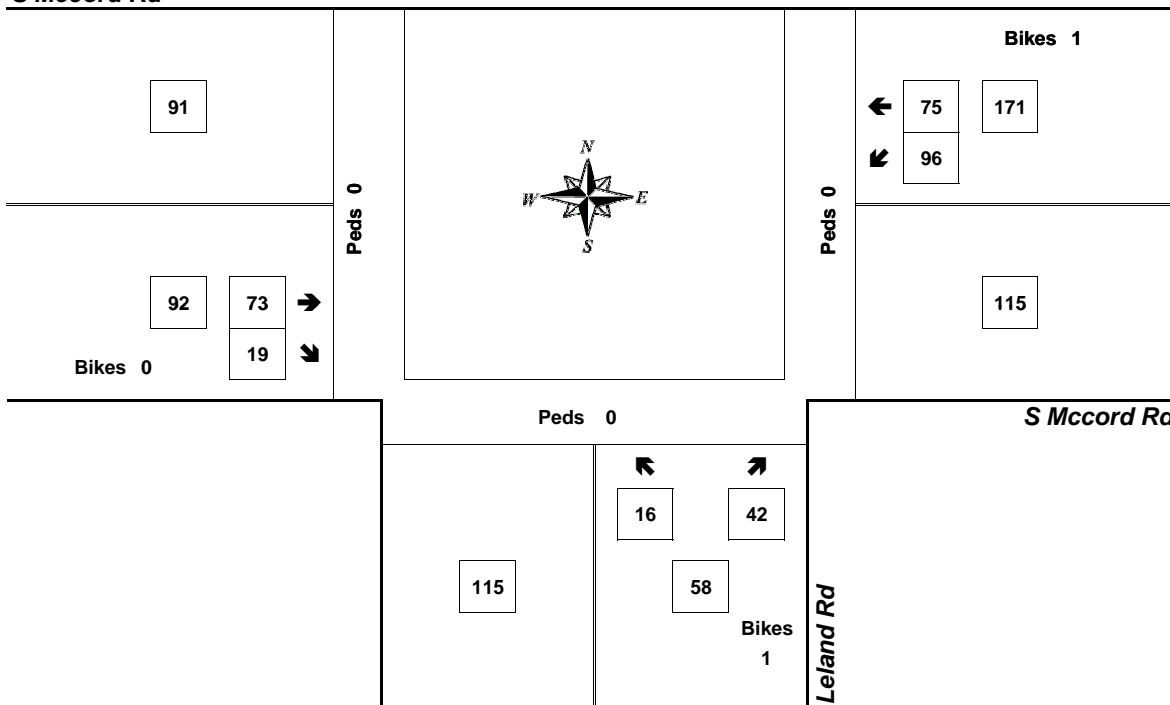
4:05 PM to 5:05 PM

Tuesday, April 18, 2017

Bikes  
0

**S Mccord Rd**

Peds 0



Approach	PHF	HV%	Volume
EB	0.72	5.4%	92
WB	0.79	0.6%	171
NB	0.81	0.0%	58
SB	0.00	0.0%	0
<b>Intersection</b>	<b>0.86</b>	<b>1.9%</b>	<b>321</b>

Count Period: 4:00 PM to 6:00 PM

## Total Vehicle Summary

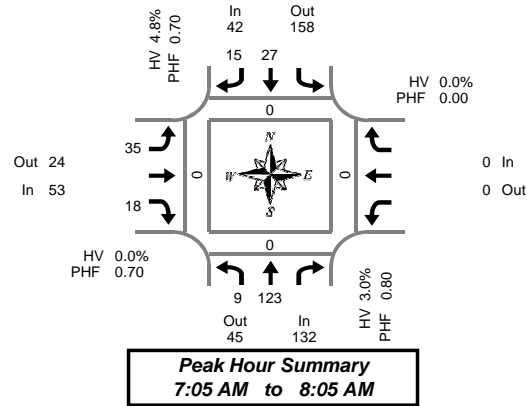


Clay Carney  
(503) 833-2740

## Leland Rd & Lindsay Anne Ln

Tuesday, April 18, 2017

7:00 AM to 9:00 AM



Peak Hour Summary  
7:05 AM to 8:05 AM

### 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	0	6		0	2	1		0	0		0	0				0	9	0	0	0	0
7:05 AM	1	7		0	0	1		0	3		2	0				0	14	0	0	0	0
7:10 AM	1	3		0	5	0		0	4		5	0				0	18	0	0	0	0
7:15 AM	0	12		0	3	0		0	3		1	0				0	19	0	0	0	0
7:20 AM	2	14		0	2	2		0	5		1	0				0	26	0	0	0	0
7:25 AM	0	13		0	2	1		0	0		0	0				0	16	0	0	0	0
7:30 AM	1	9		0	1	0		0	2		0	0				0	13	0	0	0	0
7:35 AM	0	13		0	3	1		0	4		2	0				0	23	0	0	0	0
7:40 AM	0	11		0	2	5		0	3		1	0				0	22	0	0	0	0
7:45 AM	1	16		0	3	1		0	3		3	0				0	27	0	0	0	0
7:50 AM	1	9		0	1	0		0	2		2	0				0	15	0	0	0	0
7:55 AM	1	11		0	2	3		0	3		1	0				0	21	0	0	0	0
8:00 AM	1	5		0	3	1		0	3		0	0				0	13	0	0	0	0
8:05 AM	2	6		0	0	0		0	1		1	0				0	10	0	0	0	0
8:10 AM	1	3		0	1	1		0	2		1	0				0	9	0	0	0	0
8:15 AM	0	7		0	0	1		0	3		0	0				0	11	0	0	0	0
8:20 AM	0	3		0	2	1		0	3		1	0				0	10	0	0	0	0
8:25 AM	1	5		0	3	3		0	1		0	0				0	13	0	0	0	0
8:30 AM	2	2		0	5	0		0	2		1	0				0	12	0	0	0	0
8:35 AM	0	2		0	2	0		0	2		0	0				0	6	0	0	0	0
8:40 AM	0	3		0	2	0		0	3		1	0				0	9	0	0	0	0
8:45 AM	0	3		0	5	2		0	0		1	0				0	11	0	0	0	0
8:50 AM	0	4		0	2	0		0	3		0	0				0	9	0	0	0	0
8:55 AM	1	2		0	2	2		0	0		1	0				0	8	0	0	0	0
Total Survey	16	169		0	53	26		0	55		25	0				0	344	0	0	0	0

### 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	2	16		0	7	2		0	7		7	0				0	41	0	0	0	0
7:15 AM	2	39		0	7	3		0	8		2	0				0	61	0	0	0	0
7:30 AM	1	33		0	6	6		0	9		3	0				0	58	0	0	0	0
7:45 AM	3	36		0	6	4		0	8		6	0				0	63	0	0	0	0
8:00 AM	4	14		0	4	2		0	6		2	0				0	32	0	0	0	0
8:15 AM	1	15		0	5	5		0	7		1	0				0	34	0	0	0	0
8:30 AM	2	7		0	9	0		0	7		2	0				0	27	0	0	0	0
8:45 AM	1	9		0	9	4		0	3		2	0				0	28	0	0	0	0
Total Survey	16	169		0	53	26		0	55		25	0				0	344	0	0	0	0

### Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	132	45	177	0	42	158	200	0	53	24	77	0	0	0	0	0	227	0	0	0	0
%HV	3.0%				4.8%				0.0%				0.0%				2.6%				
PHF	0.80				0.70				0.70				0.00				0.79				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Total
	L	T		Total	T	R		Total	L		R	Total				Total	
Volume	9	123		132	27	15		42	35		18	53				0	227
%HV	0.0%	3.3%		NA	3.7%	6.7%		4.8%	0.0%	NA	0.0%	0.0%	NA	NA		0.0%	2.6%
PHF	0.75	0.77		0.80	0.68	0.54		0.70	0.73		0.56	0.70				0.00	0.79

### Rolling Hour Summary

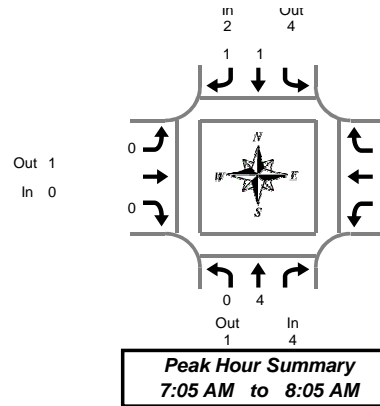
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	8	124		0	26	15		0	32		18	0				0	223	0	0	0	0
7:15 AM	10	122		0	23	15		0	31		13	0				0	214	0	0	0	0
7:30 AM	9	98		0	21	17		0	30		12	0				0	187	0	0	0	0
7:45 AM	10	72		0	24	11		0	28		11	0				0	156	0	0	0	0
8:00 AM	8	45		0	27	11		0	23		7	0				0	121	0	0	0	0

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & Lindsay Anne Ln

Tuesday, April 18, 2017

7:00 AM to 9:00 AM

### Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R						
7:00 AM	0	1		1	0	0	0	0	0		0	0				0	1
7:05 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:10 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:15 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:20 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:25 AM	0	2		2	1	0	1	0	0		0	0				0	3
7:30 AM	0	2		2	0	0	0	0	0		0	0				0	2
7:35 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:40 AM	0	0		0	0	1	1	0	0		0	0				0	1
7:45 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:50 AM	0	0		0	0	0	0	0	0		0	0				0	0
7:55 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:00 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:05 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:10 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:15 AM	0	0		0	0	0	0	1	0		0	1				0	1
8:20 AM	0	0		0	0	1	1	0	0		0	0				0	1
8:25 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:30 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:35 AM	0	0		0	0	0	0	1	0		0	1				0	1
8:40 AM	0	1		1	0	0	0	0	0		0	0				0	1
8:45 AM	0	1		1	1	0	1	0	0		0	0				0	2
8:50 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:55 AM	0	1		1	0	0	0	0	1		1	1				0	2
Total Survey	0	8		8	2	2	4	2	1		3					0	15

### Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R						
7:00 AM	0	1		1	0	0	0	0	0		0	0				0	1
7:15 AM	0	2		2	1	0	1	0	0		0	0				0	3
7:30 AM	0	2		2	0	1	1	0	0		0	0				0	3
7:45 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:00 AM	0	0		0	0	0	0	0	0		0	0				0	0
8:15 AM	0	0		0	0	1	1	1	0		0	1				0	2
8:30 AM	0	1		1	0	0	0	1	0		0	1				0	2
8:45 AM	0	2		2	1	0	1	0	1		1	1				0	4
Total Survey	0	8		8	2	2	4	2	1		3					0	15

### Heavy Vehicle Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound Lindsay Anne Ln			Westbound Lindsay Anne Ln			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	1	5	2	4	6	0	1	1	0	0	0	6
PHF	0.25			0.50			0.00			0.00			0.30

By Movement	Northbound Leland Rd			Southbound Leland Rd			Eastbound Lindsay Anne Ln			Westbound Lindsay Anne Ln			Total
	L	T	Total	T	R	Total	L		R	Total		Total	
Volume	0	4	4	1	1	2	0		0	0		0	6
PHF	0.00	0.25	0.25	0.25	0.25	0.50	0.00		0.00	0.00		0.00	0.30

### Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R		
7:00 AM	0	5		5	1	1	2	0	0		0	0	7
7:15 AM	0	4		4	1	1	2	0	0		0	0	6
7:30 AM	0	2		2	0	2	2	1	0		1	0	5
7:45 AM	0	1		1	0	1	1	2	0		2	0	4
8:00 AM	0	3		3	1	1	2	2	1		3	0	8

## Peak Hour Summary

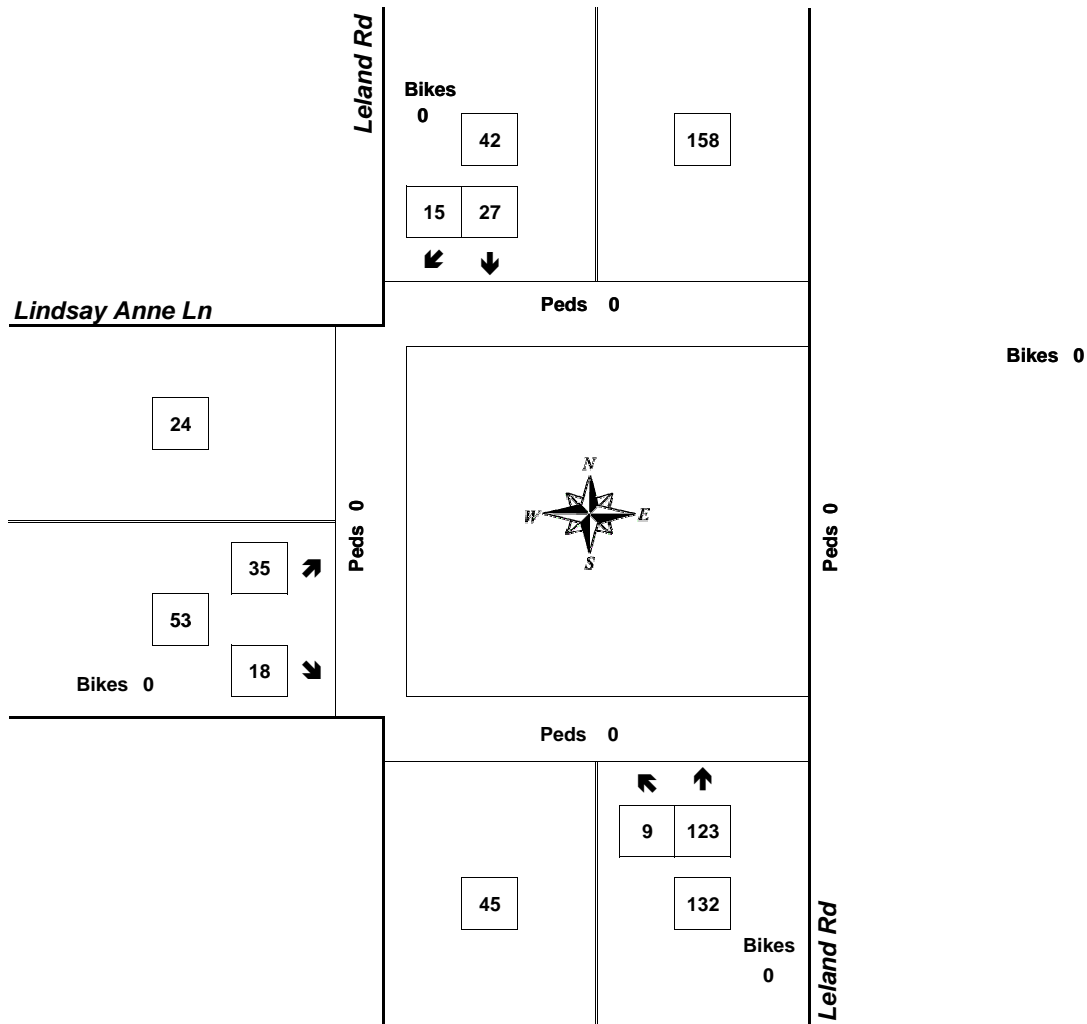


Clay Carney  
(503) 833-2740

### Leland Rd & Lindsay Anne Ln

7:05 AM to 8:05 AM

Tuesday, April 18, 2017



Approach	PHF	HV%	Volume
EB	0.70	0.0%	53
WB	0.00	0.0%	0
NB	0.80	3.0%	132
SB	0.70	4.8%	42
<b>Intersection</b>	<b>0.79</b>	<b>2.6%</b>	<b>227</b>

Count Period: 7:00 AM to 9:00 AM

## Total Vehicle Summary

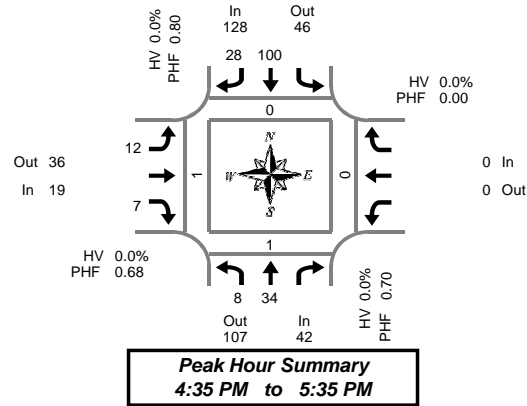


Clay Carney  
(503) 833-2740

## Leland Rd & Lindsay Anne Ln

Tuesday, April 18, 2017

4:00 PM to 6:00 PM



### 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	0	2		0	7	2		0	0		2	0				0	13	0	0	0	0
4:05 PM	1	4		0	3	3		0	3		0	0				0	14	0	0	0	0
4:10 PM	0	5		0	4	2		0	1		1	0				0	13	0	0	0	0
4:15 PM	1	1		0	3	1		0	2		0	0				0	8	0	0	0	0
4:20 PM	2	4		0	10	3		0	2		0	0				0	21	0	0	0	0
4:25 PM	1	2		0	0	2		0	2		2	0				0	9	0	0	0	0
4:30 PM	0	2		0	6	1		0	2		0	0				0	11	0	0	0	0
4:35 PM	0	1		0	13	1		0	0		0	0				0	15	0	0	0	0
4:40 PM	1	2		0	11	2		0	1		1	0				0	18	0	0	0	0
4:45 PM	1	7		0	10	3		0	2		1	0				0	24	0	0	0	0
4:50 PM	1	2		0	8	3		0	1		1	0				0	16	0	0	0	0
4:55 PM	0	4		0	10	1		0	0		0	0				0	15	0	0	0	0
5:00 PM	0	2		0	7	3		0	2		0	0				0	14	0	0	0	0
5:05 PM	2	4		0	8	3		0	1		1	0				0	19	0	0	0	0
5:10 PM	0	1		0	2	1		0	1		1	0				0	6	0	0	0	0
5:15 PM	1	2		0	11	3		0	3		0	0				0	20	0	0	0	1
5:20 PM	0	2		0	9	1		0	1		1	0				0	14	0	0	0	0
5:25 PM	0	3		0	8	2		0	0		0	0				0	13	0	1	0	0
5:30 PM	2	4		0	3	5		0	0		1	1				0	15	0	0	0	0
5:35 PM	1	4		0	7	1		1	1		0	0				0	14	0	0	0	0
5:40 PM	0	4		0	10	2		0	2		0	0				0	18	0	0	0	0
5:45 PM	0	6		0	12	1		0	2		0	0				0	21	0	0	0	0
5:50 PM	3	2		0	8	4		0	1		1	0				0	19	0	0	0	0
5:55 PM	1	1		0	5	2		0	2		0	0				0	11	0	0	0	0
Total Survey	18	71		0	175	52		1	32		13	1				0	361	0	1	0	1

### 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	1	11		0	14	7		0	4		3	0				0	40	0	0	0	0
4:15 PM	4	7		0	13	6		0	6		2	0				0	38	0	0	0	0
4:30 PM	1	5		0	30	4		0	3		1	0				0	44	0	0	0	0
4:45 PM	2	13		0	28	7		0	3		2	0				0	55	0	0	0	0
5:00 PM	2	7		0	17	7		0	4		2	0				0	39	0	0	0	0
5:15 PM	1	7		0	28	6		0	4		1	0				0	47	0	1	0	1
5:30 PM	3	12		0	20	8		1	3		1	1				0	47	0	0	0	0
5:45 PM	4	9		0	25	7		0	5		1	0				0	51	0	0	0	0
Total Survey	18	71		0	175	52		1	32		13	1				0	361	0	1	0	1

### Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	42	107	149	0	128	46	174	0	19	36	55	1	0	0	0	0	189	0	1	0	1
%HV	0.0%				0.0%				0.0%				0.0%				0.0%				
PHF	0.70				0.80				0.68				0.00				0.81				

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Total
	L	T		Total	T	R		Total	L		R	Total				Total	
Volume	8	34		42	100	28		128	12		7	19				0	189
%HV	0.0%	0.0%		NA	0.0%	0.0%		0.0%	0.0%	NA	0.0%	0.0%	NA	NA		0.0%	0.0%
PHF	0.67	0.65		0.70	0.74	0.88		0.80	0.60		0.58	0.68				0.00	0.81

### Rolling Hour Summary

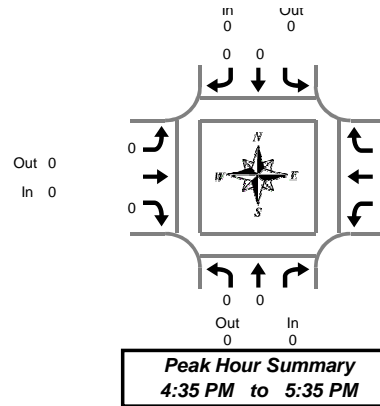
4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Lindsay Anne Ln				Westbound Lindsay Anne Ln				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	8	36		0	85	24		0	16		8	0				0	177	0	0	0	0
4:15 PM	9	32		0	88	24		0	16		7	0				0	176	0	0	0	0
4:30 PM	6	32		0	103	24		0	14		6	0				0	185	0	1	0	1
4:45 PM	8	39		0	93	28		1	14		6	1				0	188	0	1	0	1
5:00 PM	10	35		0	90	28		1	16		5	1				0	184	0	1	0	1

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## Leland Rd & Lindsay Anne Ln

Tuesday, April 18, 2017

4:00 PM to 6:00 PM

### Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R						
4:00 PM	0	0		0	1	0		1	0		0	0				0	1
4:05 PM	0	0		0	0	0		0	0		0	0				0	0
4:10 PM	0	0		0	0	0		0	0		0	0				0	0
4:15 PM	0	0		0	0	0		0	0		0	0				0	0
4:20 PM	0	0		0	1	0		1	0		0	0				0	1
4:25 PM	0	0		0	0	0		0	0		0	0				0	0
4:30 PM	0	0		0	0	0		0	0		0	0				0	0
4:35 PM	0	0		0	0	0		0	0		0	0				0	0
4:40 PM	0	0		0	0	0		0	0		0	0				0	0
4:45 PM	0	0		0	0	0		0	0		0	0				0	0
4:50 PM	0	0		0	0	0		0	0		0	0				0	0
4:55 PM	0	0		0	0	0		0	0		0	0				0	0
5:00 PM	0	0		0	0	0		0	0		0	0				0	0
5:05 PM	0	0		0	0	0		0	0		0	0				0	0
5:10 PM	0	0		0	0	0		0	0		0	0				0	0
5:15 PM	0	0		0	0	0		0	0		0	0				0	0
5:20 PM	0	0		0	0	0		0	0		0	0				0	0
5:25 PM	0	0		0	0	0		0	0		0	0				0	0
5:30 PM	0	0		0	0	0		0	0		0	0				0	0
5:35 PM	0	1		1	0	0		0	1		0	1				0	2
5:40 PM	0	0		0	0	0		0	0		0	0				0	0
5:45 PM	0	0		0	0	0		0	0		0	0				0	0
5:50 PM	0	0		0	0	0		0	0		0	0				0	0
5:55 PM	0	0		0	0	0		0	0		0	0				0	0
Total Survey	0	1		1	2	0		2	1		0	1				0	4

### Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R						
4:00 PM	0	0		0	1	0		1	0		0	0				0	1
4:15 PM	0	0		0	1	0		1	0		0	0				0	1
4:30 PM	0	0		0	0	0		0	0		0	0				0	0
4:45 PM	0	0		0	0	0		0	0		0	0				0	0
5:00 PM	0	0		0	0	0		0	0		0	0				0	0
5:15 PM	0	0		0	0	0		0	0		0	0				0	0
5:30 PM	0	1		1	0	0		0	1		0	1				0	2
5:45 PM	0	0		0	0	0		0	0		0	0				0	0
Total Survey	0	1		1	2	0		2	1		0	1				0	4

### Heavy Vehicle Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total
	In	Out			In	Out			In	Out			In	Out		
Volume	0	0		0	0	0		0	0	0		0	0	0		0
PHF	0.00				0.00				0.00				0.00			

By Movement	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total
	L	T			T	R			L		R					
Volume	0	0		0	0	0		0	0		0	0				0
PHF	0.00	0.00		0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00

### Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd			Total	Southbound Leland Rd			Total	Eastbound Lindsay Anne Ln			Total	Westbound Lindsay Anne Ln			Total	Interval Total
	L	T			T	R			L		R						
4:00 PM	0	0		0	2	0		2	0		0	0				0	2
4:15 PM	0	0		0	1	0		1	0		0	0				0	1
4:30 PM	0	0		0	0	0		0	0		0	0				0	0
4:45 PM	0	1		1	0	0		0	1		0	1				0	2
5:00 PM	0	1		1	0	0		0	1		0	1				0	2



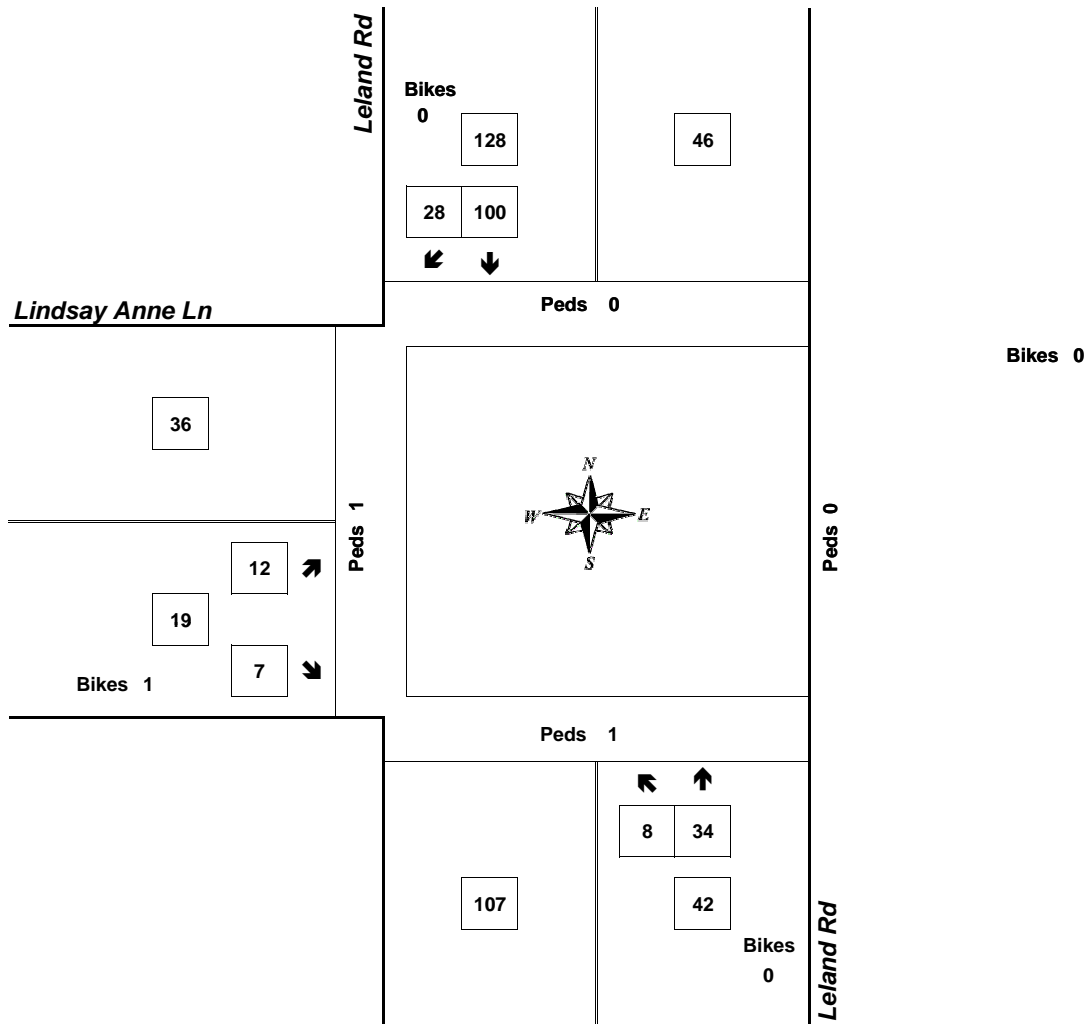
## Peak Hour Summary



Clay Carney  
(503) 833-2740

### Leland Rd & Lindsay Anne Ln

4:35 PM to 5:35 PM  
Tuesday, April 18, 2017



Approach	PHF	HV%	Volume
EB	0.68	0.0%	19
WB	0.00	0.0%	0
NB	0.70	0.0%	42
SB	0.80	0.0%	128
<b>Intersection</b>	<b>0.81</b>	<b>0.0%</b>	<b>189</b>

Count Period: 4:00 PM to 6:00 PM



## TRIP GENERATION CALCULATIONS

<i>Land Use:</i>	<b>Single-Family Detached Housing</b>
<i>Land Use Code:</i>	210
<i>Variable:</i>	Dwelling Units
<i>Variable Value:</i>	28

### AM PEAK HOUR

*Trip Rate: 0.75*

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	<b>5</b>	<b>16</b>	<b>21</b>

### PM PEAK HOUR

*Trip Rate: 1.00*

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	<b>18</b>	<b>10</b>	<b>28</b>

### WEEKDAY

*Trip Rate: 9.52*

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>133</b>	<b>133</b>	<b>266</b>

### SATURDAY

*Trip Rate: 9.91*

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>139</b>	<b>139</b>	<b>278</b>

Source: TRIP GENERATION, Ninth Edition



## LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

*Level of service A:* Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

*Level of service B:* Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

*Level of service C:* Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

*Level of service D:* Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

*Level of service E:* Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

*Level of service F:* Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.



*LEVEL OF SERVICE CRITERIA  
FOR SIGNALIZED INTERSECTIONS*




LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

*LEVEL OF SERVICE CRITERIA  
FOR UNSIGNALIZED INTERSECTIONS*

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Intersection

Int Delay, s/veh 3.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	21	140	84	12	31	51
Future Vol, veh/h	21	140	84	12	31	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	23	152	91	13	34	55

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	55	0	321
Stage 1	-	-	123
Stage 2	-	-	198
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1550	-	596
Stage 1	-	-	794
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1550	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	NW	NE	SW
HCM Control Delay, s	1	9	2.9
HCM LOS		A	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	1012	1550	-	1429	-
HCM Lane V/C Ratio	0.103	0.015	-	0.024	-
HCM Control Delay (s)	9	7.4	-	7.6	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.3	0	-	0.1	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 2.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	27	15	9	123	35	18
Future Vol, veh/h	27	15	9	123	35	18
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	-
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	29	16	10	134	38	20




Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	191
Stage 1	-	-	38
Stage 2	-	-	153
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1562	798
Stage 1	-	-	984
Stage 2	-	-	875
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1562	792
Mov Cap-2 Maneuver	-	-	792
Stage 1	-	-	984
Stage 2	-	-	869

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	860	1562	-	-	-
HCM Lane V/C Ratio	0.067	0.006	-	-	-
HCM Control Delay (s)	9.5	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Intersection

Int Delay, s/veh 5.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	16	42	73	17	96	75
Future Vol, veh/h	16	42	73	17	96	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	17	46	79	18	104	82

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	82	0	370
Stage 1	-	-	290
Stage 2	-	-	80
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1515	-	560
Stage 1	-	-	672
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1515	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	NW	NE	SW
HCM Control Delay, s	2	9.1	4.2
HCM LOS		A	

Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	978	1515	-	1562	-
HCM Lane V/C Ratio	0.1	0.011	-	0.067	-
HCM Control Delay (s)	9.1	7.4	-	7.5	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.3	0	-	0.2	-






HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 1.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	100	28	8	34	12	7
Future Vol, veh/h	100	28	8	34	12	7
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	-
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	109	30	9	37	13	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	178
Stage 1	-	-	124
Stage 2	-	-	54
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1445	812
Stage 1	-	-	902
Stage 2	-	-	969
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1445	807
Mov Cap-2 Maneuver	-	-	807
Stage 1	-	-	902
Stage 2	-	-	963

Approach	SE	NW	NE
HCM Control Delay, s	0	1.4	9.4
HCM LOS			A




Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	847	1445	-	-	-
HCM Lane V/C Ratio	0.024	0.006	-	-	-
HCM Control Delay (s)	9.4	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 TWSC  
1: McCord Road & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 3.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	22	146	87	12	32	53
Future Vol, veh/h	22	146	87	12	32	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	24	159	95	13	35	58

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	58	0	334
Stage 1	-	-	127
Stage 2	-	-	207
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1546	-	586
Stage 1	-	-	791
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1546	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	NW	NE	SW
HCM Control Delay, s	1	9	2.9
HCM LOS		A	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	1008	1546	-	1420	-
HCM Lane V/C Ratio	0.107	0.015	-	0.024	-
HCM Control Delay (s)	9	7.4	-	7.6	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	0.1	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 2.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	28	16	9	128	36	19
Future Vol, veh/h	28	16	9	128	36	19
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	-
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	30	17	10	139	39	21




Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	198
Stage 1	-	-	39
Stage 2	-	-	159
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1559	791
Stage 1	-	-	983
Stage 2	-	-	870
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1559	785
Mov Cap-2 Maneuver	-	-	785
Stage 1	-	-	983
Stage 2	-	-	864

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	856	1559	-	-	-
HCM Lane V/C Ratio	0.07	0.006	-	-	-
HCM Control Delay (s)	9.5	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Intersection

Int Delay, s/veh 5.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	17	44	76	20	100	78
Future Vol, veh/h	17	44	76	20	100	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	18	48	83	22	109	85

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	85	0	387 85
Stage 1	-	-	302 -
Stage 2	-	-	85 -
Critical Hdwy	4.12	-	6.52 6.22
Critical Hdwy Stg 1	-	-	5.52 -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	2.218	-	4.018 3.318
Pot Cap-1 Maneuver	1512	-	547 974
Stage 1	-	-	664 -
Stage 2	-	-	- -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1512	-	0 974
Mov Cap-2 Maneuver	-	-	0 -
Stage 1	-	-	0 -
Stage 2	-	-	0 -

Approach	NW	NE	SW
HCM Control Delay, s	2.1	9.1	4.2
HCM LOS		A	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	974	1512	-	1559	-
HCM Lane V/C Ratio	0.107	0.012	-	0.07	-
HCM Control Delay (s)	9.1	7.4	-	7.5	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	0.2	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

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Intersection

Int Delay, s/veh 1.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	104	29	8	35	12	7
Future Vol, veh/h	104	29	8	35	12	7
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	-
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	113	32	9	38	13	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	145
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1437
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1437
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	1.4	9.4
HCM LOS			A




Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	841	1437	-	-	-
HCM Lane V/C Ratio	0.025	0.006	-	-	-
HCM Control Delay (s)	9.4	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 TWSC  
1: McCord Road & Leland Road

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Intersection

Int Delay, s/veh 4.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	25	155	87	13	35	53
Future Vol, veh/h	25	155	87	13	35	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	27	168	95	14	38	58

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	58	0	357 58 168 0
Stage 1	-	-	134 - - -
Stage 2	-	-	223 - - -
Critical Hdwy	4.12	-	6.52 6.22 4.12 -
Critical Hdwy Stg 1	-	-	5.52 - - -
Critical Hdwy Stg 2	-	-	- - - -
Follow-up Hdwy	2.218	-	4.018 3.318 2.218 -
Pot Cap-1 Maneuver	1546	-	569 1008 1410 -
Stage 1	-	-	785 - - -
Stage 2	-	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	1546	-	543 1008 1410 -
Mov Cap-2 Maneuver	-	-	543 - - -
Stage 1	-	-	763 - - -
Stage 2	-	-	- - - -

Approach	NW	NE	SW
HCM Control Delay, s	1	12.7	3
HCM LOS		B	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	578	1546	-	1410	-
HCM Lane V/C Ratio	0.188	0.018	-	0.027	-
HCM Control Delay (s)	12.7	7.4	-	7.6	0
HCM Lane LOS	B	A	-	A	A
HCM 95th %tile Q(veh)	0.7	0.1	-	0.1	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

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Intersection

Int Delay, s/veh 2.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	32	16	9	128	36	19
Future Vol, veh/h	32	16	9	128	36	19
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	-
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	35	17	10	139	39	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	202
Stage 1	-	-	43
Stage 2	-	-	159
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1554	787
Stage 1	-	-	979
Stage 2	-	-	870
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1554	781
Mov Cap-2 Maneuver	-	-	781
Stage 1	-	-	979
Stage 2	-	-	864

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	851	1554	-	-	-
HCM Lane V/C Ratio	0.07	0.006	-	-	-
HCM Control Delay (s)	9.6	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-






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## 3: Site Access & Leland Road

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### Intersection

Int Delay, s/veh 0.7

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	28	4	1	164	12	4
Future Vol, veh/h	28	4	1	164	12	4
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	-
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	30	4	1	178	13	4




Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	213
Stage 1	-	-	33
Stage 2	-	-	180
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1576	775
Stage 1	-	-	989
Stage 2	-	-	851
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1576	774
Mov Cap-2 Maneuver	-	-	774
Stage 1	-	-	989
Stage 2	-	-	850

Approach	SE	NW	NE
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	827	1576	-	-	-
HCM Lane V/C Ratio	0.021	0.001	-	-	-
HCM Control Delay (s)	9.4	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection

Int Delay, s/veh 5.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	19	50	76	24	110	78
Future Vol, veh/h	19	50	76	24	110	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	21	54	83	26	120	85




Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	85	0	420 85
Stage 1	-	-	324 -
Stage 2	-	-	96 -
Critical Hdwy	4.12	-	6.52 6.22
Critical Hdwy Stg 1	-	-	5.52 -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	2.218	-	4.018 3.318
Pot Cap-1 Maneuver	1512	-	525 974
Stage 1	-	-	650 -
Stage 2	-	-	- -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1512	-	0 974
Mov Cap-2 Maneuver	-	-	0 -
Stage 1	-	-	0 -
Stage 2	-	-	0 -

Approach	NW	NE	SW
HCM Control Delay, s	2	9.2	4.4
HCM LOS		A	

Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	974	1512	-	1551	-
HCM Lane V/C Ratio	0.112	0.014	-	0.077	-
HCM Control Delay (s)	9.2	7.4	-	7.5	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	0.2	-

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Intersection						
Int Delay, s/veh	1.6					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	106	43	12	35	20	9
Future Vol, veh/h	106	43	12	35	20	9
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	-
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	115	47	13	38	22	10
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	203	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	64	-
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	-	-	1417	-	786	909
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1417	-	779	909
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	950	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		1.9		9.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	815	1417	-	-	-	
HCM Lane V/C Ratio	0.039	0.009	-	-	-	
HCM Control Delay (s)	9.6	7.6	0	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	0	-	-	-	

# HCM 2010 TWSC

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Intersection						
Int Delay, s/veh	0.7					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	104	14	4	39	8	2
Future Vol, veh/h	104	14	4	39	8	2
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	-
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	113	15	4	42	9	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	128	0	172	121
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	51	-
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	-	-	1458	-	818	930
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1458	-	816	930
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	968	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.7		9.4	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	837	1458	-	-	-	
HCM Lane V/C Ratio	0.013	0.003	-	-	-	
HCM Control Delay (s)	9.4	7.5	0	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

HCM 2010 TWSC  
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Intersection

Int Delay, s/veh 3.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	31	208	125	18	46	76
Future Vol, veh/h	31	208	125	18	46	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	34	226	136	20	50	83

Major/Minor	Major1	Minor2	Major2		
Conflicting Flow All	83	0	476	83	226
Stage 1	-	-	183	-	-
Stage 2	-	-	293	-	-
Critical Hdwy	4.12	-	6.52	6.22	4.12
Critical Hdwy Stg 1	-	-	5.52	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	4.018	3.318	2.218
Pot Cap-1 Maneuver	1514	-	488	976	1342
Stage 1	-	-	748	-	-
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1514	-	0	976	1342
Mov Cap-2 Maneuver	-	-	0	-	-
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-

Approach	NW	NE	SW
HCM Control Delay, s	1	9.4	2.9
HCM LOS		A	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	976	1514	-	1342	-
HCM Lane V/C Ratio	0.159	0.022	-	0.037	-
HCM Control Delay (s)	9.4	7.4	-	7.8	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0.1	-	0.1	-

HCM 2010 TWSC  
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Intersection

Int Delay, s/veh 2.7

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	40	22	13	183	52	27
Future Vol, veh/h	40	22	13	183	52	27
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	-
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	43	24	14	199	57	29

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	67	282
Stage 1	-	-	55
Stage 2	-	-	227
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1535	708
Stage 1	-	-	968
Stage 2	-	-	811
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1535	701
Mov Cap-2 Maneuver	-	-	701
Stage 1	-	-	968
Stage 2	-	-	803

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	783	1535	-	-	-
HCM Lane V/C Ratio	0.11	0.009	-	-	-
HCM Control Delay (s)	10.2	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-

Intersection

Int Delay, s/veh 5.4

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	24	62	108	28	143	111
Future Vol, veh/h	24	62	108	28	143	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	26	67	117	30	155	121

Major/Minor	Major1		Minor2		Major2	
Conflicting Flow All	121	0	552	121	67	0
Stage 1	-	-	432	-	-	-
Stage 2	-	-	120	-	-	-
Critical Hdwy	4.12	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	1467	-	442	930	1535	-
Stage 1	-	-	582	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-				-
Mov Cap-1 Maneuver	1467	-	0	930	1535	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	NW		NE		SW
HCM Control Delay, s	2.1		9.6		4.3
HCM LOS			A		

Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	930	1467	-	1535	-
HCM Lane V/C Ratio	0.159	0.018	-	0.101	-
HCM Control Delay (s)	9.6	7.5	-	7.6	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0.1	-	0.3	-






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Intersection

Int Delay, s/veh 1.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	149	42	12	51	18	10
Future Vol, veh/h	149	42	12	51	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	-
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	162	46	13	55	20	11




Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	208
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	1.5	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	760	1363	-	-	-
HCM Lane V/C Ratio	0.04	0.01	-	-	-
HCM Control Delay (s)	9.9	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection

Int Delay, s/veh 3.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	35	217	125	19	49	76
Future Vol, veh/h	35	217	125	19	49	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	38	236	136	21	53	83

Major/Minor	Major1	Minor2	Major2
Conflicting Flow All	83	0	501 83 236 0
Stage 1	-	-	189 - -
Stage 2	-	-	312 - -
Critical Hdwy	4.12	-	6.52 6.22 4.12 -
Critical Hdwy Stg 1	-	-	5.52 - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	2.218	-	4.018 3.318 2.218 -
Pot Cap-1 Maneuver	1514	-	472 976 1331 -
Stage 1	-	-	744 - -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1514	-	0 976 1331 -
Mov Cap-2 Maneuver	-	-	0 - -
Stage 1	-	-	0 - -
Stage 2	-	-	0 - -

Approach	NW	NE	SW
HCM Control Delay, s	1	9.4	3.1
HCM LOS		A	




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	976	1514	-	1331	-
HCM Lane V/C Ratio	0.16	0.025	-	0.04	-
HCM Control Delay (s)	9.4	7.4	-	7.8	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0.1	-	0.1	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 2.7

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	43	22	13	184	52	27
Future Vol, veh/h	43	22	13	184	52	27
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	-
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	47	24	14	200	57	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	287	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	228	-
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	-	-	1529	-	703	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	696	1007
Mov Cap-2 Maneuver	-	-	-	-	696	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	802	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	778	1529	-	-	-
HCM Lane V/C Ratio	0.11	0.009	-	-	-
HCM Control Delay (s)	10.2	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-




# HCM 2010 TWSC

## 3: Site Access & Leland Road

08/02/2017

### Intersection

Int Delay, s/veh 0.6

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	65	6	1	236	15	3
Future Vol, veh/h	65	6	1	236	15	3
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	-
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	71	7	1	257	16	3




Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	77	0	333	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	259	-
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	-	-	1522	-	662	988
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	784	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1522	-	661	988
Mov Cap-2 Maneuver	-	-	-	-	661	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	783	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	700	1522	-	-	-
HCM Lane V/C Ratio	0.028	0.001	-	-	-
HCM Control Delay (s)	10.3	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection

Int Delay, s/veh 5.5

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	27	70	108	32	156	111
Future Vol, veh/h	27	70	108	32	156	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	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	29	76	117	35	170	121

Major/Minor	Major1		Minor2		Major2	
Conflicting Flow All	121	0	595	121	76	0
Stage 1	-	-	460	-	-	-
Stage 2	-	-	135	-	-	-
Critical Hdwy	4.12	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	1467	-	417	930	1523	-
Stage 1	-	-	566	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-				-
Mov Cap-1 Maneuver	1467	-	0	930	1523	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	NW		NE		SW
HCM Control Delay, s	2.1		9.6		4.5
HCM LOS			A		




Minor Lane/Major Mvmt	NELn1	NWL	NWR	SWL	SWT
Capacity (veh/h)	930	1467	-	1523	-
HCM Lane V/C Ratio	0.164	0.02	-	0.111	-
HCM Control Delay (s)	9.6	7.5	-	7.7	0
HCM Lane LOS	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0.1	-	0.4	-

HCM 2010 TWSC  
2: Lindsay Anne Lane & Leland Road

08/02/2017

Intersection

Int Delay, s/veh 1.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	151	42	12	54	18	10
Future Vol, veh/h	151	42	12	54	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	-
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	164	46	13	59	20	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	272
Stage 1	-	-	187
Stage 2	-	-	85
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1361	717
Stage 1	-	-	845
Stage 2	-	-	938
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1361	710
Mov Cap-2 Maneuver	-	-	710
Stage 1	-	-	845
Stage 2	-	-	929

Approach	SE	NW	NE
HCM Control Delay, s	0	1.4	10
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	756	1361	-	-	-
HCM Lane V/C Ratio	0.04	0.01	-	-	-
HCM Control Delay (s)	10	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-




# HCM 2010 TWSC

## 3: Site Access & Leland Road

08/02/2017

### Intersection

Int Delay, s/veh 0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	188	14	4	72	8	2
Future Vol, veh/h	188	14	4	72	8	2
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	-
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	204	15	4	78	9	2

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	220
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	714	1349	-	-	-
HCM Lane V/C Ratio	0.015	0.003	-	-	-
HCM Control Delay (s)	10.1	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

05/01/2017

## TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

## CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LELAND RD and Intersectional Crashes at LELAND RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
<b>YEAR: 2015</b>														
BACKING	0	0	1	1	0	0	0	1	0	1	0	0	0	0
REAR-END	0	2	0	2	0	2	0	1	1	1	1	2	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	0	0	0
<b>YEAR 2015 TOTAL</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>YEAR: 2014</b>														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	0	1	1	0	1
REAR-END	0	2	0	2	0	2	0	2	0	2	0	0	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
<b>YEAR 2014 TOTAL</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
<b>YEAR: 2013</b>														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
PEDESTRIAN	0	1	0	1	0	1	0	0	1	0	1	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
<b>YEAR 2013 TOTAL</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>
<b>YEAR: 2012</b>														
ANGLE	0	1	1	2	0	2	0	1	1	0	2	2	0	0
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	0	1	0	1	0	0	1
REAR-END	0	1	1	2	0	1	0	1	0	1	1	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	0	0	0
<b>YEAR 2012 TOTAL</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>



05/01/2017

## TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

## CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LELAND RD and Intersectional Crashes at LELAND RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
<b>YEAR: 2011</b>														
FIXED / OTHER OBJECT	0	2	1	3	0	3	0	1	2	1	2	0	0	3
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	2	0	2	0	3	0	1	1	1	1	2	0	0
<b>YEAR 2011 TOTAL</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>3</b>
<b>FINAL TOTAL</b>	<b>0</b>	<b>14</b>	<b>9</b>	<b>23</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>14</b>	<b>8</b>	<b>13</b>	<b>10</b>	<b>13</b>	<b>0</b>	<b>5</b>

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF OREGON CITY, CLACKAMAS COUNTY

LELAND RD and Intersectional Crashes at LELAND RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

Total crash records: 23

SER#	S D		DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE				SPCL USE				MOVE	A S				PED	ERROR	ACT	EVENT	CAUSE		
	P R S W						(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY	G		E	LICNS									
	E A U C O																									
	E L G H R DAY																									
INVEST	D C S L K TIME	FROM	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC							
04286	Y Y N	11/13/2011	16	LELAND RD	STRGHT		N	Y	RAIN	FIX OBJ	01	NONE	0	STRGHT								062,010,088	01			
CITY		SU	160	LOT WHITCOMB DR	NW	(NONE)	NONE	N	WET	FIX		PRVTE	SE-NW								001	062,010,088	00			
		3A			08			N	DLIT	INJ		PSNGR	CAR		01	DRVR	INJB	25	M	OR-Y		047,080	000	01		
						(02)													OR<25							
											01	NONE	0	STRGHT												
												PRVTE	SE-NW								001	062,010,088	00			
												PSNGR	CAR		02	PSNG	INJB	27	M			000	000	00		
04741	Y N N N N	12/09/2011	16	LELAND RD	STRGHT		N	Y	FOG	FIX OBJ	01	NONE	0	STRGHT								124,053	01,05			
CITY		FR	150	JESSIE AVE	SE	(NONE)	UNKNOWN	N	ICE	FIX		PRVTE	NW-SE								000	124,053	00			
		8A			08			N	DAY	INJ		PSNGR	CAR		01	DRVR	INJC	61	F	OR-Y		047,083,081	017	01,05		
						(02)													OR<25							
03336	N N N	09/07/2012	16	DALLAS ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE	0	STRGHT									07			
NONE		FR	0	LELAND RD	S		UNKNOWN	N	UNK	REAR		PRVTE	SE-NW								000	00				
		11P			06	0		N	DARK	PDO		PSNGR	CAR		01	DRVR	NONE	00	M	OR-Y		026	000	07		
																			UNK							
											02	NONE	0	STOP												
												PRVTE	SE-NW								012	00				
												PSNGR	CAR		01	DRVR	NONE	22	F	OR-Y		000	000	00		
																			OR<25							
03079	N N N	08/19/2012	16	LELAND RD	ALLEY		N	N	CLR	O-1 L-TURN	01	NONE	0	STRGHT									02			
CITY		SU	110	REDDAWAY AVE	SW	(NONE)	UNKNOWN	N	DRY	TURN		PRVTE	SW-NE								000	00				
		4P			08			N	DAY	INJ		MTRCYCLE			01	DRVR	INJB	29	M	OR-Y		000	000	00		
						(02)													OR<25							
											02	NONE	0	TURN-L												
												PRVTE	NE-SE								019	00				
												PSNGR	CAR		01	DRVR	NONE	67	F	OR-Y		028,004	000	02		
																			OR<25							
01898	N N N	05/17/2014	16	MARYSVILLE LN	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE	0	STRGHT									02			
NO RPT		SA	0	LELAND RD	CN		UNKNOWN	N	DRY	TURN		PRVTE	N -S								000	00				
		10A			01	0		Y	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	39	F	OR-Y		000	000	00		
																			OR<25							
											02	NONE	0	TURN-L												
												PRVTE	W -N								018	00				
												PSNGR	CAR		01	DRVR	NONE	38	F	OR-Y		028	000	02		
																			OR<25							
											02	NONE	0	TURN-L												
												PRVTE	W -N								018	00				
												PSNGR	CAR		02	PSNG	NO<5	02	M			000	000	00		
04856	N N N	12/17/2011	16	CARMELITA DR	INTER	CROSS	N	N	FOG	ANGL-OTH	01	NONE	0	STRGHT									02			
CITY		SA	0	LELAND RD	CN		STOP SIGN	N	WET	TURN		PRVTE	NE-SW								007	00				
		5P			04	0		N	DARK	INJ		PSNGR	CAR		01	DRVR	NONE	25	F	OR-Y		000	000	00		
																			OR<25							
											02	NONE	0	TURN-L												
												PRVTE	NW-NE								000	00				
												PSNGR	CAR		01	DRVR	INJC	19	M	OTH-Y		028	000	02		
																			N-RES							
											02	NONE	0	TURN-L												
												PRVTE	NW-NE								000	00				
												PSNGR	CAR		02	PSNG	INJC	18	M			000	000	00		

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF OREGON CITY, CLACKAMAS COUNTY										LELAND RD and Intersectional Crashes at LELAND RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015										
Total crash records: 23																				
S D P R S W										INT-TYPE										
E A U C O DATE										SPCL USE										
SER#	E L G H R DAY	CLASS	CITY STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE	A S								
		DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G E	LICNS	PED				
INVEST	D C S L K TIME	FROM	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E X	RES	LOC	ERROR	ACT	EVENT	CAUSE
04254 NONE	N N N 10/24/2014 FR 11P	16 0	LELAND RD S MEYERS RD	INTER SE 06	4-LEG 0	N STOP SIGN	Y N N	RAIN WET DARK	FIX OBJ FIX PDO	01 NONE PRVTE PSNGR CAR	0 0 0	TURN-R SW-SE						100 000 017	03,08 100 03,08	
												01 DRVR	NONE	16 M	OR-Y OR<25		021,001			
00238 NO RPT	N N N 01/20/2011 TH 7A	16 0	LELAND RD S MEYERS RD	INTER SW 06	4-LEG 0	N STOP SIGN	N N N	CLR DRY DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 0 0	STRGHT SW-NE						000 000 011 000	07 00 07 00 00	
												01 DRVR	NONE	16 F	OR-Y OR<25		026			
												02 NONE PRVTE PSNGR CAR	0 0 0	STOP SW-NE				011 000	00 00	
												01 DRVR	INJC	18 F	OR-Y OR<25		000			
03638 NONE	N N N 10/01/2012 MO 8P	16 0	LELAND RD S MEYERS RD	INTER CN 01	4-LEG 0	N STOP SIGN	N N N	CLR DRY DLIT	ANGL-OTH ANGL PDO	01 NONE PRVTE PSNGR CAR	0 0 0	STRGHT SW-NE						015 000	02 00 02	
												01 DRVR	NONE	00	Unk UNK UNK		028			
												02 NONE PRVTE PSNGR CAR	0 0 0	STRGHT N -S				000 000	00 00	
												01 DRVR	NONE	36 M	OR-Y OR<25		000			
04648 CITY	Y Y N N N 12/03/2011 SA 12A	16 300	LELAND RD S MEYERS RD	STRGHT N 08	(NONE) (02)	N UNKNOWN	Y N N	CLR DRY DARK	FIX OBJ FIX PDO	01 NONE PRVTE PSNGR CAR	0 0 0	TURN-R SE-N						040,062,088 000 051,047,081	33,01,10 00 017	040,062,088 00 33,01,10
												01 DRVR	NONE	30 M	OR-Y OR<25					
05208 NONE	N N N 12/07/2015 MO 7A	16 0	LELAND RD PEASE RD	INTER SW 06	3-LEG 0	N STOP SIGN	N N N	RAIN WET DAWN	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 0 0	STRGHT SW-NE						000 000 011 000	29 00 29 00 00	
												01 DRVR	NONE	57 F	OR-Y OR<25		026			
												02 NONE PRVTE PSNGR CAR	0 0 0	STOP SW-NE				011 000	00 00	
												01 DRVR	INJC	39 M	OR-Y OR<25		000			
00787 NO RPT	N N N N Y 03/05/2011 SA 2P	16 0	LELAND RD PEASE RD	INTER CN 03	3-LEG 0	N STOP SIGN	N N N	CLR DRY DAY	ANGL-OTH TURN INJ	01 NONE PRVTE PSNGR CAR	0 0 0	TURN-L SW-N						015 000	02 00 02	
												01 DRVR	NONE	32 F	OR-Y OR<25		028			
												01 NONE PRVTE PSNGR CAR	0 0 0	TURN-L SW-N				015 000	00 00	
												02 PSNG	NO<5	01 M			000			
												01 NONE PRVTE PSNGR CAR	0 0 0	TURN-L SW-N				015 000	00 00	
												03 PSNG	NO<5	04 M			000			
												02 NONE PRVTE PSNGR CAR	0 0 0	STRGHT N -S				000 000	00 00	
												01 DRVR	INJC	18 M	OR-Y OR<25		000			
00397	N N N 01/31/2015	16	LELAND RD	ALLEY		N	N	CLR	ANGL-OTH	01 NONE	0	STRGHT								02

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.



## TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

## URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

LELAND RD and Intersectional Crashes at LELAND RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

Total crash records: 23

*Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.*



	S	D																		
	P	R	S	W																
	E	A	U	C	O	DATE	CLASS	CITY STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE		A	S	
SER#	E	L	G	H	R	DAY	DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM		PRTC	INJ	G E LICNS PED
INVEST	D	C	S	L	K	TIME	FROM	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO		P# TYPE	SVRTY	E X RES LOC ERROR ACT EVENT CAUSE











## **Exhibit H: Public Facilities Memorandum**

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July 10, 2017

City of Oregon City  
Planning Department  
221 Molalla Avenue, Suite 200  
Oregon City, OR 97045

**Re: Adequacy of Public Facilities (Water, Sanitary Sewer, Storm Drainage, and Streets) for an Annexation/Zone Change of the property located along S Leland Road (identified as Clackamas County 3 2E 18 1400)**

City Planning Department Staff:

AKS has performed significant engineering due diligence for the subject property including reviewing City Master Plans for transportation and utilities, reviewing City GIS Maps and as-built records, and performing field surveys. AKS is familiar with this area, as we have performed engineering services on several projects near to and/or adjacent to the subject properties. In addition, AKS reviewed the project with City Engineering Staff. Through our extensive research, we are not aware of any deficiencies with public facilities. It is our understanding that public facilities are available and adequate for the annexation/zone change of this property.

Sincerely,

**AKS ENGINEERING & FORESTRY, LLC**



Montgomery B. Hurley – PE, PLS  
Principal

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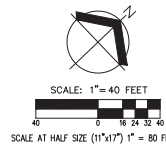


## Exhibit I: Neighborhood Meeting Documentation

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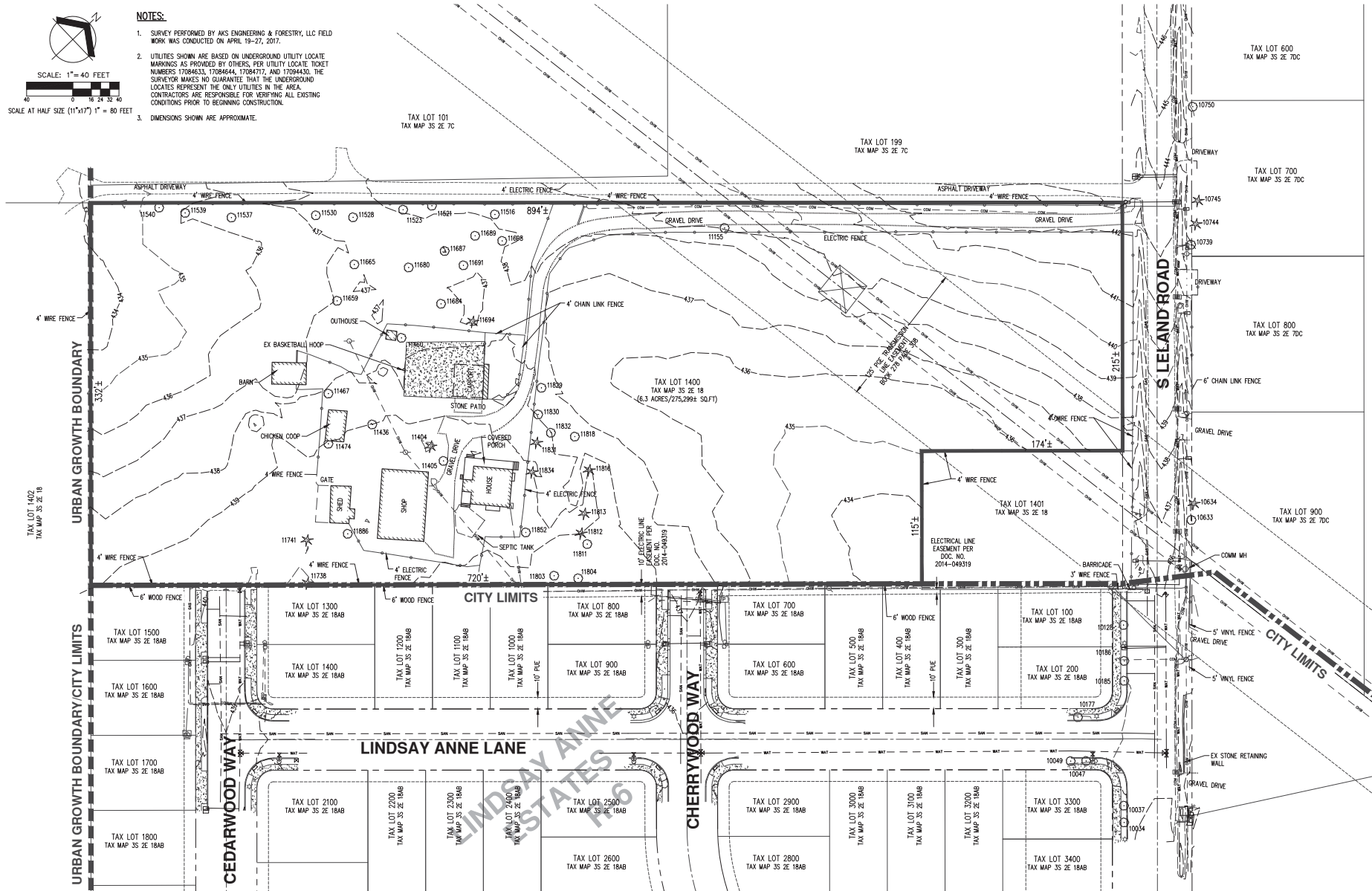
**Hillendale / Tower Vista Neighborhood Steering Meeting  
/w Presenters  
June 6, 2017**

- |                    |   |
|--------------------|---|
| <b>7:00 – 7:10</b> | <b>Call to order – Introductions</b>  |
| <b>7:10 – 7:15</b> | <b>Minutes from 4/4/17 meeting</b>  |
| <b>7:15 – 8:00</b> | <b>Jacki Herb, AKS Engineering<br/>Annexation &amp; Subdivision Presentation</b>    |
| <b>8:00 – 8:30</b> | <b>CIC report,<br/>PRAC report,<br/>Chief’s Advisory report<br/>Land Use report</b> |
| <b>8:30 – 9:00</b> | <b>Open Discussion, plans for July General Meeting</b>                              |
| <b>9:00</b>        | <b>Adjourn.</b>   |



**NOTES:**

1. SURVEY PERFORMED BY AKS ENGINEERING & FORESTRY, LLC FIELD WORK WAS CONDUCTED ON APRIL 19-27, 2017.
2. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS. PER UTILITY LOCATE TICKET NUMBERS 17094633, 17094644, 17094717, AND 17094630, THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
3. DIMENSIONS SHOWN ARE APPROXIMATE.



**AKS**  
ENGINEERING & FORESTRY, LLC  
4000 CHERRY AVE NE  
ASTORIA, OREGON 97103  
P: 503.460.6228  
F: 503.460.7722  
aks-eng.com

**LELAND ROAD  
SUBDIVISION**

**OREGON CITY**

TAX LOT 1400

**PRELIMINARY EXISTING  
CONDITIONS PLAN**

DESIGNED BY: VHN  
DRAWN BY: NMC  
CHECKED BY: CCG  
SCALE: AS NOTED  
DATE: 06/01/2017

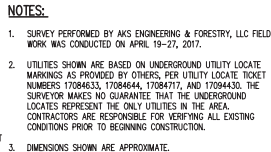
**PRELIMINARY**

REVISIONS

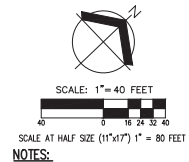
NO.	DESCRIPTION

JOB NUMBER  
**5837**

SHEET  
**1**







- NOTES:**
1. SURVEY PERFORMED BY AKS ENGINEERING & FORESTRY, LLC FIELD WORK WAS CONDUCTED ON APRIL 19-27, 2017.
  2. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS. FOR UTILITY LOCATE TICKET NUMBERS 17084633, 17084644, 17094717, AND 17094430, THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
  3. DIMENSIONS SHOWN ARE APPROXIMATE.

 AKS ENGINEERING & FORESTRY, LLC 4000 CHERRY AVE NE PORTLAND, OREGON 97218 P: 503.460.6228 F: 503.460.7722 aks-eng.com	
<b>LELAND ROAD SUBDIVISION</b> <b>OREGON CITY</b> TAX LOT 1400	
<b>OREGON</b> CLATSOP CO. TAX MAP 352816	
<b>AERIAL PHOTO PLAN</b>	
DESIGNED BY: VHN	CHECKED BY: CCG
DATE: 06/01/2017	SCALE: AS NOTED
<b>PRELIMINARY</b>	
REVISIONS	
JOB NUMBER 5837	
SHEET 3	





June 6, 2017

To whom it may concern:

*Matt Scheidegger*

Chris Goodell with AKS Engineering & Forestry attended a Hillendale/Tower Vista Neighborhood Association meeting and provided a project summary of a planned annexation, zone change and subdivision for property located at 19701 S. Leland road.

**Meeting Date:** June 6, 2017

**Time:** 7:00 PM

**Location:** Living Hope Church, 19691 Meyers Road, Oregon City, OR

Sincerely,

*William Clifford*  
Hillendale Neighborhood Association  
WILLIAM CLIFFORD

06 JUN 17

Date

*Kevin Johnson*  
Tower Vista Neighborhood Association

06/June 17

Date



June 12, 2017

**Neighborhood Meeting Minutes:** Leland Road Subdivision  
19701 S. Leland Road, Oregon City, OR

**Meeting Date:** June 6, 2017

**Time:** 7:00 PM

**Location:** Living Hope Church, 19691 Meyers Road, Oregon City, OR

The Applicant's representative attended a Hillendale/Tower Vista Neighborhood Association meeting to present details to neighbors and community members in preparation for the submission of land use applications for an annexation, zone change, and subdivision. Matt Scheidegger, with AKS Engineering & Forestry, was present. An overview of the project location, current and future zoning, lot sizes, lot configuration, public utilities, and public streets was provided. The planned applications and a general process and timeframe for the land use reviews and construction permitting process were described. Business cards were provided.

Following the presentation, attendees asked questions and/or provided general comments about the project. The following topics were discussed:

- Timing of construction of new homes
- Estimated price of future homes
- Traffic concerns
- Other nearby developments
- Off-site intersections
- Existing trees

The meeting concluded at approximately 7:30 p.m.

Sincerely,

**AKS ENGINEERING & FORESTRY, LLC**



Matt Scheidegger, Planner

## Jacki Herb

---

**From:** Joyce Gifford <Joyce@smALLFLAGs.com>  
**Sent:** Tuesday, June 13, 2017 8:04 PM  
**To:** Jacki Herb  
**Cc:** 'Roy and Anna Harris'  
**Subject:** RE: Neighborhood Association Meeting

The attendees were:

Roy Harris – Hillendale Neighborhood Association (HNA)

Vern Johnson – Tower Vista NA

Debbie DeRusha – HNA

Craig DeRusha – HNA

Mike Albin – Gaffney Lane NA

William Gifford – HNA

Joyce Gifford – HNA

Email address can be provided if needed.

---

**From:** Jacki Herb [mailto:herbj@aks-eng.com]  
**Sent:** Monday, June 12, 2017 11:48 AM  
**To:** Roy and Anna Harris <royandanna@centurylink.net>; 'Joyce Gifford' <Joyce@smALLFLAGs.com>  
**Subject:** RE: Neighborhood Association Meeting

Hello,

I was just following up to see if you would be able to email this? I sometimes get documents stuck in my spam filter, so I apologize if you have already sent it.

Regards,

**Jacki Herb**



**AKS ENGINEERING & FORESTRY, LLC**

12965 SW Herman Road, Suite 100 | Tualatin, OR 97062

P: 503.563.6151 ext. 279 | F: 503.563.6152 | [www.aks-eng.com](http://www.aks-eng.com) | [herbj@aks-eng.com](mailto:herbj@aks-eng.com)

Offices in: Tualatin, OR | Salem-Keizer, OR | Vancouver, WA

*NOTICE: This communication may contain privileged or other confidential information. If you have received it in error, please advise the sender by reply e-mail and immediately delete the message and any attachments without copying or disclosing the contents. AKS Engineering and Forestry shall not be liable for any changes made to the electronic data transferred. Distribution of electronic data to others is prohibited without the express written consent of AKS Engineering and Forestry.*

---

**From:** Roy and Anna Harris [<mailto:royandanna@centurylink.net>]  
**Sent:** Wednesday, June 07, 2017 6:37 PM  
**To:** Jacki Herb <[herbj@aks-eng.com](mailto:herbj@aks-eng.com)>; 'Joyce Gifford' <[Joyce@smALLFLAGs.com](mailto:Joyce@smALLFLAGs.com)>  
**Subject:** Re: Neighborhood Association Meeting

Joyce,

Could you get a copy of the sign in sheet over to Jacki?

Thanks,

Roy

On 6/7/2017 1:43 PM, Jacki Herb wrote:

Roy,

Thank you fitting us into your neighborhood association meeting and allowing us to present information on the Leland Road project.

Would it be possible to get a copy of the meeting in sign in sheet? The City requires that we include this in our application submittal materials. If you could email it to me at your earliest convenience, we would appreciate it.

Thank you again,

**Jacki Herb**



**AKS ENGINEERING & FORESTRY, LLC**

12965 SW Herman Road, Suite 100 | Tualatin, OR 97062

P: 503.563.6151 ext. 279 | F: 503.563.6152 | [www.aks-eng.com](http://www.aks-eng.com) | [herbj@aks-eng.com](mailto:herbj@aks-eng.com)

Offices in: Tualatin, OR | Salem-Keizer, OR | Vancouver, WA

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## **Exhibit J: City Pre-Application Conference Notes**

---



### PRE-APPLICATION MEETING NOTES

**Date of Meeting:** March 8, 2017

File Number: **PA 17-07** – Annexation / Zone Change / Subdivision  
Address: 19701 S. Leland Road, Oregon City, OR 97045  
Tax Assessor Map: 3S 2E 18, Tax Lot: 1400  
Total Acres: 6.32 acres  
Project Name: Annexation, Zone Change to R-6, Subdivision  
Staff Present: Pete Walter, AICP, Associate Planner  
Email: [pwalter@orccity.org](mailto:pwalter@orccity.org) Ph: (503) 496-1568  
Mario De La Rosa, PE, Development Project Engineer,  
Email: [mdelarosa@orccity.org](mailto:mdelarosa@orccity.org) Ph: (503) 974-5518

### Approval Criteria

#### City Code Chapter 14

- OCMC [14.04.050](#).(E).(1-9). The required narrative statement in response to items 7(a) through (g) must be included:
  - 7. *A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:*
    - a. *Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;*
    - b. *Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;*
    - c. *Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;*
    - d. *Statement outlining method and source of financing required to provide additional facilities, if any;*
    - e. *Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced;*
    - f. *Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;*
    - g. *Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;*



- **OCMC 14.04.060 – Annexation Factors.** Narrative shall address each of the required Annexation Factors (1) through (7). *When reviewing a proposed annexation, the commission shall consider the following factors, as relevant:*

*1. Adequacy of access to the site;*

**Comment:** Address how current and future access to the site is adequate.

*2. Conformity of the proposal with the city's comprehensive plan;*

**Comment:** The applicant's narrative should the applicable goals and policies. Staff will include the applicable goals and policies with the Code Response Template.

*3. Adequacy and availability of public facilities and services to service potential development;*

**Comment:** The applicant's narrative should the current Oregon City public facilities plans for Water, Sewer, Stormwater and Transportation and the respective demand placed on these services by the potential development of the site.

*4. Compliance with applicable sections of ORS Ch. 222, and Metro Code Section 3.09;*

**Comment:** The applicant's narrative should these criteria.

*5. Natural hazards identified by the city, such as wetlands, floodplains and steep slopes;*

**Comment:** The applicant's narrative should address any natural hazards present on site.

*6. Any significant adverse effects on specially designated open space, scenic, historic or natural resource areas by urbanization of the subject property at time of annexation;*

**Comment:** The applicant's narrative should address any specially designated open space, scenic, historic or natural resource areas on the site. Staff is not aware of any, although there are constraints on building in a powerline easement. We recommend contacting the County Historic Preservation staff for any cultural or historic records for the site.

*7. Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.*

**Comment:** The applicant's narrative should address any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.

#### **Metro Code 3.09.045.A-D (Boundary Change Criteria)**

- Whether the proposed boundary change will promote the timely, orderly and economic provision of public facilities and services.
- Whether the proposed boundary change will affect the quality and quantity of urban services
- Whether the proposed boundary change would eliminate or avoid unnecessary duplication of facilities or services.
- **Comment:** See comments from Public Works.
- Water - Please see attached comments from CRW regarding water services along Leland Road.
- Schools - Oregon City School District representative indicated verbally at the pre-application that school capacity at Gardiner Elementary and Oregon City High School should have sufficient capacity to serve development of the proposed annexation area.

#### **Oregon City Comprehensive Plan – Applicable Goals and Policies**

- Goal 14.1.2 – Concept Plans (Address Park Place Concept Plan)
- Goal 14.3 - Orderly Provision of Services to Growth Areas
- Goal 14.4 – Annexation of Lands to the city

## Concept Plan Goals and Policies

- This area was not within any Concept Plan study area boundary regulated under Metro Title 11.

## Zone Change

- The Zone Change request to R-6 may be submitted concurrently with the annexation request or submitted separately and is a discretionary zone change processed pursuant to the criteria in OCMC 17.68.
- Non-discretionary default zoning is R-10 based on the designation of Low Density Residential, pursuant to [OCMC 17.68.025](#).
- Discretionary re-zoning to R-6 must comply with the criteria in [17.68.020 - Criteria](#). These include:
  - A. The proposal shall be consistent with the goals and policies of the comprehensive plan.*
  - B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.*
  - C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.*
  - D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.*
- A separate zone change application is required for both R-10 and R-6 rezoning.
- Applicant is advised to review and consider the City's decision on the current applications AN-16-0003 (OC Golf Course, 113 acres), and AN-16-0004 / ZC-16-0001 (Serres Property, 35 acres). Staff can provide this information.

## Subdivision

- Subdivisions are typically reviewed as a Type II process based on clear and objective review criteria and staff recommends that the applicant apply separately for subdivision following approval of annexation and zone change.
- Pursuant to ORS 227.175, any applicant may elect to consolidate applications for two or more related permits needed for a single development project. Any grading activity associated with development shall be subject to preliminary review as part of the review process for the underlying development. It is the express policy of the city that development review not be segmented into discrete parts in a manner that precludes a comprehensive review of the entire development and its cumulative impacts.
- Review of a concurrent subdivision application may be submitted either concurrently with or separate from the annexation and zone change, however, the subdivision cannot be approved until the zone change is effective. The applicant should discuss and propose appropriate conditions of approval with staff and the City attorney if the applicant intends to submit the application for subdivision as a Type II.
- It appears that the subdivision could meet the requirements of the R-6 zone district and land division requirements
- Per OCMC [16.12.070 - Building site—Setbacks and building location](#). Lots 1 and 2 shall orient the front setback and the most architecturally significant elevation toward Leland Road. The applicant shall maintain the proposed access to the aforementioned lots by utilizing a shared driveway at the rear of the lots. If the applicant chooses to alter the access to the lots, the access shall comply with OCMC 16.12.070. (P)

## Transportation

Traffic Impact Analysis is required. Fees for review of the traffic impact analysis will be required pursuant to the TIA fee structure. The City's transportation consultant John Replinger has reviewed the pre-application and has the following comments;

*Please provide the following guidance to the applicant in connection with the pre-app for the proposed development:*

*The applicant will need to have a traffic engineer conduct a transportation study in conformance with the City's Guidelines for Transportation Impact Analyses available on the Oregon City website.*

*Based on the information provided by the applicant, it appears the trip generation exceeds the level at which the project's transportation analysis requirements can be satisfied by submittal of a Transportation Analysis Letter (TAL). A full Transportation Impact Analysis (TIA) will be required. Among other requirements, a full TIA includes conducting traffic counts and operational analysis of impacted intersections will be required. Intersections to be analyzed include the site access and intersections of collector/collector and higher where traffic volumes from the development exceed 20 peak hour trips.*

*The applicant and his traffic engineer should review the Guidelines for Transportation Impact Analyses and the most recent mobility standards as specified in Oregon City Municipal Code section 12.04.205.*

*Because the proposal includes a zone change, the applicant will also need to address the requirements of Oregon's Transportation Planning Rule. Specifically, the applicant shall address the provisions of 660-12-0060 Plan and Land Use Regulation Amendments. When a zone change is proposed, a future year analysis is required assessing the impact associated with the planning horizon specified in the city's adopted Transportation System Plan.*

*The applicant's traffic engineer is welcome to contact the city's traffic engineering consultant, John Replinger, at [Replinger-Associates@comcast.net](mailto:Replinger-Associates@comcast.net) or at 503-719- 3383.*

To summarize, zone changes must comply with the Transportation Planning Rule, and development will not be permitted until compliance with the TPR is shown. ODOT staff will likely be involved with the scoping analysis for the TIA / TPR. A copy of the recent Staff Report with proposed Condition of Approval for transportation mitigation, developed in collaboration with ODOT staff, for the zone change and annexation of 35 acres north of Holcomb Boulevard (AN-16-0004/ZC-16-0001) is attached for reference.

## Annexation Election

It appears that this annexation may be exempt from the voter approval requirements of OCMC 14.04, pursuant to SB 1573. SB 1573 is survived a recent legal challenge from Corvallis in Benton County Circuit Court. Staff will be tracking this issue as it develops.

## Review Fees (2017 Fee Schedule)

Annexation: \$4,342.00

Zone Change:	\$2,798.00
Traffic Impact Analysis:	
TIA Base Fee (<50 units):	\$1,092.00
- Zone Change / Comp Plan Amendment	\$2,046.00
Mailing Labels:	\$15.00
Metro Mapping Fees:	\$300.00
Subdivision:	\$4,136.00 + \$344 per lot

### **Neighborhood Association Meeting Required**

Per OCMC [17.50.055 - Neighborhood association meeting](#). Documentation of the meeting with the applicable Neighborhood Association is required for a complete application. Staff will confirm which N.A. the annexation would be included within upon annexation. The annexation property is within the Hillendale Neighborhood Association boundary. See Web page <http://www.orcity.org/community/neighborhood-associations> for contact and meeting information.

### **Miscellaneous Comments**

Staff will provide you a Code Response template similar to a Staff Report and electronic versions of the applicable plans, policies and approval criteria above to assist in the preparation of your application.

These pre-application conference notes were prepared in accordance with OCMC [17.50.050 - Preapplication conference](#).

*A. Preapplication Conference. Prior to submitting an application for any form of permit, the applicant shall schedule and attend a preapplication conference with City staff to discuss the proposal. To schedule a preapplication conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans. The purpose of the preapplication conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the preapplication conference. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.*

*B. A preapplication conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant must schedule and attend another conference before the city will accept a permit application. The community development director may waive the preapplication requirement if, in the Director's opinion, the development does not warrant this step. In no case shall a preapplication conference be valid for more than one year.*



## DEVELOPMENT SERVICES

### PRE-APPLICATION MEETING NOTES

Date: 03-10-2017

**Planning Project Number:** PA 17-07  
**Address:** 19701 S Leland Road  
**Map Number(s):** 3S 2E 18  
**Tax Lot(s):** 1400  
**Project Name:** 19701 S Leland Road Annexation/Subdivision  
**Meeting Date:** March 8, 2017  
**Reviewer(s):** Mario de la Rosa, PE

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#### ENGINEERING - UTILITIES

##### Stormwater

1. The City Stormwater and Grading Design Standards dated 2015 must be adhered to for this development. The Standards can be found online here: [http://www.orcity.org/sites/default/files/final\\_manual\\_0.pdf](http://www.orcity.org/sites/default/files/final_manual_0.pdf)
2. An existing storm sewer conveyance system exists directly to the east along two (2) separate stub streets located within Lindsey Anne Estates to the east. An existing 12-inch storm main is located within S Leland Road just east of the project frontage.
3. A downstream analysis per the requirements of the Stormwater and Grading Design Standards will be required to document existing conditions and demonstrate adequate conveyance capacity of the natural and constructed drainage system downstream of the project site.
4. Based on review of City GIS System, the project site is mostly located within a high water table area. A Geotechnical Report will be required for this project and should identify elevation of ground water.
5. Applicant indicates stormwater outfall from proposed stormwater facility will be discharged to Leland Road or Cherrywood Way and is still to be determined.

##### Water

1. The City of Oregon City has 12-inch water main located nearby within Leland Road. The water main would need to be extended to and through to the west property boundary along Leland Road.



2. Water service extension to adjacent property owners along Leland Road property frontage will be required via Developer Agreement with City will be required for following addresses off of S Leland Road, 19717, 19658, 19646, and 19634.
3. An existing 6-inch water main owned by Clackamas River Water is located along the property frontage within S Leland Road.
4. The proposed annexation area is within the Upper Zone water system pressure zone.
5. The 2012 Water Distribution System Master Plan was adopted in February 2012. A PDF version of the adopted master plan is available on our City website.
6. The Water Master Plan currently indicates a 6" water main proposed for S Leland Road along the project frontage. However, the minimum water main size is 8-inches. The City will reimburse the Applicant for the cost difference between a 12-inch and 8-inch water main.

## **Sanitary Sewer**

1. The 2014 Sanitary Sewer Master Plan Update was adopted in November 2014. A PDF version of the adopted master plan is available on our City website.
2. The 2014 Sanitary Sewer Master Plan identifies a proposed 8-inch, sanitary sewer main to be constructed along Leland Road in the vicinity of the proposed project.
3. An existing 8-inch PVC sanitary sewer main is located approximately 120-feet east of the proposed site along S Leland Road, which will need to be extended to the west end of the project frontage to serve the site.
4. Existing sanitary sewer manholes currently exist along the east property line and are located at Cedarwood Way and Cherrywood Way, which are stub streets from Lindsay Anne Estates and are also able to serve the site.
5. Two-way cleanouts will be required for each lot located at Right-of-Way.

## **Transportation**

1. No development of this property will occur as result of annexation. The transportation analysis will be deferred until the time a future zone change is approved.
2. Local streets are stubbed to the annexation area from adjacent single-family neighborhoods at Cedarwood Way and Cherrywood Way. Connections to these streets can be made from Lindsay Anne Lane, which has direct access off of Leland Road.
3. Primary access to the subject property will be from the north along Leland Road. Leland Road is a minor arterial street owned by Clackamas County. Street improvements and permitting for Leland Road will need to be coordinated with Clackamas County.



4. SDC credits for construction of S Leland Road will be available similar to Lindsay Anne Estates.

## **Questions**

### Access / Transportation / Circulation

10. Please confirm if the City or County has jurisdiction of Leland Road, which jurisdiction standards apply, who will be reviewing plans, issuing permits, etc. **RESPONSE: Leland Road is a Clackamas County owned roadway. Plans associated with road improvements will be reviewed/issued a permit by Clackamas County. All utilities within S Leland Road are owned by City of Oregon City and will be reviewed/issued a permit by City of Oregon City excluding the 6-inch water main owned by Clackamas River Water.**
11. Please confirm access spacing requirements and if the planned spacing of the new street is acceptable. **RESPONSE: Spacing between local streets is 150-feet.**
12. Please discuss requirements for access to Leland Road for Lots 1 and 2. **RESPONSE: Access for Lots 1 and 2 will need to be coordinated with Clackamas County. We believe it will need to be a shared driveway off of S Leland Road or access will be required from internal street.**
13. Please confirm required right-of-way dedication for S. Leland Road, Cherrywood Way, Cedarwood Way, and the new internal street. **RESPONSE: Right-of-Way dedication for S. Leland Road should meet the right-of-way required for a minor arterial and should match the right-of-way required for Lindsay Anne Estates. A 9-foot dedication was required for Lindsay Anne Estates for a half-street right-of-way width of 39-feet. Right-of-way dedication for Cherrywood Way, Cedarwood Way and the new internal street should meet the right-of-way required for a local street, which is 54-feet.**
14. Please discuss requirements for frontage improvements along S. Leland Road. **RESPONSE: Frontage improvements for S. Leland Road will need to be coordinated with Clackamas County.**
15. Will a traffic study be required? If so, please describe the required scope. **RESPONSE: See Planning Notes.**
16. Please confirm if there are any known transportation issues in the area that may affect the annexation/zone change or subdivision applications. **RESPONSE: See City's traffic subconsultant – John Repliner's comments.**

### Service and Utilities

17. Please confirm the stormwater requirements (water quality, detention, etc.) for this site/project. **RESPONSE: Yes, per above, the City Stormwater and Grading Design Standards dated 2015 must be adhered to for this development.**





18. Are the stormwater planters, rain gardens, or vegetated swales required to treat and detain stormwater runoff from the public right-of-way area? Can these facilities be located in the planter strip in between the curb and sidewalk? Does the City have any standard details yet?  
**RESPONSE:** Per the City's Stormwater and Grading Design Standards, low-impact development (LID) facilities such as planters, swales, rain gardens, ponds, and other vegetated facilities are best management practices and are the preferred strategy to meet the stormwater management requirements for water quality treatment, and flow control. Yes, facilities can be located in planter strip. The City is currently updating a standard detail for this application.
19. Please confirm access, side slope, and other requirements for the stormwater facility?  
**RESPONSE:** See Appendix C of Stormwater and Grading Standards for specific stormwater facility design.
20. Are there any known stormwater capacity issues with the site or surrounding areas?  
**RESPONSE:** To the best of our knowledge there are no known stormwater capacity issues within the project vicinity.
21. Are there any known water supply (capacity or pressure issues)? **RESPONSE:** No, per the Water Master Plan there are no known capacity or pressure issues. The master plan indicates the extension of 6-inch and 8-inch water mains within the project vicinity.
22. Are there any known sanitary sewer capacity issues? **RESPONSE:** No, per the Sanitary Sewer Master Plan there are no known capacity issues. The master plan indicates the extension of 8-inch sanitary sewer lines in the vicinity.
23. Are there any other known utility issues that we should be made aware of? **RESPONSE:** No, not to the best of my knowledge.
24. Please discuss the status of new City requirements for performance bonding. **RESPONSE:** Currently in progress, will have by time construction will start for this project.
25. Please confirm what items are planned to be included in the required performance bond.  
**RESPONSE:** Everything in existing right-of-way plus erosion control, vegetation to button up site in event Contractor walks away from project.
26. How is this affected by Clackamas County's jurisdiction of Leland Road? **RESPONSE:** Applicant will need to coordinate with Clackamas County.
27. Please discuss the status of the City's new stormwater facility maintenance option program?  
**RESPONSE:** The stormwater facility maintenance option program is being implemented.
28. Please describe the methodology for the City fee option. How is it calculated? **RESPONSE:** Fee is calculated per SF of pond.
29. Please confirm that the fee would not include maintenance of dead storage areas?  
**RESPONSE:** Yes, this is correct.



30. Please confirm that if the fee is paid to the City that the City will be responsible for replanting required vegetation that does not survive. **RESPONSE: Yes, this is correct.**
31. Are any special studies or assessments (natural resources, traffic, etc.) required?  
**RESPONSE: A TPR Analysis will be required for the annexation.**
32. Please confirm if a geotechnical/soils/infiltration report will be required for land use application? **RESPONSE: A geotechnical report will be required for infiltration testing based on the Professional Method and should determine depth of groundwater. See Stormwater and Grading Standards for Infiltration Testing procedures.**

## **Exhibit K: Clackamas County Assessor's Map**

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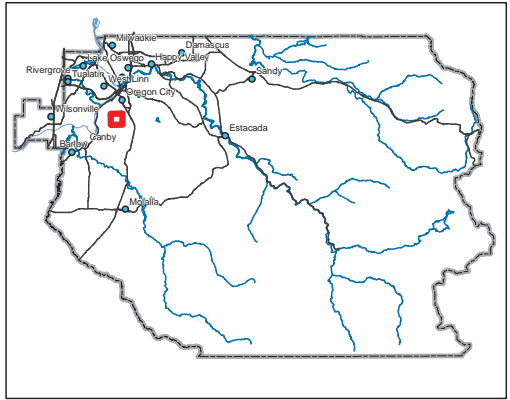
SECTION 18 T.3S. R.2E. W.M.  
CLACKAMAS COUNTY  
1" = 400'

D. L. C.'S  
JOHN S. HOWLAND NO. 45  
BENJAMIN MAILS NO. 50

Cancelled Taxlots

2700
2790
1201
1204
1205
1202
202
203
501
800
992
1090
1291
1292
1490
1690
2290
1282
1300
1206

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT  
PURPOSES ONLY



## **Exhibit L: Mailing Labels**

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32E07C 00100  
Wayne & Patsy Streight  
19673 Leland Rd  
Oregon City, OR 97045

32E07C 00101  
Patricia Lynae McClure  
19681 Leland Rd  
Oregon City, OR 97045

32E07C 00102  
Shawna Faye Co-E Morris  
19659 Mccord Rd  
Oregon City, OR 97045

32E07C 00104  
Levi & Jillian Morris  
19665 Mccord Rd  
Oregon City, OR 97045

32E07C 00106  
Jerry & Faye Rainbolt  
19663 Mccord Rd  
Oregon City, OR 97045

32E07DC00500  
Terry & Anita Anderson  
19600 Leland Rd  
Oregon City, OR 97045

32E07DC00600  
Patricia & Thomas Kitancevski  
Po Box 1297  
Oregon City, OR 97045

32E07DC00700  
Trina Houck  
19634 Leland Rd  
Oregon City, OR 97045

32E07DC00800  
Colleen Commons  
19646 Leland Rd  
Oregon City, OR 97045

32E07DC00900  
Arhondisa Thompson  
19658 Leland Rd  
Oregon City, OR 97045

32E07DC01000  
Paul Daniel Wyland  
19700 Leland Rd  
Oregon City, OR 97045

32E07DC02800  
Kurt & Susan Gross  
19590 Kalal Ct  
Oregon City, OR 97045

32E07DC02900  
John Rizzo  
19600 Kalal Ct  
Oregon City, OR 97045

32E07DC03000  
Angelika Murray  
19620 Kalal Ct  
Oregon City, OR 97045

32E07DC03100  
Sean & Lauren Fuller  
19630 Kalal Ct  
Oregon City, OR 97045

32E07DC03200  
Wendy Smith  
19640 Kalal Ct  
Oregon City, OR 97045

32E07DC03300  
Mark & Cindy Shaw  
19650 Kalal Ct  
Oregon City, OR 97045

32E18 01400  
Bruce Raymond Trstee Miller  
19701 Leland Rd  
Oregon City, OR 97045

32E18 01401  
Jeff & Tina Westenfelt  
19717 Leland Rd  
Oregon City, OR 97045

32E07C 00109  
Ross & Kay Smith  
19691 Leland Rd  
Oregon City, OR 97045

32E18 01402  
Rick & Keli Dotson  
19695 Leland Rd  
Oregon City, OR 97045

32E07C 00192  
Bradley Dean Co-E Morris  
19659 Mccord Rd  
Oregon City, OR 97045

32E07C 00199  
Ross & Kay Smith  
19691 Leland Rd  
Oregon City, OR 97045

32E18AB00100  
Andrew & Shannon Hietschold  
19727 Leland Rd  
Oregon City, OR 97045

32E18AB00200  
Lindsey Suzanne Wilde  
19737 Leland Rd  
Oregon City, OR 97045

32E18AB00300  
Shane Killian  
12795 Lindsay Anne Ln  
Oregon City, OR 97045

32E18AB00400  
Jonathan & Jane Newman  
12787 Lindsay Anne Ln  
Oregon City, OR 97045

32E18AB00500  
Curtis Lee Williams  
12779 Lindsay Anne Ln  
Oregon City, OR 97045

32E18AB00600  
Roland Romero  
19736 Cherrywood Way  
Oregon City, OR 97045

32E18AB00700  
Bryan & Donna Easlick  
19726 Cherrywood Way  
Oregon City, OR 97045



32E18AB00800 Matthew Johnson 19725 Cherrywood Way Oregon City, OR 97045	32E18AB00900 Justin Meininger 12735 Cherrywood Way Oregon City, OR 97045	32E18AB01000 Nicholas & Natalie Cardoza 12755 Lindsay Anne Ln Oregon City, OR 97045
32E18AB01100 Mysha Angell 12747 Lindsay Anne Ln Oregon City, OR 97045	32E18AB01200 Joshua & Eileen Weeks 12739 Lindsay Anne Ln Oregon City, OR 97045	32E18AB01300 Jeremy Todd Pincoski 19724 Cedarwood Way Oregon City, OR 97045
32E18AB01400 Billie Adams 19734 Cedarwood Way Oregon City, OR 97045	32E18AB01500 Betty Meisel 19723 Cedarwood Way Oregon City, OR 97045	32E18AB01600 Mark Horn Po Box 118 Oregon City, OR 97045
32E18AB01700 Amber & Adam Wilkins 19743 Cedarwood Way Oregon City, OR 97045	32E18AB01800 Kimberly Donaca 19753 Cedarwood Way Oregon City, OR 97045	32E18AB01900 Shanon Kmetc 12763 Cedarwood Way Oregon City, OR 97045
32E18AB02000 Jennifer Porter Bown 19764 Cedarwood Way Oregon City, OR 97045	32E18AB02100 Ronald & Kathleen Rodwick 19754 Cedarwood Way Oregon City, OR 97045	32E18AB02200 Michael Harrison 12738 Lindsay Anne Ln Oregon City, OR 97045
32E18AB02300 Jeffery Dunham 12746 Lindsay Anne Ln Oregon City, OR 97045	32E18AB02400 James Williams 12754 Lindsay Anne Ln Oregon City, OR 97045	32E18AB02500 Corey Johnson Po Box 743 Canby, OR 97013
32E18AB02600 Stefanie Hassan 19755 Cherrywood Way Oregon City, OR 97045	32E18AB02700 Donald & Rita Bredehoeft 19765 Cherrywood Way Oregon City, OR 97045	32E18AB02800 Shavon Albee 19756 Cherrywood Way Oregon City, OR 97045
32E18AB02900 Aleksandr & Julia Mazhnikov 19746 Cherrywood Way Oregon City, OR 97045	32E18AB03000 Benjamin & Michelle Johnson 12778 Lindsay Anne Ln Oregon City, OR 97045	32E18AB03100 Kimhun Bartel 12786 Lindsay Anne Ln Oregon City, OR 97045
32E18AB03200 Julieanne Reincke 12794 Lindsay Anne Ln Oregon City, OR 97045	32E18AB03300 Thomas Baker Jr. 19747 Leland Rd Oregon City, OR 97045	32E18AB03400 Julie Lyons 19757 Leland Rd Oregon City, OR 97045
32E18AB03500 Nicholas Fiorante 19767 Leland Rd Oregon City, OR 97045	32E18AB03600 City Of Oregon City 625 Center St Oregon City, OR 97045	