Zone Change Application For Wheeler Family Properties

Date: June 2017

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

Owners:
Wheeler Family Enterprises, LLC
David H. Wheeler Sr. Trust
Donald W. & Roxanne O. Wheeler

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

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Zone Change Application
For
Wheeler Family Properties

Submitted to:	City of Oregon City Planning Division 221 Molalla Avenue, Suite 200 Oregon City, OR 97045
Owners:	32E07C Tax Lot 1001 (Wheeler Family Enterprises, LLC) 32E07C Tax Lots 1100, 1180 (David H. Wheeler Sr. Trust) 32E07C Tax Lot 1291 (Donald W. & Roxanne O. Wheeler) 31E12D Tax Lots 1700, 1790 (Wheeler Family Enterprises, LLC)
Applicant:	Rian Park Development, Inc. P.O. Box 2559 Oregon City, OR 97045
Applicant's Consultant:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062 Contact: Monty Hurley (monty@aks-eng.com) Chris Goodell (chrisg@aks-eng.com) Phone: (503) 563-6151 Fax: (503) 563-6152
Clackamas County Assessor's Information:	Tax Map: 32E07C, Tax Lots: 1001, 1100, 1180, & 1291 Tax Map: 31E12D, Tax Lots: 1700 & 1790
Site Size:	±22.56 Acres
Current Zoning Designation:	LR – Low Density Residential / R-10
Planned Zoning Designation:	LR – Low Density Residential / R-8

I. Executive Summary

This application is for a zone change to change the existing R-10 zoning designation of the Wheeler family's six tax lots to an R-8 zoning designation. The Wheeler Family properties are located in an area that is redeveloping. Surrounding residential projects such as Payson Farms No. 2, Highland Park, Central Point Crossing, and Ed's Orchard have all annexed into the City, and successfully changed the zoning from R-10 to R-8.

The Wheeler Family has owned and operated a Christmas tree and hazelnut farm on the subject properties for over 50 years. As development of surrounding properties encroached the farm, new streets and utility infrastructure were extended to the farm's boundary to facilitate future development of the property and complete the intended network for the area. This zone change application is the first step in fulfilling Dave Wheeler Sr.'s vision of passing the farm onto his children for the future subdivision of the property and construction of single-family homes.

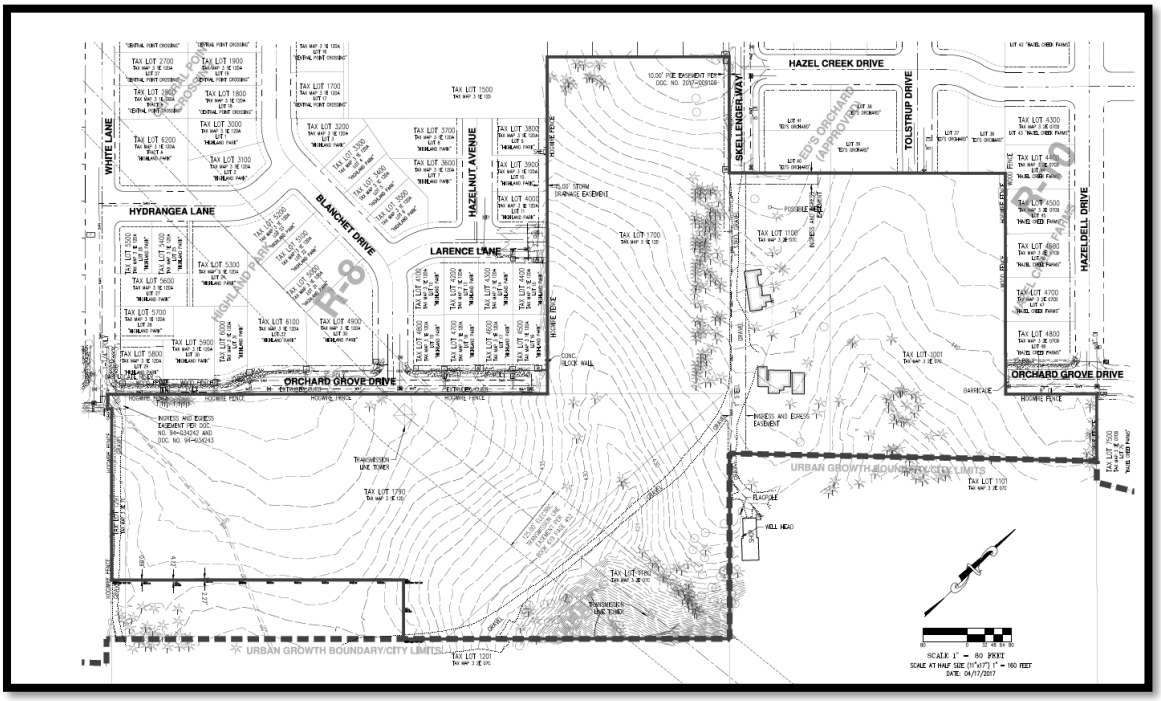
The submittal materials include the required findings and other documentation necessary to establish compliance with all applicable approval criteria.

II. Site Description / Setting

The Wheeler Family owns approximately ±22.56 acres of land that is situated south of the Ed's Orchard Subdivision, west of the Hazel Creek Farms Subdivision, east of the Highland Park Subdivision, and north of the Urban Growth Boundary. The Wheeler Family properties have frontage on Orchard Grove Drive, Larence Lane, Skellenger Way, and Tolstrup Drive. These streets are considered public streets that have recently been constructed as the surrounding area has developed.

Aerial Photo

Zoning Map



III. Applicable Review Criteria

City staff's pre-application conference notes outline the review criteria that are relevant to this application. Therefore, those criteria are addressed below.

CITY OF OREGON CITY MUNICIPAL CODE

Chapter 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.

The planned zone change meets the following applicable goals and policies of the Comprehensive Plan:

Goal 1: Citizen Involvement

Goal 1.2: 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 South End Neighborhood Association meeting held on May 18, 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 Commission and the Oregon City Commission. Future applications involving the subject properties involve additional public processes. Therefore, the application is consistent with this Goal.

Goal 2: Land Use

Goal 2.1: 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 the R-10 zoning designation to the R-8 zoning designation. This represents an increase in density while still remaining in a single-family zone. Densities corresponding to the R-8 zone represent sustainable development in a more 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, which abuts the subject properties to the south. Therefore, the application is consistent with this Goal.

Goal 2.7: 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 properties are 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 the R-10 zoning designation to the R-8 zoning designation. A change to the Comprehensive Plan designation of the site is not necessary. The subject properties are adjacent to other properties within the Low Density Residential Comprehensive Plan designation (R-8 and R-10). Therefore, the R-8 zoning designation 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.

Goal 5: Natural Resources

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

Response: According to City maps, A Natural Resource Overlay District (NROD) extends onto a portion of three of the six tax lots included in this application (Tax Lots 1180, 1790, and 1700). A Natural Resource Assessment (NRA), was prepared and included in an application for a Type I NROD Verification which was approved by the City on May 19, 2017 (NR 17-03), verifying that no natural resources exist on the Wheeler family properties and that these properties are exempt from further NROD review. A copy of the City's NROD Verification Decision that includes the project's NRA are planned to be included with any future development application(s) associated with the subject properties as documentation for the verification as is typical and appropriate. Therefore, the application is consistent with this Goal.

Goal 6: Quality of Air, Water and Land Resources

Goal 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.

Response: The planned R-8 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 properties represented in this application are located approximately one (±1) mile from John McLoughlin Elementary School and approximately one and a half (±1½) miles from lands being considered for Neighborhood Commercial designations (along South End Road) in the South End Concept Plan. Thus, the R-8 zoning for these properties strategically increases opportunities for greater populations to walk and bike to places of education, shopping, and employment. Therefore, the R-8 zoning designation is consistent with this Goal.

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.

Goal 10: Housing

Goal 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-8 zoning will preserve 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-8 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-8 zone. Those types of uses would require a Comprehensive Plan Map Amendment, which is not included in this application. It is clear that R-8 densities will allow for a greater number of residential units on the site, thereby increasing the number and variety of housing choices in the area. Therefore, the application is consistent with this Goal.

Goal 11: Public Facilities

Goal 11.1: 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 (water, sanitary sewer, storm drainage, streets) were identified. This is in part because a change from R-10 to R-8 is a shift within the Low Density Residential Comprehensive Plan Map designation and these impacts have been previously evaluated with the adoption of the City's Comprehensive Plan. School District staff did not identify concerns with this zone change application due to the small size of the subject property. Please also refer to the memorandum from a professional engineer included in the application materials discussing the adequacy of public facilities for further information.

In addition, as part of any future application (including subdivision review), detailed preliminary plans are planned to be submitted for review by the City, Clackamas Fire District No.1, as well as the School District. The applicant will be required to sign a Non-Remonstrance Agreement for the purpose of ensuring sanitary sewer, storm drainage, water, and/or street improvements are extended in the future that benefit the project site. This Goal is met.

Goal 12: Transportation

Goal 12.6: Develop and maintain a transportation system that has enough capacity of meet users' needs.

Response: A Transportation Planning Rule (TPR) analysis has been included in the attached Transportation Impact Study (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 R-10 zone and the planned R-8 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).

Written findings are contained within the TPR analysis that demonstrate that the TPR is satisfied by the application. Therefore, the application is consistent with this Goal.

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 R-10 to R-8. 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, and streets) were identified. This is in part because a change from R-10 to R-8 is a shift within the Low Density Residential Comprehensive Plan Map designation and these impacts have been previously evaluated with the adoption of the City's

Comprehensive Plan. School District staff did not identify concerns with this zone change application due to the small size of the subject property. Please refer to the memorandum from a professional engineer discussing the adequacy of public facilities for further information.

In addition, as part of any future application (including subdivision review), detailed preliminary plans are planned to be submitted for review by the City, Clackamas Fire District No.1, as well as the School District. The applicant will be required to sign a Non-Remonstrance Agreement for the purpose of ensuring sanitary sewer, storm drainage, water, and/or street improvements are extended in the future that benefit the project site. 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's traffic engineering consultant. The TIS includes trip generation estimates for the existing R-10 zone and the planned R-8 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).

Written findings are contained within the TIS that demonstrate that the TPR is satisfied by the application. Therefore, the application is consistent with this standard.

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.

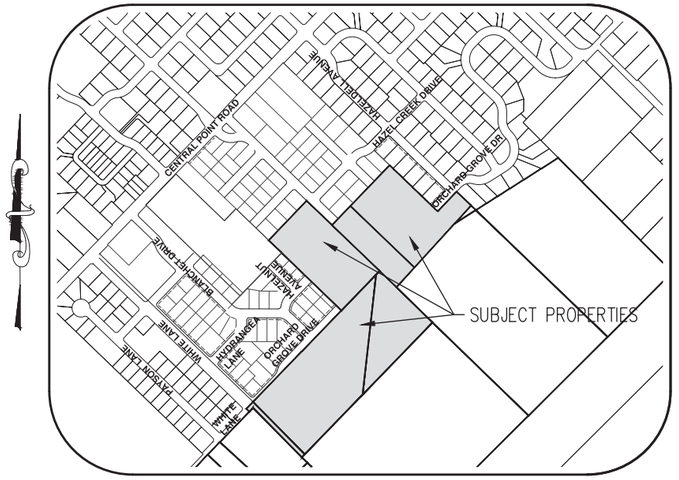
IV. Conclusion

The above listed findings and accompanying documentation demonstrate that the planned zone change application complies with all 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 zone change to the R-8 zoning district. The City can rely upon this information in its approval of the application.

Exhibit A: Preliminary Plans

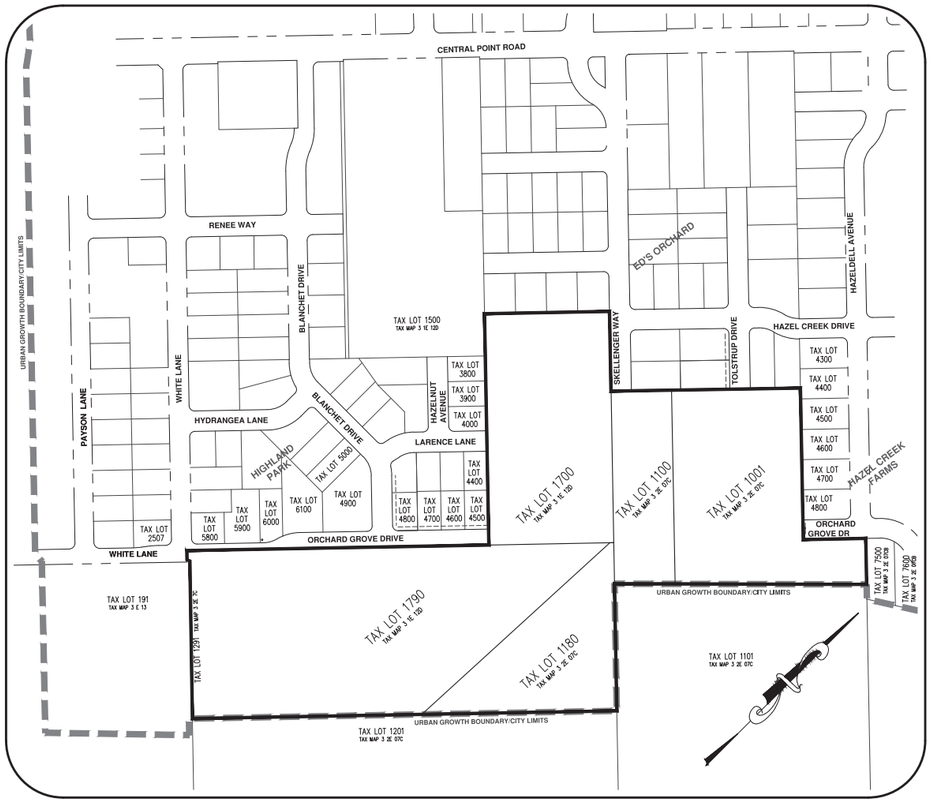
WHEELER FAMILY PROPERTIES

ZONE CHANGE APPLICATION PLANS



VICINITY MAP

SCALE: NTS



SITE MAP

SCALE: 1"=200'

SHEET INDEX

APPLICANT:
RIAN PARK DEVELOPMENT, INC.
PO BOX 2559 OREGON CITY,
OR 97045

OWNERS:
WHEELER FAMILY ENTERPRISES, LLC
(TAX LOT 1001, 1700, & 1790)
(32E07C & 31E12D)
DAVID H. WHEELER SR. TRUST
(TAX LOT 1100 & 1180) (32E07C)
DONALD W. & ROXANNE O. WHEELER
(TAX LOT 1291) (32E07C)

CONSULTING FIRM:
AKS ENGINEERING & FORESTRY, LLC.
CONTACT:
MONTY HURLEY (MONTY@AKS-ENG.COM)
CHRIS GOODELL (CHRISG@AKS-ENG.COM)
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062
PH: 503-563-6151
FAX: 503-563-6152

PROJECT LOCATION:
19566 CENTRAL POINT ROAD
OREGON CITY, OREGON 97045

PROPERTY DESCRIPTION:
TAX LOTS 1700 & 1790 OF CLACKAMAS COUNTY TAX MAP 3S-1E-12D, LOCATED IN THE SOUTHEAST ONE-QUARTER OF TOWNSHIP 3 SOUTH, RANGE 1 EAST, SECTION 12; AND TAX LOT 1001, 1291, 1100 & 1180 OF TAX MAP 3S-2E-07C, LOCATED IN THE SOUTHWEST ONE-QUARTER OF TOWNSHIP 3 SOUTH, RANGE 2 EAST, SECTION 7, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON.

EXISTING LAND USE:
EXISTING SINGLE FAMILY RESIDENTIAL AND ACCESSORY BUILDINGS WITH FARMLAND/FIELD.

PROJECT PURPOSE:
ZONE CHANGE FROM R-10 LOW DENSITY RESIDENTIAL TO R-8 LOW DENSITY RESIDENTIAL.

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD STE 100
TUALATIN, OR 97062
P: 503.563.6151
F: 503.563.6152
aks-eng.com

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FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

WHEELER FAMILY PROPERTIES
OREGON CITY OREGON
TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

COVER SHEET WITH VICINITY AND SITE MAPS

DESIGNED BY:	MCH
DRAWN BY:	MCH
CHECKED BY:	MBH
SCALE:	AS NOTED

DATE: 06/15/2017

REGISTERED PROFESSIONAL ENGINEER
58542PE
OREGON
JULY 9, 2002
MONTGOMERY B. HURLEY
PRELIMINARY
RENEWAL DATE: 6/30/19

REVISIONS

JOB NUMBER
5621

SHEET
1

AKS DRAWING FILE: 5621-1-COVER.DWG | LAYOUT: 1

SCALE 1" = 80 FEET

SCALE AT HALF SIZE (11"x17") 1" = 160 FEET

DATE: 04/17/2017

NOTES:

1. SURVEY PERFORMED BY AKS ENGINEERING & FORESTRY, LLC FIELD WORK WAS CONDUCTED MARCH 15–24, 2017
2. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBER 17053695. 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.

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD STE 100
TUALATIN, OR 97062
P: 503.563.6151
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aks-eng.com

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

WHEELER FAMILY PROPERTIES

OREGON CITY OREGON

TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

EXSITING CONDITIONS PLAN

DESIGNED BY:	MCH
DRAWN BY:	MCH
CHECKED BY:	MBH
SCALE:	AS NOTED

DATE: 06/15/2017

REGISTERED PROFESSIONAL ENGINEER
58542PE
OREGON
MAY 9, 2012
MONTGOMERY B. HURLEY
PRELIMINARY
RENEWAL DATE: 6/30/19

REVISIONS

JOB NUMBER
5621

SHEET
2

AKS DRAWING FILE: 5621-2-EXCOND.DWG | LAYOUT: 2

SCALE: 1" = 100 FEET

SCALE AT HALF SIZE (11"x17"): 1" = 200'

NOTES:

1. INFORMATION SHOWN IS BASED ON A VARIETY OF SOURCES, INCLUDING GEOGRAPHIC INFORMATION SYSTEMS (GIS), AERIAL PHOTOGRAPHS, AS-BUILT INFORMATION, TAX MAPS, FIELD SURVEY, AND OTHER SOURCES AS AVAILABLE. AKS ENGINEERING & FORESTRY, LLC, SURVEY.

AERIAL PHOTO AND CONCEPTUAL SHADOW PLAT

WHEELER FAMILY PROPERTIES

OREGON CITY **OREGON**

TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

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TUALATIN, OR 97062
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ENGINEERING • SURVEYING • NATURAL RESOURCES
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

PRELIMINARY
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 13, 2004
MICHAEL C. HARRIS
58542PE
RENEWAL DATE: 6/30/19

DESIGNED BY:	MCH
DRAWN BY:	MCH
CHECKED BY:	MRH
SCALE:	AS NOTED
DATE:	06/15/2017

REVISIONS

JOB NUMBER 5621

SHEET 3

Exhibit B: City Land Use Application Forms and Checklist

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

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)
❑ Compatibility Review	❑ Extension	❑ Annexation
❑ Lot Line Adjustment	❑ Detailed Development Review	❑ Code Interpretation / Similar Use
❑ Non-Conforming Use Review	❑ Geotechnical Hazards	❑ Concept Development Plan
❑ Natural Resource (NROD) Verification	❑ Minor Partition (<4 lots)	❑ Conditional Use
❑ Site Plan and Design Review	❑ Minor Site Plan & Design Review	❑ Comprehensive Plan Amendment (Text/Map)
	❑ Non-Conforming Use Review	❑ Detailed Development Plan
	❑ Site Plan and Design Review	❑ Historic Review
	❑ Subdivision (4+ lots)	❑ Municipal Code Amendment
	❑ Minor Variance	❑ Variance
	❑ Natural Resource (NROD) Review	☑ Zone Change

File Number(s): PA 16-54 (Pre-Application Conference)

Proposed Land Use or Activity: Zone Change Application for the Wheeler family properties within the Low Density Residential Plan Designation (from R-10 to R-8).

Project Name: Wheeler Family Properties Number of Lots Proposed (If Applicable): N/A

Physical Address of Site: 19566 S Central Point Road

Clackamas County Map and Tax Lot Number(s): Map: 32E07C Tax Lots: 1001, 1100, 1180, & 1291
Map: 31E12D Tax Lots: 1700 & 1790

Applicant(s):

Applicant(s) Signature: _____

Applicant(s) Name Printed: Rian Park 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: David H. Wheeler Jr.

Property Owner(s) Name Printed: Wheeler Family Enterprises, LLC (Tax Lots: 1001, 1700, 1790) Date: 6/15/17

Mailing Address: _____

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: May 22, 2017

Mailing Address: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

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.

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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: David H. Wheeler Sr.

Property Owner(s) Name Printed: David H. Wheeler Sr. Trust (Tax Lots: 1100, 1180) Date: 6/15/17

Mailing Address: _____

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: May 22, 2017

Mailing Address: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

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

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Applicant(s) Signature: _____

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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: Donald W. Wheeler

Property Owner(s) Name Printed: Donald W. Wheeler and Roxanne O. Wheeler (Tax Lot: 1291) Date: 6/15/17

Mailing Address: 19898 S White Lane, Oregon City, OR 97045

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

Representative(s):

Representative(s) Signature: Montgomery B Hurley

Representative (s) Name Printed: AKS Engineering & Forestry, LLC (Monty Hurley) Date: May 22, 2017

Mailing Address: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

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.

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

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)
❑ Compatibility Review	❑ Extension	❑ Annexation
❑ Lot Line Adjustment	❑ Detailed Development Review	❑ Code Interpretation / Similar Use
❑ Non-Conforming Use Review	❑ Geotechnical Hazards	❑ Concept Development Plan
❑ Natural Resource (NROD) Verification	❑ Minor Partition (<4 lots)	❑ Conditional Use
❑ Site Plan and Design Review	❑ Minor Site Plan & Design Review	❑ Comprehensive Plan Amendment (Text/Map)
	❑ Non-Conforming Use Review	❑ Detailed Development Plan
	❑ Site Plan and Design Review	❑ Historic Review
	❑ Subdivision (4+ lots)	❑ Municipal Code Amendment
	❑ Minor Variance	❑ Variance
	❑ Natural Resource (NROD) Review	☑ Zone Change

File Number(s): PA 16-54 (Pre-Application Conference)

Proposed Land Use or Activity: Zone Change Application for the Wheeler family properties within the Low Density Residential Plan Designation (from R-10 to R-8).

Project Name: Wheeler Family Properties Number of Lots Proposed (If Applicable): N/A

Physical Address of Site: 19566 S Central Point Road

Clackamas County Map and Tax Lot Number(s): Map: 32E07C Tax Lots: 1001, 1100, 1180, & 1291
Map: 31E12D Tax Lots: 1700 & 1790

Applicant(s):

Applicant(s) Signature:

Applicant(s) Name Printed: Rian Park Development, Inc. Date: 6/13/17

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: Date:

Mailing Address:

Phone: Fax: Email:

Representative(s):

Representative(s) Signature: Monty B Hurley

Representative (s) Name Printed: AKS Engineering & Forestry, LLC (Monty Hurley) Date: May 22, 2017

Mailing Address: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

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.

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

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. N/A **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. ✓ **Additional Information or Reports**

Exhibit C: Property Title Information

Fidelity National Title OREGON

Property Profile Report

Address Not Available

Ownership Information

Owner Name:	Please see attached vesting deed for current ownership.
Mailing Address:	19566 CENTRAL POINT RD OREGON CITY, OR 97045

Property Description

County:	Clackamas	Map / Tax Lot:	32E07C/01001
Account Num:	00862748	Owner Occ.:	No
Land Use:	540-	Census:	
Map Grid:	717-B5		
Subdivision:			
Legal Description:	Section 07 Township 3S Range 2E Quarter C TAX LOT 01001		

Property Characteristics

Property Type:	AGRICULTURAL	Building SF:		Pool:	No
House Style:		Living Area SF:		Deck SF:	
Year Built:		Square Feet:	0	Deck Desc:	
Bedrooms:		1st Floor SF:		Patio SF:	
Bathrooms:		2nd Floor SF:		Patio Desc:	
Heat:		3rd Floor SF:		Foundation:	
Cooling:		Attic SF:		Exterior:	
Lot Size:	188,065	Bsmnt SF:		Ext. Finish:	
Acres:	4.21	Fin Bsmt SF:		Interior:	
Garage Type:		Garage SF:		Roof Style:	
Fireplaces:		Bsmnt Type:		Roof Cover:	

Assessment Information

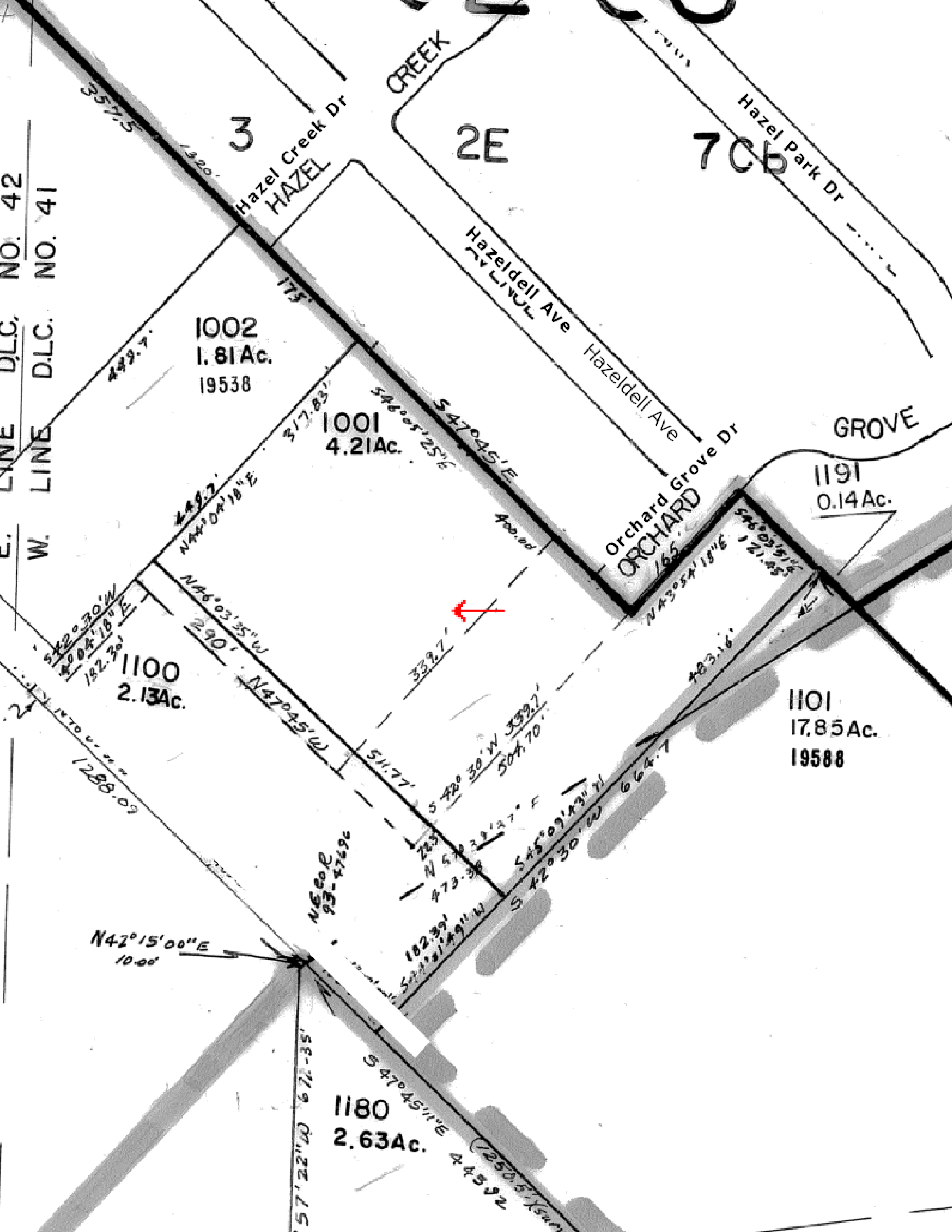
Real Market Value:	$ 557,432	Land Value:	$ 557,432	Imp. Value:	$ 0
Total Assessed Value:	$ 3,406	Levy Code:	062064	M-5 Rate:	.0182
Taxes:	$ 61.88	Tax Year:	15-16		

Previous Sale Information

Sale Amount:	Sale Date:	Document Num:

Transaction History

Sale Date	Sale Amount	HPI Sale Amount	Document Type	Reception Num	Book/Page
3/8/2013	$ 0		S	2013-016299	/
5/21/2007	$ 1		S	2007-043768	/


3
2E
7Cb
CREEK
Hazel Creek Dr
HAZEL
Hazel Park Dr
Hazeldell Ave
Orchard Grove Dr
ORCHARD
GROVE
E. D.L.C. NO. 42
W. D.L.C. NO. 41
LINE
1002
1.81 Ac.
19538
1001
4.21Ac.
1100
2.13Ac.
1101
17,85 Ac.
19588
1191
0.14 Ac.
1180
2.63Ac.
S 47°45' E
N47°45' W
290'
N46°03'35"W
N 42°15'00"E
10.00'
1288.09
483.16'
664.7
504.70'
339.7'
511.77'
317.83'
449.9'
400.00'
175'
165'
182.30'
473.38

STATUTORY BARGAIN AND SALE DEED

Wheeler Family Investment Limited Partnership
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTORS

TO
Wheeler Family Enterprises, LLC
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTEE

After recording, return to:
Jaylin Palacio
Tyler Smith
Tyler Smith & Associates P.C.
181 N Grant St. STE 212
Canby, OR 97013

Clackamas County Official Records
Sherry Hall, County Clerk

2013-016299

01662995201300162990030032

$58.00

03/08/2013 1:39:52 PM

D-D Cnt=1 Stn=2 TINAJAR
$15.00 $10.00 $16.00 $17.00

Until a change is requested, all tax statements shall be sent to:
Wheeler Family Enterprises, LLC
19566 S Central Point Rd.
Oregon City, OR 97045

STATUTORY BARGAIN AND SALE DEED

The Wheeler Family Investment Limited Partnership, **GRANTOR**, hereby conveys to Wheeler Family Enterprises, LLC, as **GRANTEE**, the following described real property:

Tract 1 being fully described in the attached Exhibit A.

No monetary consideration for this conveyance exchange was all or part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009

Dated: March 8, 2013, 2013.

David H. Wheeler, Sr.

David H. Wheeler Sr., General Partner, The Wheeler Family Investments Limited Partnership

STATE OF OREGON,)
County of Clackamas) ss.
This instrument was signed or acknowledged before me on March 8, 2013.

By:

OFFICIAL SEAL
JAYLIN D PALACIO
NOTARY PUBLIC - OREGON
COMMISSION NO. 458146
MY COMMISSION EXPIRES MAY 02, 2015

Jaylin D. Palacio

Notary Public for State of Oregon
My commission expires: May 2, 2015

Delivered to and accepted by:

David H. Wheeler Sr.

David H. Wheeler Sr., Member, Wheeler Family Enterprises, LLC.

ENGINEERING PLANNING
FORESTRY
13910 S.W. Galbreath Dr., Suite 100
Sherwood, Oregon 97140
Phone: (503) 925-8799
Fax: (503) 925-8969

AKS JOB No. 2142

LANDSCAPE ARCHITECTURE
SURVEYING
AKS Group of Companies:
SHERWOOD, OREGON
SALEM, OREGON
VANCOUVER, WASHINGTON
www.aks-eng.com

EXHIBIT A

Tract 1
City of Oregon City Planning File No. LL 12-01

A tract of land located in the Southwest One-Quarter of Section 7, Township 3 South, Range 2 East, Willamette Meridian, City of Oregon City, Clackamas County, Oregon, being more particularly described as follows:

Commencing at a 5/8 inch iron rod with a red plastic cap inscribed "AKS ENGR." at the southerly corner of Lot 75 of the plat "Hazel Creek Farms"; thence along the southwest line of said Lot 75, North 46°03'51" West 38.92 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." and the Point of Beginning; thence along the northwest line of that tract of land conveyed to David H. Wheeler Jr. and Carol A. Wheeler in Document Number 2004-103478 and clarified in Boundary Line Agreement Document Number 2012-039420, Clackamas County Deed Records, South 45°09'43" West 483.16 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR."; thence leaving said northwest line, North 46°03'35" West 511.77 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." on the southeast line of that tract of land conveyed to David H. Wheeler, Sr. Trustee of the David H. Wheeler Sr. Trust per Document Number 2002-068860, Clackamas County Deed Records; thence along said southeast line, North 44°04'18" East 317.83 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." on the southwest line of Lot 44 of the plat "Hazel Creek Farms"; thence along the westerly southwest line of "Hazel Creek Farms", South 46°05'25" East 400.00 feet to a 12 inch by 18 inch stone with a "X" scribed on top on the southeast right-of-way line of Orchard Grove Drive (26.00 feet from centerline); thence along said southeast right-of-way line, North 43°54'18" East 165.00 feet to the westerly corner of said Lot 75; thence along the westerly line of said Lot 75, South 46°03'51" East 121.45 feet to the Point of Beginning.

The above described tract of land contains 4.21 acres, more or less.

06-25-12
REGISTERED
PROFESSIONAL
LAND SURVEYOR
OREGON
JANUARY 11, 2005
ROBERT D. RETTIG
60124LS
RENEWS: 12/31/12

Fidelity National Title
OREGON

Property Profile Report

Address Not Available

Ownership Information

Owner Name:	Please see attached vesting deed for current ownership.
Mailing Address:	19566 CENTRAL POINT RD OREGON CITY, OR 97045

Property Description

County:	Clackamas	Map / Tax Lot:	32E07C/01100
Account Num:	00862828	Owner Occ.:	No
Land Use:	541-	Census:	
Map Grid:	717-B5		
Subdivision:			

Legal Description: Township 3S Range 2E Section 07 Quarter C TAX LOT 01100 SEE SPLIT CODE ACCT 01180

Property Characteristics

Property Type:	SINGLE FAMILY	Building SF:	1,712	Pool:	No
House Style:		Living Area SF:	1,712	Deck SF:	
Year Built:	1926	Square Feet:	1,712	Deck Desc:	
Bedrooms:	5	1st Floor SF:		Patio SF:	
Bathrooms:	1.50	2nd Floor SF:		Patio Desc:	
Heat:		3rd Floor SF:		Foundation:	
Cooling:		Attic SF:		Exterior:	
Lot Size:	96,907	Bsmnt SF:		Ext. Finish:	
Acres:	2.13	Fin Bsmt SF:		Interior:	
Garage Type:		Garage SF:		Roof Style:	
Fireplaces:		Bsmnt Type:		Roof Cover:	

Assessment Information

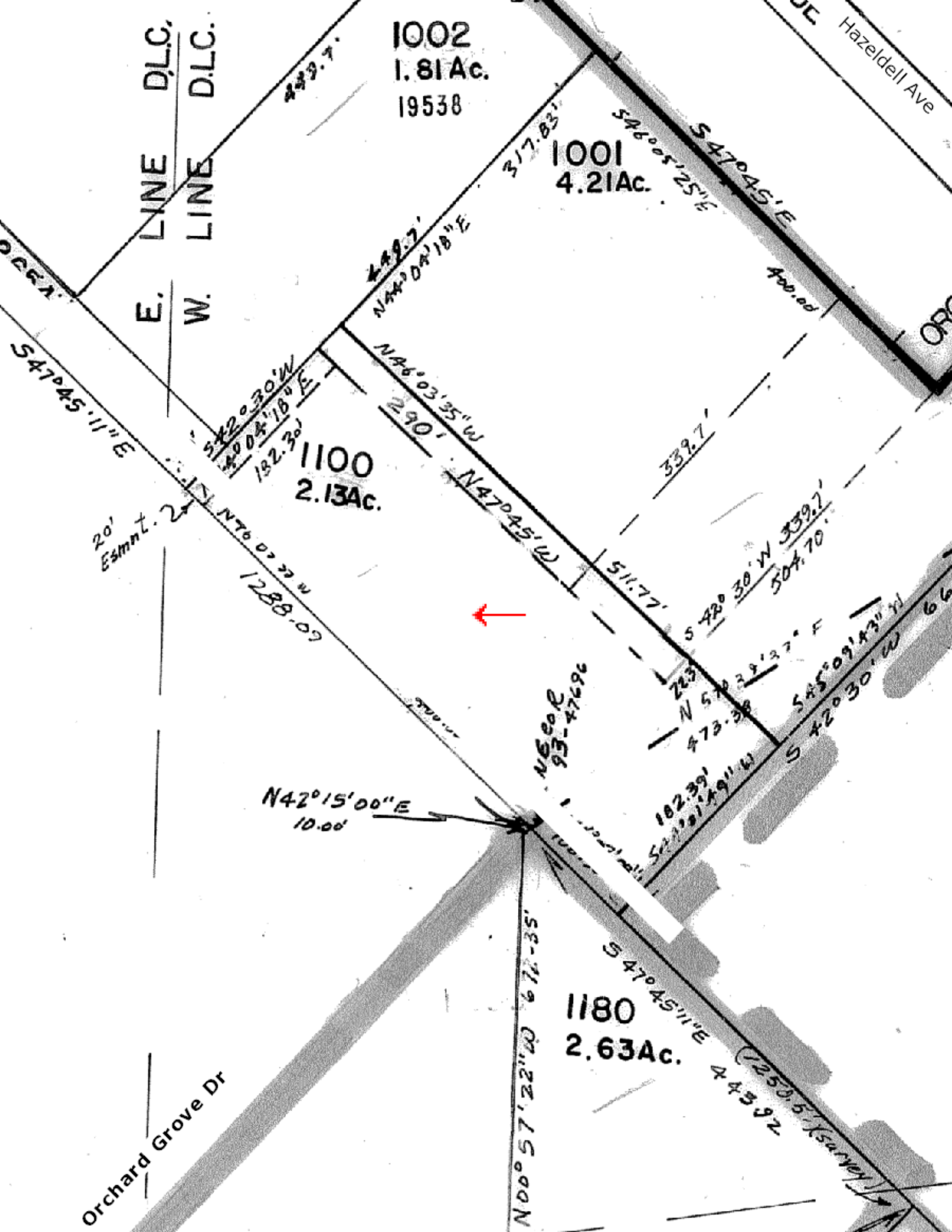
Real Market Value:	$ 271,977	Land Value:	$ 179,617	Imp. Value:	$ 92,360
Total Assessed Value:	$ 132,652	Levy Code:	062064	M-5 Rate:	.0182
Taxes:	$ 2,409.93	Tax Year:	15-16		

Previous Sale Information

Sale Amount:	Sale Date:	Document Num:

Transaction History

Sale Date	Sale Amount	HPI Sale Amount	Document Type	Reception Num	Book/Page
5/21/2007	$ 0	$ 0	X	2007-043769	/
11/9/2004	$ 1	$ 0	X	2004-103476	/


1002
1.81 Ac.
19538
1001
4.21Ac.
1100
2.13Ac.
1180
2.63Ac.
E. W. LINE D.L.C.
E. W. LINE D.L.C.
449.7'
317.83'
S48°05'25"E
S47°45'E
400.00'
N44°04'18"E
449.7'
S42°30'W
N44°04'18"E
132.30'
N46°03'35"W
290'
N47°45'W
339.7'
S47°45'11"E
20' Esmnt. 2
N70°07'22"W
1288.09
511.77'
S 42° 30' W 339.7'
504.70'
N 47° 23' 37" E
223.
473.38
S45°09'43"W
182.39'
S 42°30'W
NE cor 93-47696
N42°15'00"E
10.00'
N00°57'22"W 671.35'
S47°45'11"E
1250.57' (survey)
443.92
Hazeldell Ave
Orchard Grove Dr

3P

STATUTORY QUIT CLAIM DEED

David H. Wheeler Jr.
19588 S Central Point Rd.
Oregon City, OR 97045

GRANTOR

TO
David H. Wheeler Sr. as Trustee
David H. Wheeler Sr. Trust
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTEE

After recording, return to:

Jaylin Palacio
Tyler Smith & Associates P.C.
181 N Grant St. STE 212
Canby, OR 97013
Anna Adams

Clackamas County Official Records
Sherry Hall, County Clerk
2013-007511
$58.00
01653157201300075110030034
02/01/2013 10:15:48 AM
D-D Cnt=1 Stn=1 JANISKEL
$15.00 $10.00 $16.00 $17.00

Until a change is requested, all tax statements shall be sent to:
The David H. Wheeler Sr. Trust
19566 S Central Point Rd.
Oregon City, OR 97045

STATUTORY QUITCLAIM DEED

David H. Wheeler Jr., **GRANTOR**, hereby releases and quitclaim to the David H. Wheeler Sr. as Trustee of the David H. Wheeler Sr. Trust, as **GRANTEE**, all right, title, and interest in and to the Property described as:

All real property, if any, BETWEEN: the northwestern boundary of the lot conveyed to David H Wheeler Jr. and Carol Wheeler, with the established legal description in the recorded Document Number 2004-103478, and furthermore with a legal description of said Boundary Line being described in the Boundary Line Agreement recorded in the real property records of Clackamas County as document number 2012-039420;
AND
the southeastern boundary line of the adjacent lot to the northwest, with said adjacent lot (also known as Tract 2) being recorded as Clackamas County record number 2004-103477 as amended by Property Line Adjustment Oregon City Planning File 12-01and shown Survey Number SN2012-080, with said survey recorded as Clackamas County record 2012-058983. The full legal description of the entire Tract 2 is described in Attachment A.

No monetary consideration for this conveyance was all or part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009

Dated: January 30, 2013.

David H. Wheeler Jr.

David H. Wheeler Jr., Grantor

STATE OF OREGON, County of Clackamas) ss.
This instrument was signed or acknowledged before me on January 30, 2013.

By:

OFFICIAL SEAL
JAYLIN D PALACIO
NOTARY PUBLIC - OREGON
COMMISSION NO. 458146
MY COMMISSION EXPIRES MAY 02, 2015

Jaylin D Palacio

Notary Public for State of Oregon
My commission expires: May 2, 2015

Delivered to and accepted by:

David H. Wheeler Sr.

David H. Wheeler Sr., Trustee, the David H. Wheeler Sr. Trust

ENGINEERING PLANNING
FORESTRY
13910 S.W. Galbreath Dr., Suite 100
Sherwood, Oregon 97140
Phone: (503) 925-8799
Fax: (503) 925-8969

AKS JOB No. 2142

LANDSCAPE ARCHITECTURE
SURVEYING
AKS Group of Companies:
SHERWOOD, OREGON
SALEM, OREGON
VANCOUVER, WASHINGTON
www.aks-eng.com

EXHIBIT A

Tract 2
City of Oregon City Planning File No. LL 12-01

A tract of land located in the Southwest One-Quarter of Section 7, Township 3 South, Range 2 East, Willamette Meridian, City of Oregon City, Clackamas County, Oregon, being more particularly described as follows:

Commencing at a 5/8 inch iron rod with a red plastic cap inscribed "AKS ENGR." at the southerly corner of Lot 75 of the plat "Hazel Creek Farms"; thence along the southwest line of said Lot 75, North 46°03'51" West 38.92 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR."; thence along the northwest line of that tract of land conveyed to David H. Wheeler Jr. and Carol A. Wheeler in Document Number 2004-103478 and clarified in Boundary Line Agreement Document Number 2012-039420, Clackamas County Deed Records, South 45°09'43" West 483.16 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." and the Point of Beginning; thence South 44°01'49" West 182.39 feet to a point on the northeasterly line of that tract of land conveyed to The Wheeler Family Investment Limited Partnership, an Oregon Limited Partnership in Document Number 2007-043768, Clackamas County Deed Records; thence along said northeasterly line and the northeasterly line, North 46°02'08" West 108.30 feet to a 6 inch by 6 inch stone with a "X" at the northerly corner thereof; thence along the northeasterly line of that tract of land conveyed to Edwin M. Tolstrup and Reitha M. Tolstrup in Document Number 2001-067656, Clackamas County Deed Records, North 46°03'35" West 400.00 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." at the southerly corner of that tract of land conveyed to David H. Wheeler Sr. Trust per Document Number 2002-068860, Clackamas County Deed Records; thence along the David H. Wheeler Sr. Trust tract, North 44°04'18" East 182.30 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR."; thence South 46°03'35" East 511.77 feet to the Point of Beginning.

The above described tract of land contains 2.13 acres, more or less.

06-25-12
REGISTERED
PROFESSIONAL
LAND SURVEYOR
OREGON
JANUARY 11, 2005
ROBERT D. RETTIG
60124LS
RENEWS: 12/31/12

Fidelity National Title
OREGON

Property Profile Report

Address Not Available

Ownership Information

Owner Name:	Please see attached vesting deed for current ownership.
Mailing Address:	19566 CENTRAL POINT RD OREGON CITY, OR 97045

Property Description

County:	Clackamas	Map / Tax Lot:	32E07C/01180
Account Num:	00862837	Owner Occ.:	No
Land Use:	680-	Census:	
Map Grid:	717-B5		
Subdivision:			

Legal Description: Township 3S Range 2E Section 07 Quarter C TAX LOT 01180 SEE SPLIT CODE ACCT 01100

Property Characteristics

Property Type:	OTHER	Building SF:		Pool:	No
House Style:		Living Area SF:		Deck SF:	
Year Built:		Square Feet:	0	Deck Desc:	
Bedrooms:		1st Floor SF:		Patio SF:	
Bathrooms:		2nd Floor SF:		Patio Desc:	
Heat:		3rd Floor SF:		Foundation:	
Cooling:		Attic SF:		Exterior:	
Lot Size:	140,812	Bsmnt SF:		Ext. Finish:	
Acres:	2.63	Fin Bsmt SF:		Interior:	
Garage Type:		Garage SF:		Roof Style:	
Fireplaces:		Bsmnt Type:		Roof Cover:	

Assessment Information

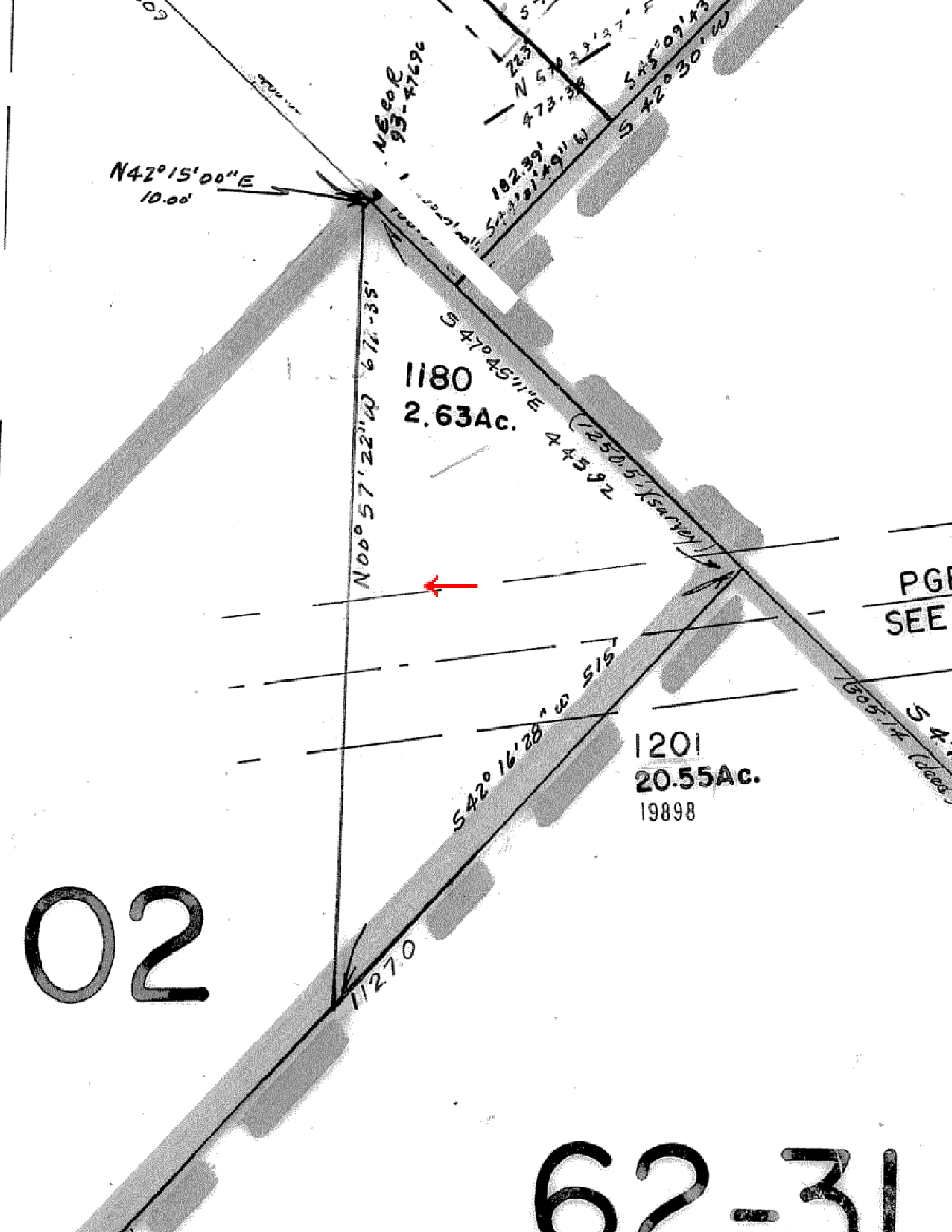
Real Market Value:	$ 236,355	Land Value:	$ 236,355	Imp. Value:	$ 0
Total Assessed Value:	$ 1,914	Levy Code:	062002	M-5 Rate:	.0182
Taxes:	$ 34.78	Tax Year:	15-16		

Previous Sale Information

Sale Amount:	Sale Date:	Document Num:

Transaction History

Sale Date	Sale Amount	HPI Sale Amount	Document Type	Reception Num	Book/Page
5/21/2007	$ 0		M	2007-043769	/
11/9/2004	$ 1		M	2004-103476	/



N42°15'00"E
10.00'
N Ecol 93-47696
182.39'
473.38
S 42°30' W
N00°57'22"W 672.35'
S 47°45'11"E
445.92
(1250.5' survey)
1180
2.63Ac.
S42°16'28"W 515'
1201
20.55Ac.
19898
11270
PGE
SEE
02
62-31

3P

STATUTORY QUIT CLAIM DEED

David H. Wheeler Jr.
19588 S Central Point Rd.
Oregon City, OR 97045

GRANTOR

TO
David H. Wheeler Sr. as Trustee
David H. Wheeler Sr. Trust
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTEE

After recording, return to:

Jaylin Palacio
Tyler Smith & Associates P.C.
181 N Grant St. STE 212
Canby, OR 97013
Anna Adams

Clackamas County Official Records
Sherry Hall, County Clerk
2013-007511
$58.00
01653157201300075110030034
02/01/2013 10:15:48 AM
D-D Cnt=1 Stn=1 JANISKEL
$15.00 $10.00 $16.00 $17.00

Until a change is requested, all tax statements shall be sent to:
The David H. Wheeler Sr. Trust
19566 S Central Point Rd.
Oregon City, OR 97045

STATUTORY QUITCLAIM DEED

David H. Wheeler Jr., **GRANTOR**, hereby releases and quitclaim to the David H. Wheeler Sr. as Trustee of the David H. Wheeler Sr. Trust, as **GRANTEE**, all right, title, and interest in and to the Property described as:

All real property, if any, BETWEEN: the northwestern boundary of the lot conveyed to David H Wheeler Jr. and Carol Wheeler, with the established legal description in the recorded Document Number 2004-103478, and furthermore with a legal description of said Boundary Line being described in the Boundary Line Agreement recorded in the real property records of Clackamas County as document number 2012-039420;
AND
the southeastern boundary line of the adjacent lot to the northwest, with said adjacent lot (also known as Tract 2) being recorded as Clackamas County record number 2004-103477 as amended by Property Line Adjustment Oregon City Planning File 12-01and shown Survey Number SN2012-080, with said survey recorded as Clackamas County record 2012-058983. The full legal description of the entire Tract 2 is described in Attachment A.

No monetary consideration for this conveyance was all or part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009

Dated: January 30, 2013.

David H. Wheeler Jr.

David H. Wheeler Jr., Grantor

STATE OF OREGON, County of Clackamas) ss.
This instrument was signed or acknowledged before me on January 30, 2013.

By:

OFFICIAL SEAL
JAYLIN D PALACIO
NOTARY PUBLIC - OREGON
COMMISSION NO. 458146
MY COMMISSION EXPIRES MAY 02, 2015

Jaylin D Palacio

Notary Public for State of Oregon
My commission expires: May 2, 2015

Delivered to and accepted by:

David H. Wheeler Sr.

David H. Wheeler Sr., Trustee, the David H. Wheeler Sr. Trust

ENGINEERING PLANNING
FORESTRY
13910 S.W. Galbreath Dr., Suite 100
Sherwood, Oregon 97140
Phone: (503) 925-8799
Fax: (503) 925-8969

AKS JOB No. 2142

LANDSCAPE ARCHITECTURE
SURVEYING
AKS Group of Companies:
SHERWOOD, OREGON
SALEM, OREGON
VANCOUVER, WASHINGTON
www.aks-eng.com

EXHIBIT A

Tract 2
City of Oregon City Planning File No. LL 12-01

A tract of land located in the Southwest One-Quarter of Section 7, Township 3 South, Range 2 East, Willamette Meridian, City of Oregon City, Clackamas County, Oregon, being more particularly described as follows:

Commencing at a 5/8 inch iron rod with a red plastic cap inscribed "AKS ENGR." at the southerly corner of Lot 75 of the plat "Hazel Creek Farms"; thence along the southwest line of said Lot 75, North 46°03'51" West 38.92 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR."; thence along the northwest line of that tract of land conveyed to David H. Wheeler Jr. and Carol A. Wheeler in Document Number 2004-103478 and clarified in Boundary Line Agreement Document Number 2012-039420, Clackamas County Deed Records, South 45°09'43" West 483.16 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." and the Point of Beginning; thence South 44°01'49" West 182.39 feet to a point on the northeasterly line of that tract of land conveyed to The Wheeler Family Investment Limited Partnership, an Oregon Limited Partnership in Document Number 2007-043768, Clackamas County Deed Records; thence along said northeasterly line and the northeasterly line, North 46°02'08" West 108.30 feet to a 6 inch by 6 inch stone with a "X" at the northerly corner thereof; thence along the northeasterly line of that tract of land conveyed to Edwin M. Tolstrup and Reitha M. Tolstrup in Document Number 2001-067656, Clackamas County Deed Records, North 46°03'35" West 400.00 feet to a 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR." at the southerly corner of that tract of land conveyed to David H. Wheeler Sr. Trust per Document Number 2002-068860, Clackamas County Deed Records; thence along the David H. Wheeler Sr. Trust tract, North 44°04'18" East 182.30 feet to a set 5/8 inch iron rod with a yellow plastic cap inscribed "AKS ENGR."; thence South 46°03'35" East 511.77 feet to the Point of Beginning.

The above described tract of land contains 2.13 acres, more or less.

06-25-12
REGISTERED
PROFESSIONAL
LAND SURVEYOR
OREGON
JANUARY 11, 2005
ROBERT D. RETTIG
60124LS
RENEWS: 12/31/12

5
30

FORM No. 961 – BARGAIN AND SALE DEED – STATUTORY FORM (Individual Grantor). STEVENS-NESS LAW PUBLISHING CO., PORTLAND, OR 97204

NA

BARGAIN AND SALE DEED — STATUTORY FORM

INDIVIDUAL GRANTOR

David H. Wheeler and Winifred L. Wheeler, husband and wife

, Grantor,

conveys to Donald W. Wheeler and Roxanne O. Wheeler, husband and wife

, Grantee, the following real property situated in Clackamas

County, Oregon, to-wit:

Beginning at a point which is North 42°15' East 57.36 Feet from the most Northerly corner of a tract of land conveyed to Frank Rotter and Anna Rotter as described in Vol. 133 Pg. 629 in the deed records for Clackamas County, Oregon; Thence South 47°36'06" East 443.46 Feet; Thence South 42°16'28" West 25.00 Feet; Thence North 47°36'06" West 417.45 Feet; Thence South 42°15' West 7.41 Feet; Thence North 47°30' West 26.00 Feet; Thence north 42°15' East 32.36 Feet to the point of beginning.

Recorded By First American Title Insurance Company of Oregon 74751

IIF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE SIDE

No The true consideration for this conveyance is $ ** 0 . (Here comply with the requirements of ORS 93.030)

** Lot Line Adjustment

Dated this 19 day of April, 19 94

David H. Wheeler

Winifred L. Wheeler

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

STATE OF OREGON, County of Clackamas) ss.

This instrument was acknowledged before me on April 19, 19 94,

by David H. Wheeler and Winifred L. Wheeler

OFFICIAL SEAL
SUSAN R. SEAWARD
NOTARY PUBLIC-OREGON
COMMISSION NO. 015780
MY COMMISSION EXPIRES MAY 31, 1996

Susan R. Seaward
Notary Public for Oregon

My commission expires 5/31/96

BARGAIN AND SALE DEED

David H. & Winifred L. Wheeler, GRANTOR
Donald W. & Roxanne O. Wheeler, GRANTEE

GRANTEE'S ADDRESS, ZIP

After recording return to:

A. Gregory McKenzie
1600 Willamette Falls Drive
West Linn, OR 97068

NAME, ADDRESS, ZIP

Until a change is requested, all tax statements shall be sent to the following address:

Donald W. Wheeler
Roxanne O. Wheeler
19898 S. White Lane
Oregon City, OR 97045

NAME, ADDRESS, ZIP

STATE OF OREGON
County of Clackamas } ss

I, John Kauffman, County Clerk, for the County of Clackamas, do hereby certify that the instrument of writing was received for recording in the records of said county at

94 APR 22 PM 3:20

COUNTY OF CLACKAMAS * STATE OF OREGON *

Witness my hand and seal affixed

JOHN KAUFFMAN
County Clerk

Deputy

Recording Certificate
CCP-R4 (Rev 6/91)

94 34241

94 34241

Fidelity National Title OREGON

Property Profile Report

Address Not Available

Ownership Information

Owner Name:	Please see attached vesting deed for current ownership.
Mailing Address:	19566 CENTRAL POINT RD OREGON CITY, OR 97045

Property Description

County:	Clackamas	Map / Tax Lot:	31E12D/01700
Account Num:	00763276	Owner Occ.:	No
Land Use:	540-	Census:	
Map Grid:	717-B5		
Subdivision:			

Legal Description: Section 12 Township 3S Range 1E Quarter D TAX LOT 01700 SEE SPLIT CODE ACCT 01790

Property Characteristics

Property Type:	AGRICULTURAL	Building SF:		Pool:	No
House Style:		Living Area SF:		Deck SF:	
Year Built:		Square Feet:	0	Deck Desc:	
Bedrooms:		1st Floor SF:		Patio SF:	
Bathrooms:		2nd Floor SF:		Patio Desc:	
Heat:		3rd Floor SF:		Foundation:	
Cooling:		Attic SF:		Exterior:	
Lot Size:	190,697	Bsmnt SF:		Ext. Finish:	
Acres:	4.62	Fin Bsmt SF:		Interior:	
Garage Type:		Garage SF:		Roof Style:	
Fireplaces:		Bsmnt Type:		Roof Cover:	

Assessment Information

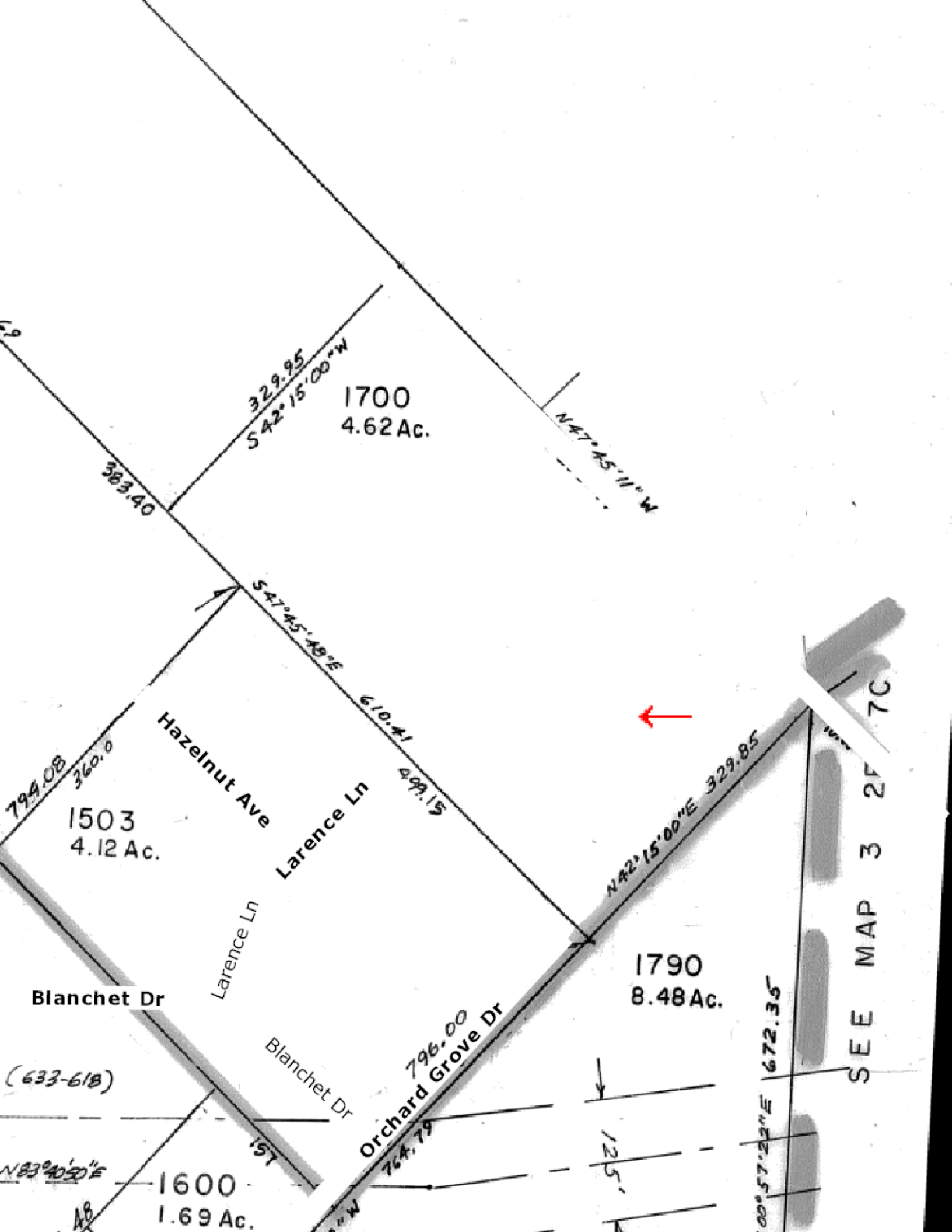
Real Market Value:	$ 270,495	Land Value:	$ 270,495	Imp. Value:	$ 0
Total Assessed Value:	$ 3,738	Levy Code:	062064	M-5 Rate:	.0182
Taxes:	$ 67.91	Tax Year:	15-16		

Previous Sale Information

Sale Amount:	Sale Date:	Document Num:

Transaction History

Sale Date	Sale Amount	HPI Sale Amount	Document Type	Reception Num	Book/Page
10/8/2013	$ 0		S	2013-070116	/
7/1/1993	$ 0			1993-047696	/


1700
4.62 Ac.
329.95
S 42° 15' 00" W
N 47° 45' 11" W
383.40
S 47° 45' 49" E
610.41
499.15
1503
4.12 Ac.
794.08
360.0
Hazelnut Ave
Larence Ln
Larence Ln
Blanchet Dr
Blanchet Dr
N 42° 15' 00" E 329.85
1790
8.48 Ac.
796.00
Orchard Grove Dr
764.79
1600
1.69 Ac.
(633-618)
151
125'
672.35
SEE MAP 3 2F 7C

3P

BARGAIN AND SALE DEED

Wheeler Family Investment Limited Partnership
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTORS

TO
Wheeler Family, Enterprises LLC
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTEE

After recording, return to:

Tayda Ross
Tyler Smith
Tyler Smith & Associates P.C.
181 N Grant St. STE 212
Canby, OR 97013

Clackamas County Official Records
Sherry Hall, County Clerk
2013-070116

01723548201300701160030033
$58.00
10/08/2013 01:29:11 PM

D-D Cnt=1 Stn=9 COUNTER1
$15.00 $10.00 $16.00 $17.00

Until a change is requested, all tax statements shall be sent to:
Wheeler Family Enterprises, LLC
19566 S Central Point Rd.
Oregon City, OR 97045

STATUTORY BARGAIN AND SALE DEED

Wheeler Family Investment Limited Partnership, **GRANTOR**, herby conveys to Wheeler Family Enterprises, LLC, as **GRANTEE**, the following described real property:

See attachment Exhibit A, (lot to be conveyed commonly known as Tax Lot 1700, T3S R1E Section 12D).

No monetary consideration for this conveyance was all or part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE

UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009

Dated: October 8, 2013.

David H. Wheeler, Sr

David H. Wheeler Sr., General Partner Wheeler Family Investments Limited Partnership

STATE OF OREGON,)
County of Clackamas) ss.
This instrument was signed or acknowledged by David Wheeler, before me on October 8, 2013.

Sherry B Smith

Notary Public for State of Oregon
My commission expires: July 14, 2016

OFFICIAL SEAL
SHERRY B SMITH
NOTARY PUBLIC - OREGON
COMMISSION NO. 469538
MY COMMISSION EXPIRES JULY 14, 2016

Delivered to and accepted by:

David H. Wheeler Sr.

David H. Wheeler Sr., Member Wheeler Family Enterprises, LLC

EXHIBIT A

Beginning at a point on the northeasterly line of that tract of land described in Recorders Fee 93-47696, Clackamas County Deed Records, located in the S.E. 1/4 of Section 12, T.3S., R.1E., and the S.W. 1/4 of Section 7, T.3S., R.2E., W.M., Clackamas County, Oregon, said point being S42°41'31"W 65.05 feet and S47°45'11"E 677.68 feet from a 5/8 inch iron rod marking the most northerly curve point of Lot 1, "Filbert Orchard"; thence, leaving said northeasterly line, S42° 15'00"W 329.95 feet to the southwesterly line of said tract; thence, on the southwesterly line S47°45'48"E 610.41 feet to the most southerly corner of said track; thence, on the southeasterly line of said tract, N42°15'00"E 329.85 feet to the most easterly corner of said tract; thence, on the northeasterly line of said tract N47°45'11"W 610.41 feet to the POINT OF BEGINNING.

The tract known as tax lot 1700 conveyed herein contains 4.62 acres, more or less.

Subject to any easements of record.

Fidelity National Title OREGON

Property Profile Report

Address Not Available

Ownership Information

Owner Name:	Please see attached vesting deed for current ownership.
Mailing Address:	19566 CENTRAL POINT RD OREGON CITY, OR 97045

Property Description

County:	Clackamas	Map / Tax Lot:	31E12D/01790
Account Num:	01655729	Owner Occ.:	No
Land Use:	640-	Census:	
Map Grid:	717-A6		
Subdivision:			

Legal Description: Section 12 Township 3S Range 1E Quarter D TAX LOT 01790 SEE SPLIT CODE ACCT 01700

Property Characteristics

Property Type:	VACANT LAND	Building SF:		Pool:	No
House Style:		Living Area SF:		Deck SF:	
Year Built:		Square Feet:	0	Deck Desc:	
Bedrooms:		1st Floor SF:		Patio SF:	
Bathrooms:		2nd Floor SF:		Patio Desc:	
Heat:		3rd Floor SF:		Foundation:	
Cooling:		Attic SF:		Exterior:	
Lot Size:	346,764	Bsmnt SF:		Ext. Finish:	
Acres:	8.48	Fin Bsmt SF:		Interior:	
Garage Type:		Garage SF:		Roof Style:	
Fireplaces:		Bsmnt Type:		Roof Cover:	

Assessment Information

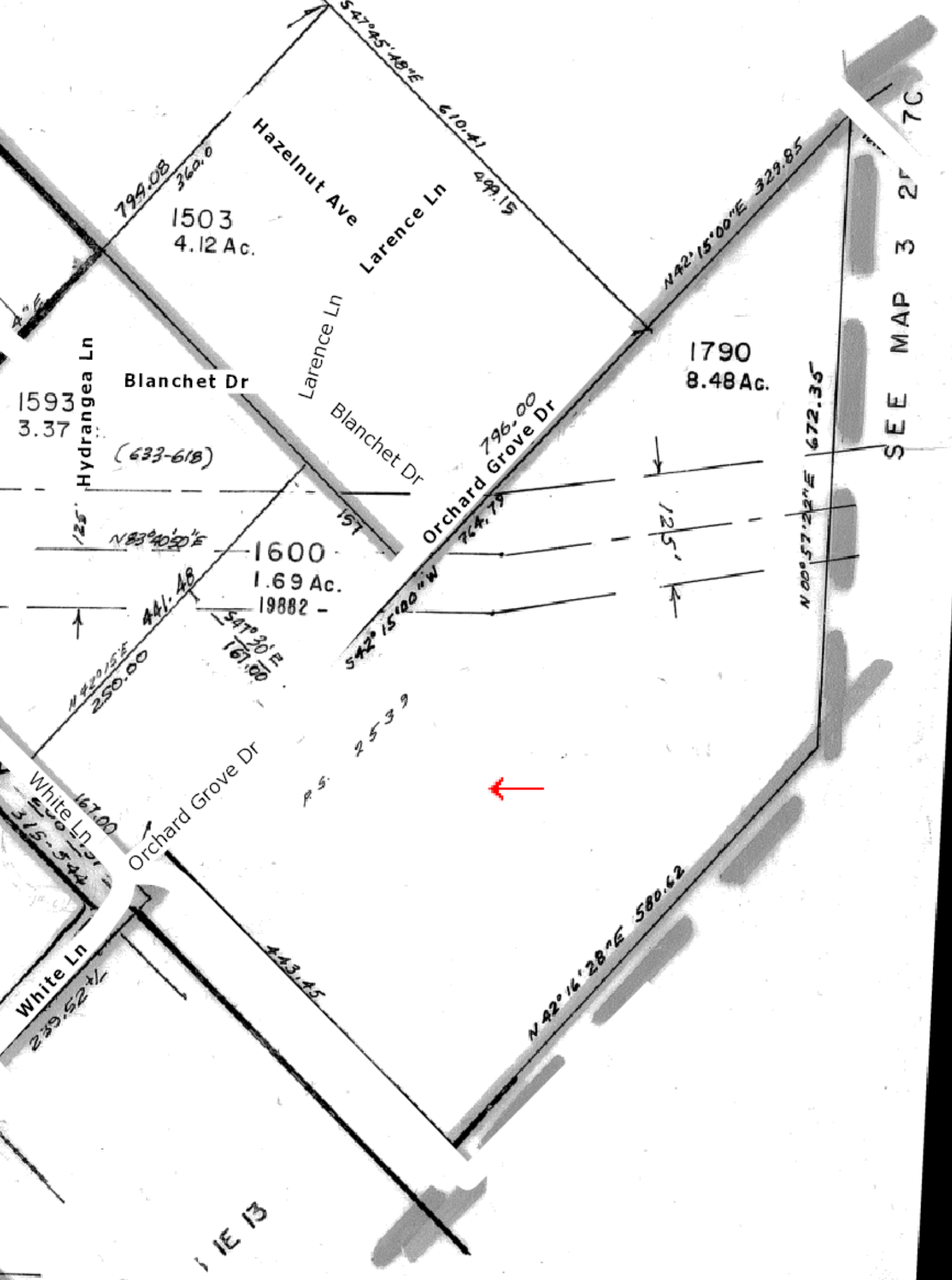
Real Market Value:	$ 376,049	Land Value:	$ 376,049	Imp. Value:	$ 0
Total Assessed Value:	$ 2,985	Levy Code:	062002	M-5 Rate:	.0182
Taxes:	$ 54.23	Tax Year:	15-16		

Previous Sale Information

Sale Amount:	Sale Date:	Document Num:

Transaction History

Sale Date	Sale Amount	HPI Sale Amount	Document Type	Reception Num	Book/Page
10/8/2013	$ 0		S	2013-070117	/


Hazelnut Ave
Larence Ln
Larence Ln
Blanchet Dr
Blanchet Dr
Hydrangea Ln
Orchard Grove Dr
Orchard Grove Dr
White Ln
White Ln
1503
4.12 Ac.
1593
3.37
1600
1.69 Ac.
1790
8.48 Ac.
SEE MAP 3 2
S47°45'48"E 610.41
499.15
194.08
360.0
N42°15'00"E 329.85
672.35
N83°40'20"E
441.48
S47°20'
161.81'E
N42°15'E
250.00
796.00
764.79
S42°15'00"W
N00°57'22"E
167.00
443.45
N42°16'28"E 580.62
239.52+/-
(633-618)
19882
125'
151'
125'

3P

BARGAIN AND SALE DEED

Wheeler Family Investment Limited Partnership
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTORS

TO

Wheeler Family, Enterprises LLC
19566 S Central Point Rd.
Oregon City, OR 97045

GRANTEE

After recording, return to:

Fayda Ross
Tyler Smith
Tyler Smith & Associates P.C.
181 N Grant St. STE 212
Canby, OR 97013

Clackamas County Official Records
Sherry Hall, County Clerk

2013-070117

$58.00

01723549201300701170030030

10/08/2013 01:29:11 PM

D-D Cnt=1 Stn=9 COUNTER1
$15.00 $10.00 $16.00 $17.00

Until a change is requested, all tax statements shall be sent to:
Wheeler Family Enterprises, LLC
19566 S Central Point Rd.
Oregon City, OR 97045

STATUTORY BARGAIN AND SALE DEED

Wheeler Family Investment Limited Partnership, **GRANTOR**, herby conveys to Wheeler Family Enterprises, LLC, as **GRANTEE**, the following described real property:

See attachment Exhibit A, (lot to be conveyed commonly known as Tax Lot 1790, T3S R1E Section 12D).

No monetary consideration for this conveyance was all or part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE

UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009

Dated: October 8, 2013.

David H. Wheeler Sr

David H. Wheeler Sr., General Partner Wheeler Family Investments Limited Partnership

STATE OF OREGON,)
County of Clackamas) ss.
This instrument was signed or acknowledged by David Wheeler, before me on October 8, 2013.

OFFICIAL SEAL
SHERRY B SMITH
NOTARY PUBLIC - OREGON
COMMISSION NO. 469538
MY COMMISSION EXPIRES JULY 14, 2016

Sherry B Smith

Notary Public for State of Oregon
My commission expires: July 14, 2016

Delivered to and accepted by:

David H Wheeler Sr.

David H. Wheeler Sr., Member, Wheeler Enterprises LLC

EXHIBIT A

Beginning at a point on the northeasterly line of that tract of land described in Recorders Fee 93-47696, Clackamas County Deed Records, located in the S.E. 1/4 of Section 12, T.3S., R.1E., and the S.W. 1/4 of Section 7, T.3S., R.2E., W.M., Clackamas County, Oregon, said point being S42° 41'31"W 65.05 feet and S47° 45'11" E 677.68 feet from a 5/8 inch rod marking the most northerly curve point of Lot 1, "Filbert Orchard"; thence, leaving said northeasterly line, S42° 150' 0"W 329.95 feet to the southwesterly line of said tract; thence, on said southwesterly line S47°45' 48"E 610.41 feet to the most southerly corner of said tract, said corner being on the northwesterly line of that tract of land described in Recorders Fee No. 83-11698, Clackamas County deed Records; thence, on said northwesterly line S42°15' 00" W 764.79 feet to the most westerly corner of said tract; thence, on the southwesterly line of said tract S47°36' 06"E 443.45 feet; thence N42° 16' 28"E 580.62 feet; thence, N00°57'22"E 672.35 feet to the northwesterly line of said tract (Fee 83-11698); thence, on said northwesterly line N42°15'00"E 10.00 feet to the most easterly corner of said tract (Fee No. 93-47696); thence, on the northeasterly line of said tract N47°45'11"W 610.41 feet to the POINT OF BEGINNING.

(Above description includes both tax lot 1700 and 1790 as recorded and described in the boundary line agreement recorded in Clackamas County Records document number 2003-085041, Exhibit C).

EXCLUDING that portion of above description known as tax lot 1700 which is being conveyed by separate document, with full description of excluded portion being:

Beginning at a point on the northeasterly line of that tract of land described in Recorders Fee 93-47696, Clackamas County Deed Records, located in the S.E. 1/4 of Section 12, T.3S., R.1E., and the S.W. 1/4 of Section 7, T.3S., R.2E., W.M., Clackamas County, Oregon, said point being S42°41'31"W 65.05 feet and S47°45'11"E 677.68 feet from a 5/8 inch iron rod marking the most northerly curve point of Lot 1, "Filbert Orchard"; thence, leaving said northeasterly line, S42° 15'00"W 329.95 feet to the southwesterly line of said tract; thence, on the southwesterly line S47°45'48"E 610.41 feet to the most southerly corner of said track; thence, on the southeasterly line of said tract, N42°15'00"E 329.85 feet to the most easterly corner of said tract; thence, on the northeasterly line of said tract N47°45'45'11"W 610.41 feet to the POINT OF BEGINNING. (The tract known as tax lot 1700 contains 4.62 acres, more or less).

With the parcel being conveyed under this document consisting of 8.48 acres more or less.

Subject to any easements of record.

Exhibit D: Type I Natural Resource Overlay District Verification (NR 17-03)

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

TYPE I NATURAL RESOURCE OVERLAY DISTRICT VERIFICATION
May 19, 2017

FILE NUMBER:	NR 17-03: Type I Natural Resource Overlay District Verification
APPLICANT:	Rian Park Development, Inc. P.O. Box 2559 Oregon City, OR 97045
OWNERS:	32E07C Tax Lot 1001 (Wheeler Family Enterprises, LLC) 32E07C Tax Lots 1100, 1180 (David H. Wheeler Sr. Trust) 32E07C Tax Lot 1291 (Donald W. & Roxanne O. Wheeler) 31E12D Tax Lots 1700, 1790 (Wheeler Family Enterprises, LLC)
CONSULTANT:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062
REQUEST:	The applicant submitted a request for a Type I Natural Resource Overlay District Verification with a professionally prepared assessment to demonstrate that the subject site is not within the Natural Resource Overlay District.
LOCATION:	NO SITUS ADDRESS: Clackamas County Tax Map: 32E07C, Tax Lots: 1001, 1180, & 1291 / 31E12D, Tax Lots: 1700 & 1790; and 19566 Central Point Rd, Oregon City, OR 97045, Clackamas County Tax Map: 32E07C, Tax Lot 1100
ZONING:	"R-10", Single Family Residential District
DECISION:	Approval
REVIEWER:	Pete Walter, AICP, Planner
CRITERIA:	OCMC Chapter 17.49 – Natural Resource Overlay District OCMC Chapter 17.50 – Administration and Procedures

Type I decisions do not require interpretation or the exercise of policy or legal judgment in evaluating approval criteria and include lot line adjustments, zone changes upon annexation as provided in Section 17.06.050 for which there is no discretion provided, final plats, and final planned unit development plans where there are no material deviations from the approved preliminary plans. Because no discretion is involved, Type I decisions do not qualify as a land use, or limited land use, decision. The decision-making process requires no notice to any party other than the applicant. One representative from each of the city-recognized neighborhood associations, who has been identified by the neighborhood coordinator, will be distributed a monthly compilation of all Type I activities. The Community Development Director's decision is final and not appealable by any party through the normal city land use process. IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT THE PLANNING DIVISION OFFICE AT (503) 722.3789.

I. BACKGROUND

The subject properties are located southeast of Central Point Road on the southern boundary of the City. The area was historically pastureland, Christmas trees and orchard land that was brought into the Metro Urban Growth Boundary in 2001 or earlier in 1979. The lands in question were annexed to Oregon City in 2006 (File AN 16-02) and have a zoning designation of R-10 Single Family Residential. There has been a lot of recent subdivision and home construction in the area over the last 10 years abutting the site to the northwest, and it is anticipated that this land will be used in the same manner.

As shown in Figure 1, the subject site is partially located within the mapped Natural Resource Overlay District (NROD), and is thus subject to review by the City of Oregon City to ensure adequate protection of nearby water features and associated vegetated corridors.

The Oregon City Municipal Code protects degradation of water features enforcing a vegetated corridor consisting of native plantings adjacent to the identified feature (e.g. stream or wetland) to improve water quality and functions. The applicant has requested an exemption from the Natural Resource Overlay District. Approval of this verification application would exempt the property from further NROD review pursuant with Chapter 17.49 of the Oregon City Municipal Code.

Figure 1: Subject Site and Mapped NROD

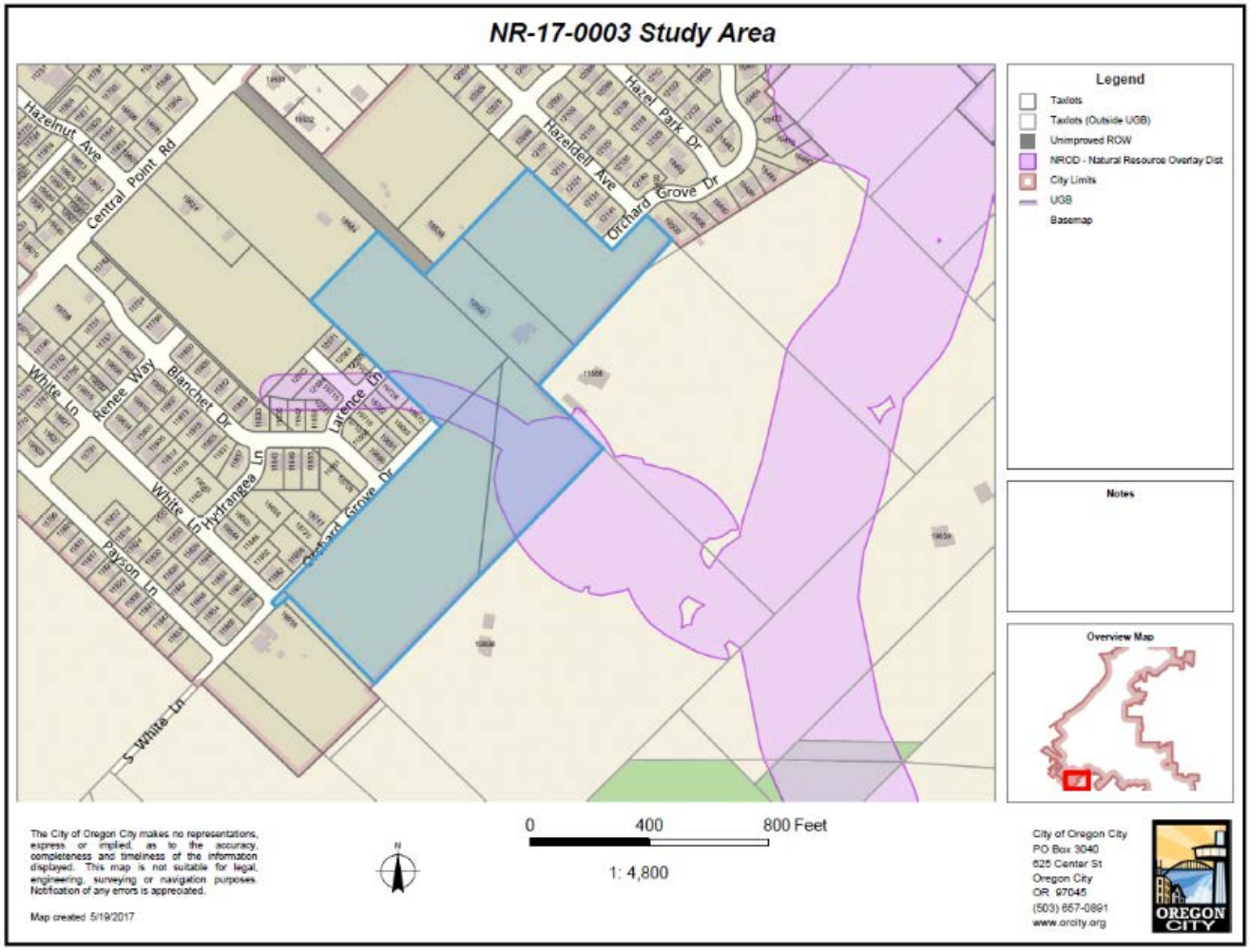
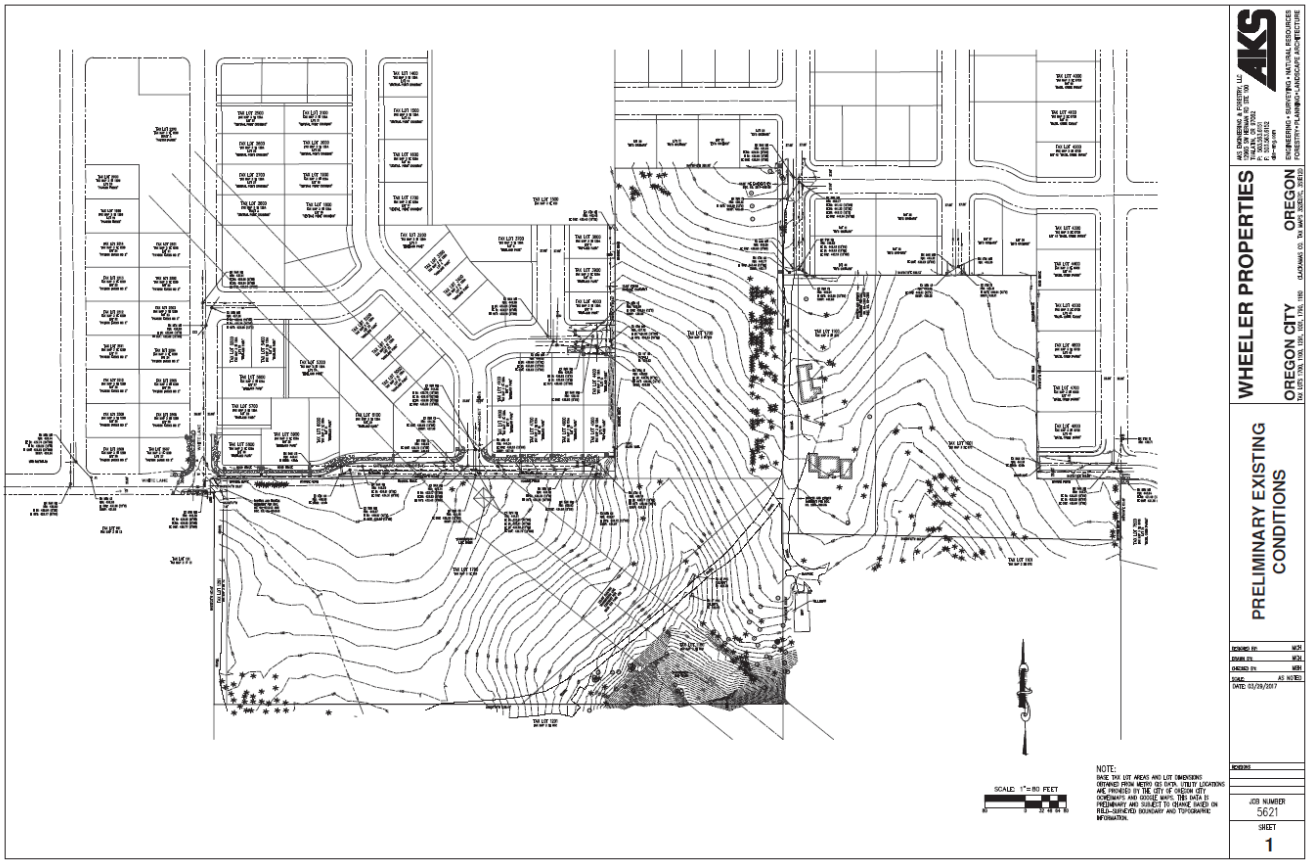


Figure 2: Existing Conditions Map from Applicant's Natural Resources Assessment



II. ANALYSIS AND FINDINGS

CHAPTER 17.49 NATURAL RESOURCE OVERLAY DISTRICT

17.49.250 Verification of NROD Boundary

The NROD boundary may have to be verified occasionally to determine the true location of a resource and its functional values on a site. This may through a site specific environmental survey or, in those cases where existing information demonstrates that the NROD significance rating does not apply to a site-specific area. Applications for development on a site located in the NROD area may request a determination that the subject site is not in an NROD area and therefore is not subject to the standards of Section 17.49.100. Verifications shall be processed as either a Type I or Type II process.

Finding: Applicable. The City of Oregon City's maps show a perennial stream that originates off-site to the west and flows into the center of the subject site. A Natural Resource Assessment dated April 3, 2017 has been prepared concluding that no potentially jurisdictional Title 3 wetlands or waters, or associated vegetated corridors were documented on-site and that the stream identified in the City's mapping is not present on the subject property. No development is associated with this application and it has been determined that a Type I NROD Verification application can accomplish the requested concurrence that the subject property is not in an NROD area.

17.49.255 - Type I verification.

A. Applicants for a determination under this section shall submit a site plan meeting the requirements of Section 17.49.220, as applicable.

Finding: Complies as Proposed. The applicant submitted a Natural Resource Assessment prepared by Lindsey Obermiller, Natural Resource Specialist, including site plans in accordance with Section 17.49.220, as applicable. The Natural Resource Assessment included in the application materials includes site plans and conclusions that no evidence of the characteristics found in criteria B.1. – B.6. exist on the subject site.

B. Alternatively, an applicant may request a Type I Verification determination by the community development director by making an application therefore and paying to the city a fee as set by resolution of the city commission. Such requests may be approved provided that there is evidence substantiating that all the requirements of this chapter relative to the proposed use are satisfied and demonstrates that the property also satisfies the following criteria, as applicable:
1. No soil, vegetation, hydrologic features have been disturbed;
2. No hydrologic features have been changed;
Finding: Complies as proposed. The applicant has not requested that the Community Development Director make this determination. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant provides the necessary evidence that the criteria for exemption are met.

3 There are no man-made drainage features, water marks, swash lines, drift lines present on trees or shrubs, sediment deposits on plants, or any other evidence of sustained inundation.
Finding: Complies as Proposed. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant identify that the site did not have any observable water marks, swash lines, drift lines on trees or shrubs, sediment deposits on plants, or any other evidence of sustained inundation in the vicinity of the steel building onsite.

4. The property does not contain a wetland as identified by the city's local wetland inventory or water quality and flood management areas map.
Finding: Complies as Proposed. The City's local wetland inventory and NROD map do not identify a wetland at the property. The Natural Resources Assessment and Wetland Delineation Data Forms submitted by the applicant also conclude that the site and adjacent locations do not possess any jurisdictional Title 3 wetlands or waters, or associated vegetated corridors.

5. There is no evidence of a perennial or intermittent stream system or other protected water feature. This does not include established irrigation ditches currently under active farm use, canals or manmade storm or surface water runoff structures or artificial water collection devices.
Finding: Complies as Proposed. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant identify that the site did not contain evidence of perennial or intermittent stream or other protected water features.

6. Evidence of prior land use approvals that conform to the City's existing Water Quality Resource Area Overlay District.
There is an existing physical barrier between the site and a protected water feature, including:
a. Streets, driveways, alleys, parking lots or other approved impervious areas wider than fifteen feet and which includes drainage improvements that are connected to the city storm sewer system, as approved by the city.
b. Walls, buildings, drainages, culverts or other structures and which form a physical barrier between the site and the protected water features, as approved by the city.
Finding: Complies as proposed. The Highland Park subdivision uphill and abutting the property received land use approval which included a prior NROD exemption regarding the subject mapped resource (Planning File TP 15-01, NR 14-08).

C. If a the city is not able to clearly determine, through the Type I verification process that the applicable criteria subsection B.1.—B.6. above are met the verification application shall be denied. An applicant may then opt to apply for a verification through the Type II process defined below.
Finding: Not Applicable. The applicant's submittal adequately demonstrates that a protected feature and associated vegetated buffer are not present onsite, and that the criteria in subsections B.1-B.6 are met. A Type II verification is not required.

17.49.260. Type II Verification
Finding: Not Applicable. The application does not include a Type II Verification request.

17.49.265 - Corrections to violations.
For correcting violations, the violator shall submit a remediation plan that meets all of the applicable standards of the NROD. The remediation plan shall be prepared by one or more qualified professionals with experience and credentials in natural resource areas, including wildlife biology, ecology, hydrology and forestry. If one or more of these standards cannot be met then the applicant's remediation plan shall demonstrate that there will be:
A. No permanent loss of any type of resource or functional value listed in Section 17.49.10, as determined by a qualified environmental professional;
B. A significant improvement of at least one functional value listed in section 17.49.10, as determined by a qualified environmental professional; and
C. There will be minimal loss of resources and functional values during the remediation action until it is fully established.
Finding: Not Applicable. No violations have been reported. Therefore, a remediation plan for the violation is not required.

CHAPTER 17.50 - ADMINISTRATION AND PROCEDURES
17.50.030 Summary of the City's Decision-Making Processes.
Finding: Complies as Proposed. The Natural Resource Overlay District verification application is being reviewed pursuant to the Type I process.

III. CONCLUSION AND DECISION

Based on the analysis and findings presented in this report, and the substantial evidence in the application materials, the properties identified are exempt from further review under Chapter 17.49 of the Oregon City Municipal Code. Though the site is exempt from further NROD review, portions of the property also fall within the Geologic Hazards Overlay District and development is subject to compliance with OCMC Chapter 17.44, *Geologic Hazards* at the time of land division application.

EXHIBITS

1. Vicinity Map (On File)
2. Map of the Site and Natural Resources Overlay District (On File)
2. Applicant's Submittal (On File)

TUALATIN · VANCOUVER · SALEM-KEIZER
12965 SW HERMAN RD., SUITE 100 · TUALATIN, OR 97062
AKS ENGINEERING & FORESTRY
WWW.AKS-ENG.COM
P: (503) 563-6151 F: (503) 563-6152

Natural Resource Assessment

DATE: April 3, 2017

TO: Oregon City Planning Department, Oregon

FROM: Kayla Katkin, Natural Resource Specialist – AKS Engineering & Forestry, LLC

SUBJECT: Type 1 Verification - Natural Resource Assessment

PROJECT: Wheeler Farms

Introduction and Background

Rian Park Development contracted AKS Engineering and Forestry, LLC (AKS) to conduct a map verification at 19566 South Central Point Road in Oregon City, Clackamas County, Oregon (Tax Lots 1001, 1291, 1180, and 1100 of Tax Map 3 2E 7C and Tax Lots 1700 and 1790 of Tax Map 3 1E 12D) as seen on the attached Figures 1 and 2A and 2B. The Oregon City Natural Resource Overlay District (NROD) Map shows a perennial stream that originates off site to the west and flows through the project area (Figure 5). Our site visit determined this resource is not present on the site or immediately off-site to the west.

This memo has been prepared to meet the Oregon City Code of Ordinances application requirements listed under Chapter 17.49.250 Type 1 Verification, to request a determination that the project area does not include an NROD area and is therefore not subject to the NROD standards.

Existing Conditions

The methodology used to determine the presence of wetlands followed the U.S. Army Corps of Engineers (Corps) *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010), used by both the Corps and the Oregon Department of State Lands (DSL). Kayla Katkin and Lindsey Obermiller documented the site conditions on March 15, 2017. They recorded soils, vegetation, and indicators of hydrology at two sample plot locations to document representative site conditions.

A single-family home, detached shop, and outbuildings are on Tax Lot 1100 on Tax Map 3 2E 7C. Tax Lots 1700 and half of Tax Lot 1001 are used as a filbert orchard. Tax Lot 1790 is primarily used as a Christmas tree farm, and Tax Lot 1291 contains a driveway. The southern portion of Tax Lot 1180 is dominated by big-leaf maple (*Acer macrophyllum*), Douglas-fir (*Pseudotsuga menziesii*), red alder (*Alnus rubra*), beaked hazelnut (*Corylus cornuta*), and pineland sword fern (*Polystichum munitum*), and slopes steeply (>25%) to the south toward an off-site drainage. Topography on remaining portions of the site have a gentle (less than 3 percent) southeasterly slope.

According to the Natural Resources Conservation Service (NRCS) Clackamas County, Oregon Area soil survey map and the Clackamas County hydric soils list, non-hydric Bornstedt silt loam with 0 to 8% slopes (Unit 8B) is mapped in the northern portion of the site and non-hydric soils Jory stony silt loam with 3-8% slopes (Unit 46B) and Xerochrepts and Haploxerolls, very steep slopes (Unit 92F) are mapped in the southern portion of

the site (Figure 3). There are no wetlands or waters mapped on the site according to the DSL approved 1999 Oregon City Local Wetland Inventory (LWI) map (Figure 4A and 4B).

Plots 1 and 2 document the conditions within the on-site mapped NROD. Plot 1 is at the lowest point within the planted Christmas tree farm in the vicinity of the mapped NROD. Plot 2 is also located in a low topographic area within the mapped NROD and upslope of a small diameter culvert under a gravel driveway along the southern property line of Tax Lot 1180. There was no defined channel upslope or downslope of the culvert. No defined channel was present upstream or downstream of the culvert.

Planted Douglas-fir dominated the vegetation at both plots. Soils were a dark reddish brown silt loam (with chromas of 3 and 4) and did not meet hydric soil indicators. Both plots lacked wetland hydrology indicators. Therefore, the area was determined to be upland.

No man-made drainage features, water marks, swash lines, drift lines on trees or shrubs, sediment deposits on plants, or any other evidence of sustained inundation was observed on the site. The approximate location of sample Plots 1 and 2 are shown on attached Figure 6, Existing Conditions Map. The wetland determination data sheets and representative site photos are also attached (Attachments A and B).

Summary

No potentially jurisdictional Title 3 wetlands or waters, or associated vegetated corridors were documented within the project area. Therefore, we request that Oregon City update the online geographic information system (GIS) mapping to reflect current site conditions and the absence of any on-site streams or buffers.

Please do not hesitate to contact me with any questions concerning the proposed project.

K. Katkin

Kayla Katkin
Natural Resource Specialist
Field work and report preparation

Stacey Reed

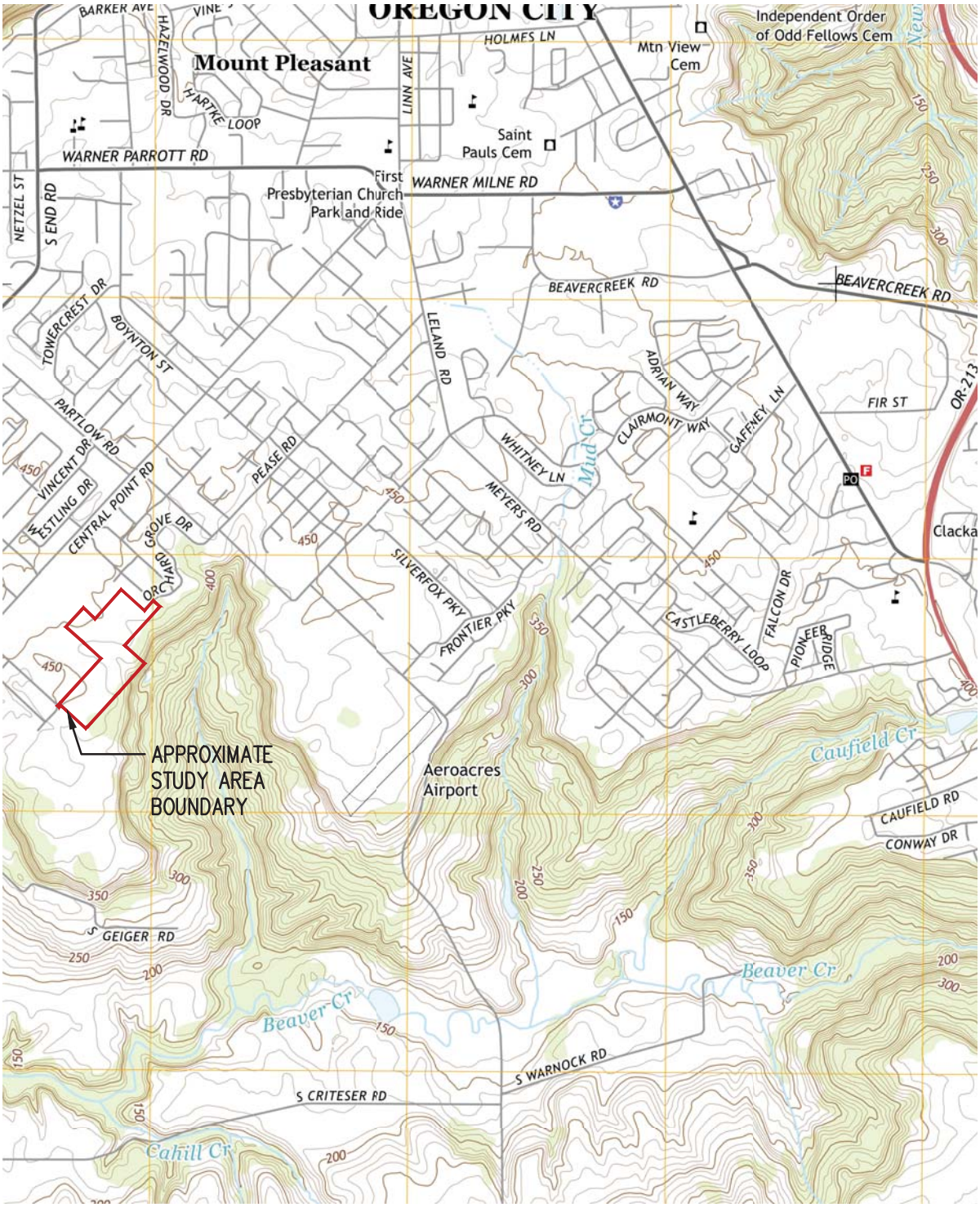
Stacey Reed, PWS
Senior Wetland Scientist
Report review

List of Attached Figures

Figure 1. Vicinity Map
Figure 2. Tax Lot Map
Figure 3. Soils Map
Figure 4. Oregon City Local Wetland Inventory Map
Figure 5. Oregon City GIS NROD Map
Figure 6. Existing Conditions Map

List of Attachments

Attachment A: Wetland Determination Data Sheets
Attachment B: Representative Site Photographs



N

SCALE 1" = 2000 FEET

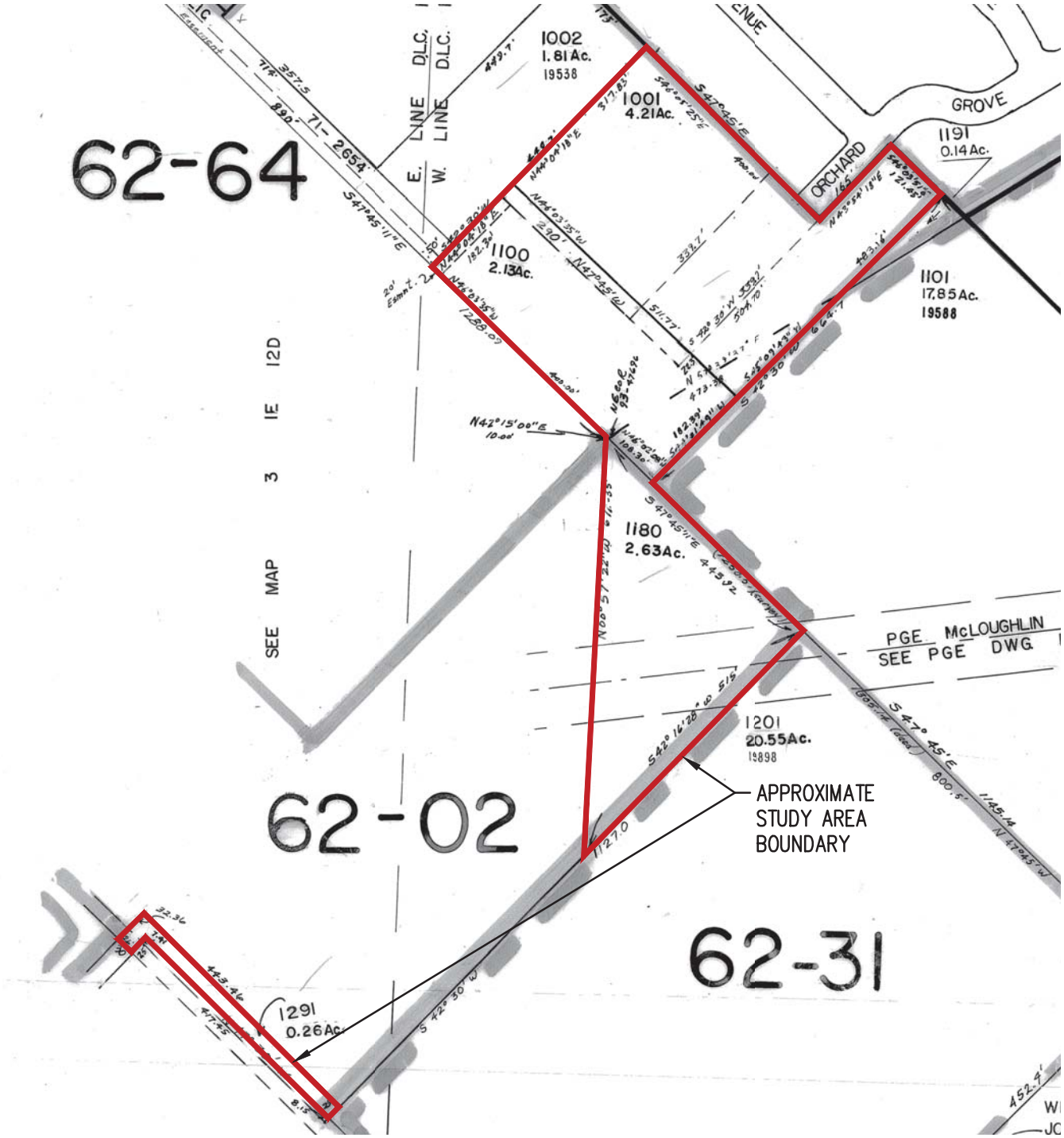
2000 0 2000

USGS 7.5' TOPOGRAPHIC
QUADRANGLE: OREGON CITY, OR (2014)

DATE: 03/20/2017

VICINITY MAP WHEELER FARMS NATURAL RESOURCE ASSESSMENT	FIGURE 1
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152	DRWN: KMK CHKD: SAR AKS JOB: 5621

DWG: 5621 REPORT FIGURES | FIGURE 1



N

SCALE 1" = 250 FEET

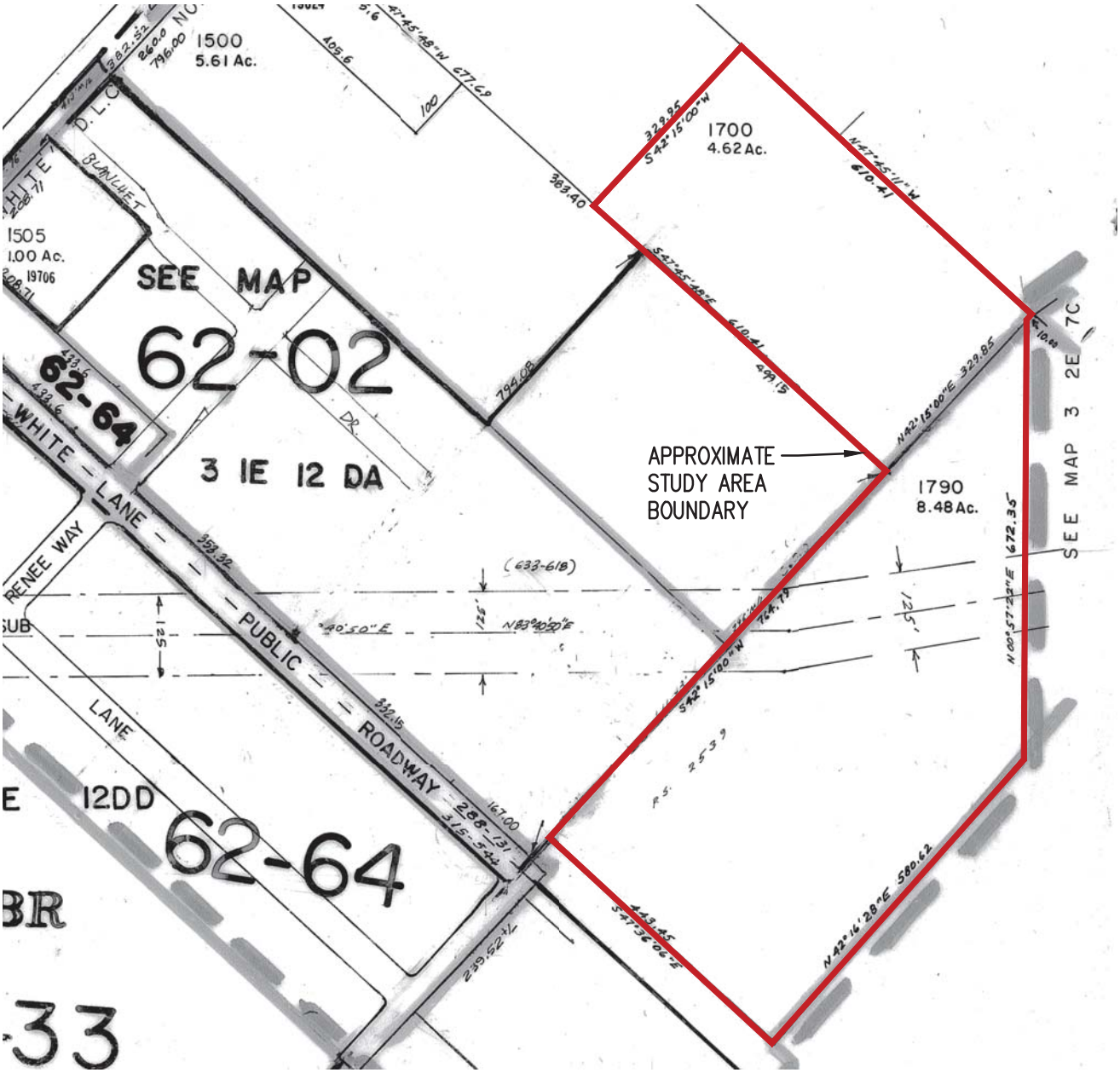
250 0 250

TAX MAP 3 2E 7C
PORTION OF TAX LOTS
1001, 1100, 1180, 1291

DATE: 03/20/2017

TAX MAP (MAP 3 2E 7C) WHEELER FARMS NATURAL RESOURCE ASSESSMENT	FIGURE 2A
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152	DRWN: KMK CHKD: SAR AKS JOB: 5621

DWG: 5621 REPORT FIGURES | FIGURE 2A



TAX MAP 3 1E 12D
PORTION OF TAX LOTS
1700 AND 1790

N

SCALE 1" = 250 FEET

250 0 250

DATE: 03/20/2017

TAX MAP (MAP 3 1E 12D) WHEELER FARMS NATURAL RESOURCE ASSESSMENT	FIGURE 2B
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152	DRWN: KMK CHKD: SAR AKS JOB: 5621

DWG: 5621 REPORT FIGURES | FIGURE 2B

MAP UNIT SYMBOL	MAP UNIT NAME
8B	BORNSTEDT SILT LOAM, 0% – 8% SLOPES; NON-HYDRIC
46B	JORY STONY SILT LOAM, 3% – 8% SLOPES; NON-HYDRIC
92F	XEROCHREPTS AND HAPLOXEROLLS, VERY STEEP; NON-HYDRIC

NRCS WEB SOIL SURVEY FOR
CLACKAMAS COUNTY

N

SCALE: 1"= 250 FEET

250 0 100 150 200 250

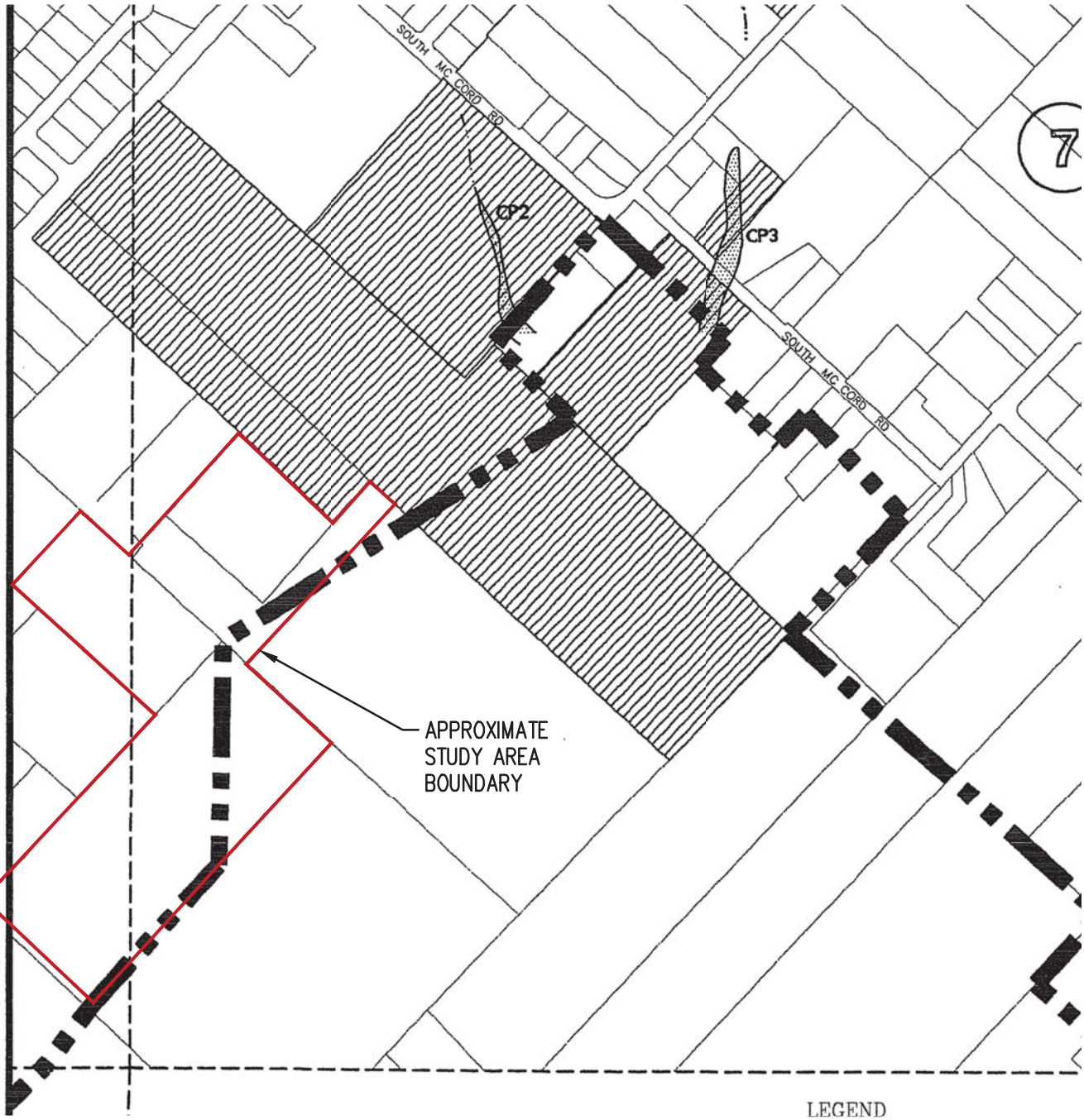
DATE: 03/20/2017

SOIL SURVEY MAP
WHEELER FARMS NATURAL RESOURCE ASSESSMENT

FIGURE 3

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD SUITE 100
TUALATIN, OR 97062 www.aks-eng.com
PHONE: 503.563.6151 FAX: 503.563.6152

DRWN: KMK
CHKD: SAR
AKS JOB: 5621



OREGON CITY LOCAL WETLAND INVENTORY, 1999
PAGE 7

NOTE: OLD UGB LINE FROM 1999

LEGEND

- Urban Growth Boundary
- Wetland
- AC2 Wetland label
- FCR1 Riparian label
- Sample site
- DSL DET wetland
- DSL DET 31-0569 DSL label
- Mitigation wetland
- Site access not granted
- Stream

DATE: 03/20/2017

N

SCALE: 1"= 500 FEET

500 0 200 300 400 500

LOCAL WETLAND INVENTORY MAP (LWI)
WHEELER FARMS NATURAL RESOURCE ASSESSMENT

FIGURE **4A**

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD SUITE 100
TUALATIN, OR 97062 www.aks-eng.com
PHONE: 503.563.6151 FAX: 503.563.6152

DRWN: KMK
CHKD: SAR
AKS JOB: 5621

OREGON CITY LOCAL WETLAND
INVENTORY, 1999
PAGE 12

LEGEND

- Urban Growth Boundary ← NOTE: OLD UGB LINE FROM 1999
- Wetland
- AC2 Wetland label
- FCR1 Riparian label
- .46 Sample site
- DSL DET wetland
- DSL DET 97-0568 DSL label
- Mitigation wetland
- Site access not granted
- Stream

STUDY AREA EXTENDS OFF MAP
(SEE FIGURE 4A)

APPROXIMATE
STUDY AREA
BOUNDARY

N

SCALE: 1"= 500 FEET

500 0 200 300 400 500

DATE: 03/20/2017

LOCAL WETLAND INVENTORY MAP (LWI)
WHEELER FARMS NATURAL RESOURCE ASSESSMENT

FIGURE
4B

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD SUITE 100
TUALATIN, OR 97062 www.aks-eng.com
PHONE: 503.563.6151 FAX: 503.563.6152

DRWN: KMK
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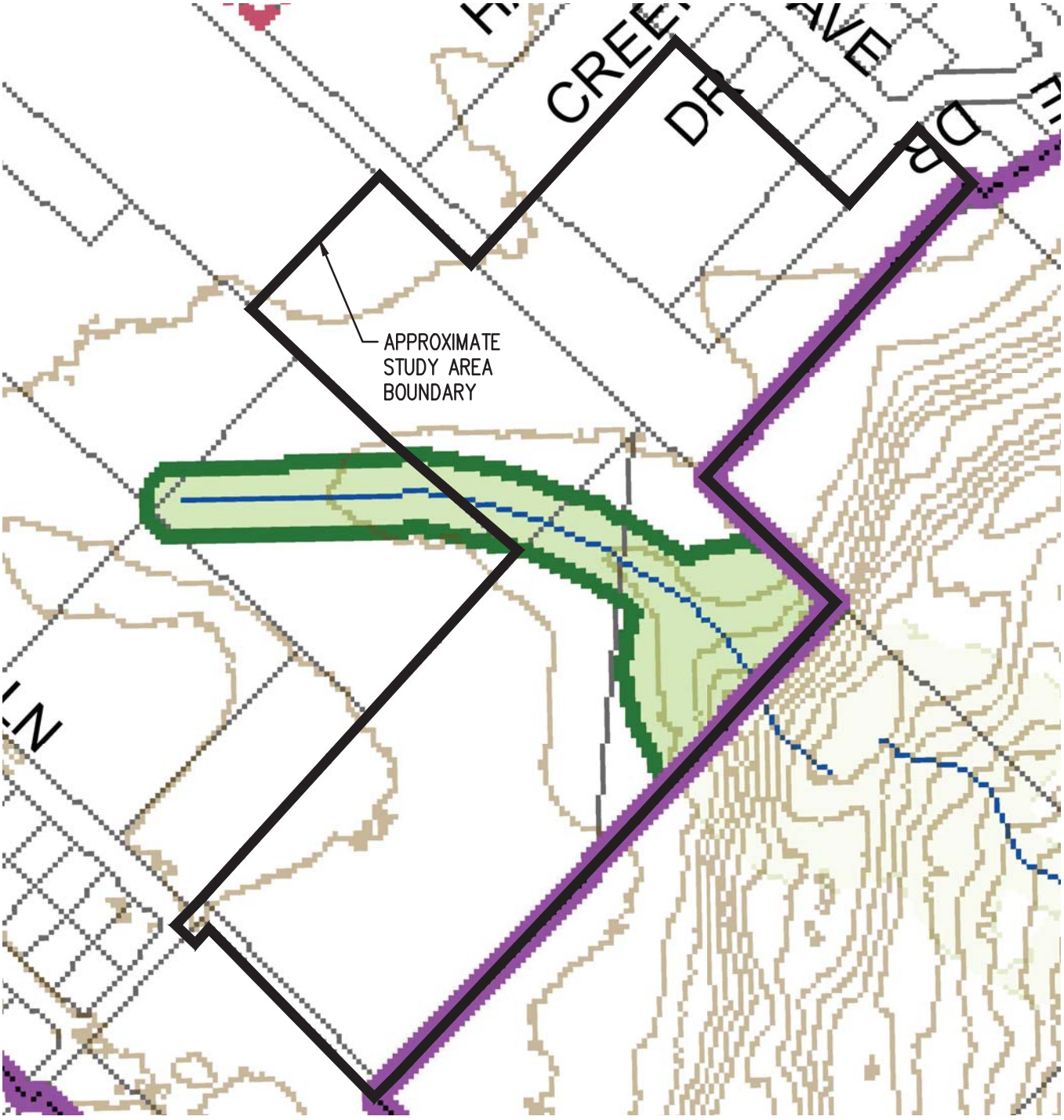


OREGON CITY GIS NROD MAP

UGB
City Limits
Contours - 10 ft
Streams - piped
Perrenial Streams
Intermittent Streams
NROD Boundary
Taxlots
NROD Boundary (2009 Title13)
RIV_FILL

N

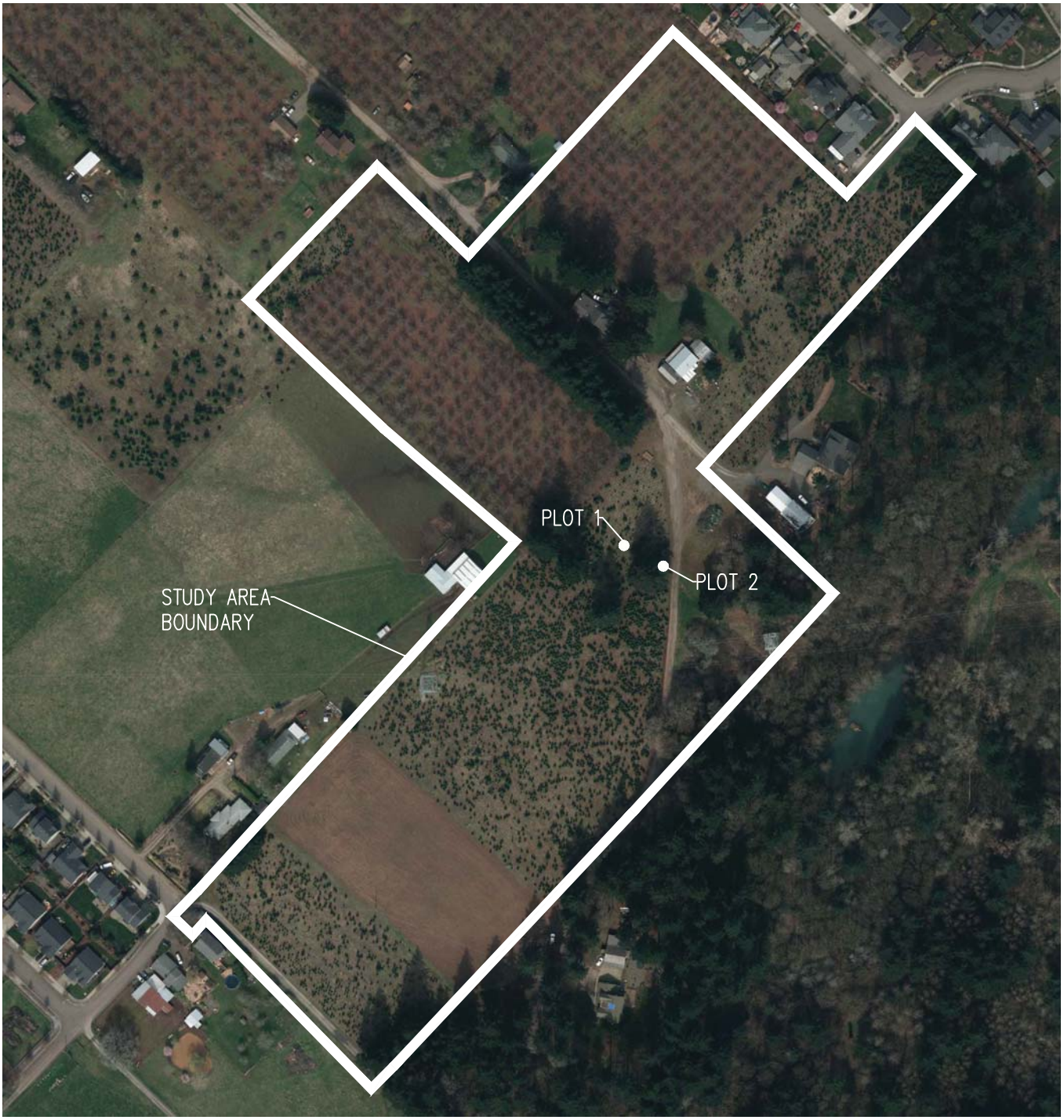
SCALE: 1"= 250 FEET

250 0 100 150 200 250

DATE: 03/20/2017

OREGON CITY GIS NROD MAP WHEELER FARMS NATURAL RESOURCE ASSESSMENT	FIGURE 5
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152	DRWN: KMK CHKD: SAR AKS JOB: 5621

DWG: 5621 REPORT FIGURES | FIGURE 5



PLOT LOCATIONS SHOWN WERE DETERMINED BY AKS ENGINEERING & FORESTRY, LLC ON 3/15/2017. PLOT LOCATIONS ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

N

SCALE: 1"= 250 FEET

250 0 100 150 200 250

DATE: 03/20/2017

FIGURE 6

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD SUITE 100
TUALATIN, OR 97062 www.aks-eng.com
PHONE: 503.563.6151 FAX: 503.563.6152

DRWN: KMK
CHKD: SAR
AKS JOB: 5621

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

TYPE I NATURAL RESOURCE OVERLAY DISTRICT VERIFICATION
May 19, 2017

FILE NUMBER:	NR 17-03: Type I Natural Resource Overlay District Verification
APPLICANT:	Rian Park Development, Inc. P.O. Box 2559 Oregon City, OR 97045
OWNERS:	32E07C Tax Lot 1001 (Wheeler Family Enterprises, LLC) 32E07C Tax Lots 1100, 1180 (David H. Wheeler Sr. Trust) 32E07C Tax Lot 1291 (Donald W. & Roxanne O. Wheeler) 31E12D Tax Lots 1700, 1790 (Wheeler Family Enterprises, LLC)
CONSULTANT:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062
REQUEST:	The applicant submitted a request for a Type I Natural Resource Overlay District Verification with a professionally prepared assessment to demonstrate that the subject site is not within the Natural Resource Overlay District.
LOCATION:	NO SITUS ADDRESS: Clackamas County Tax Map: 32E07C, Tax Lots: 1001, 1180, & 1291 / 31E12D, Tax Lots: 1700 & 1790; and 19566 Central Point Rd, Oregon City, OR 97045, Clackamas County Tax Map: 32E07C, Tax Lot 1100
ZONING:	"R-10", Single Family Residential District
DECISION:	Approval
REVIEWER:	Pete Walter, AICP, Planner
CRITERIA:	OCMC Chapter 17.49 – Natural Resource Overlay District OCMC Chapter 17.50 – Administration and Procedures

Type I decisions do not require interpretation or the exercise of policy or legal judgment in evaluating approval criteria and include lot line adjustments, zone changes upon annexation as provided in Section 17.06.050 for which there is no discretion provided, final plats, and final planned unit development plans where there are no material deviations from the approved preliminary plans. Because no discretion is involved, Type I decisions do not qualify as a land use, or limited land use, decision. The decision-making process requires no notice to any party other than the applicant. One representative from each of the city-recognized neighborhood associations, who has been identified by the neighborhood coordinator, will be distributed a monthly compilation of all Type I activities. The Community Development Director's decision is final and not appealable by any party through the normal city land use process. IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT THE PLANNING DIVISION OFFICE AT (503) 722.3789.

I. BACKGROUND

The subject properties are located southeast of Central Point Road on the southern boundary of the City. The area was historically pastureland, Christmas trees and orchard land that was brought into the Metro Urban Growth Boundary in 2001 or earlier in 1979. The lands in question were annexed to Oregon City in 2006 (File AN 16-02) and have a zoning designation of R-10 Single Family Residential. There has been a lot of recent subdivision and home construction in the area over the last 10 years abutting the site to the northwest, and it is anticipated that this land will be used in the same manner.

As shown in Figure 1, the subject site is partially located within the mapped Natural Resource Overlay District (NROD), and is thus subject to review by the City of Oregon City to ensure adequate protection of nearby water features and associated vegetated corridors.

The Oregon City Municipal Code protects degradation of water features enforcing a vegetated corridor consisting of native plantings adjacent to the identified feature (e.g. stream or wetland) to improve water quality and functions. The applicant has requested an exemption from the Natural Resource Overlay District. Approval of this verification application would exempt the property from further NROD review pursuant with Chapter 17.49 of the Oregon City Municipal Code.

Figure 1: Subject Site and Mapped NROD

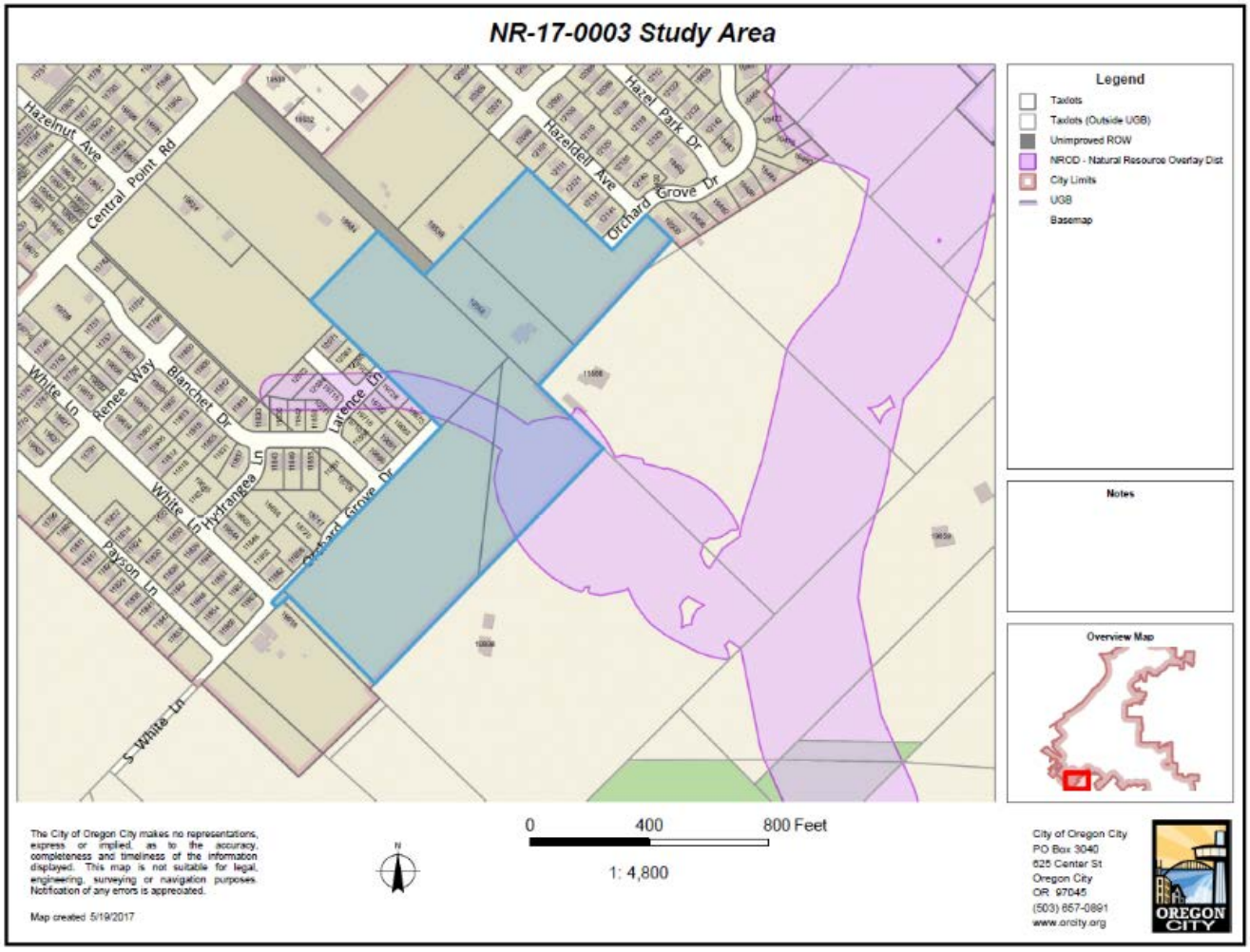
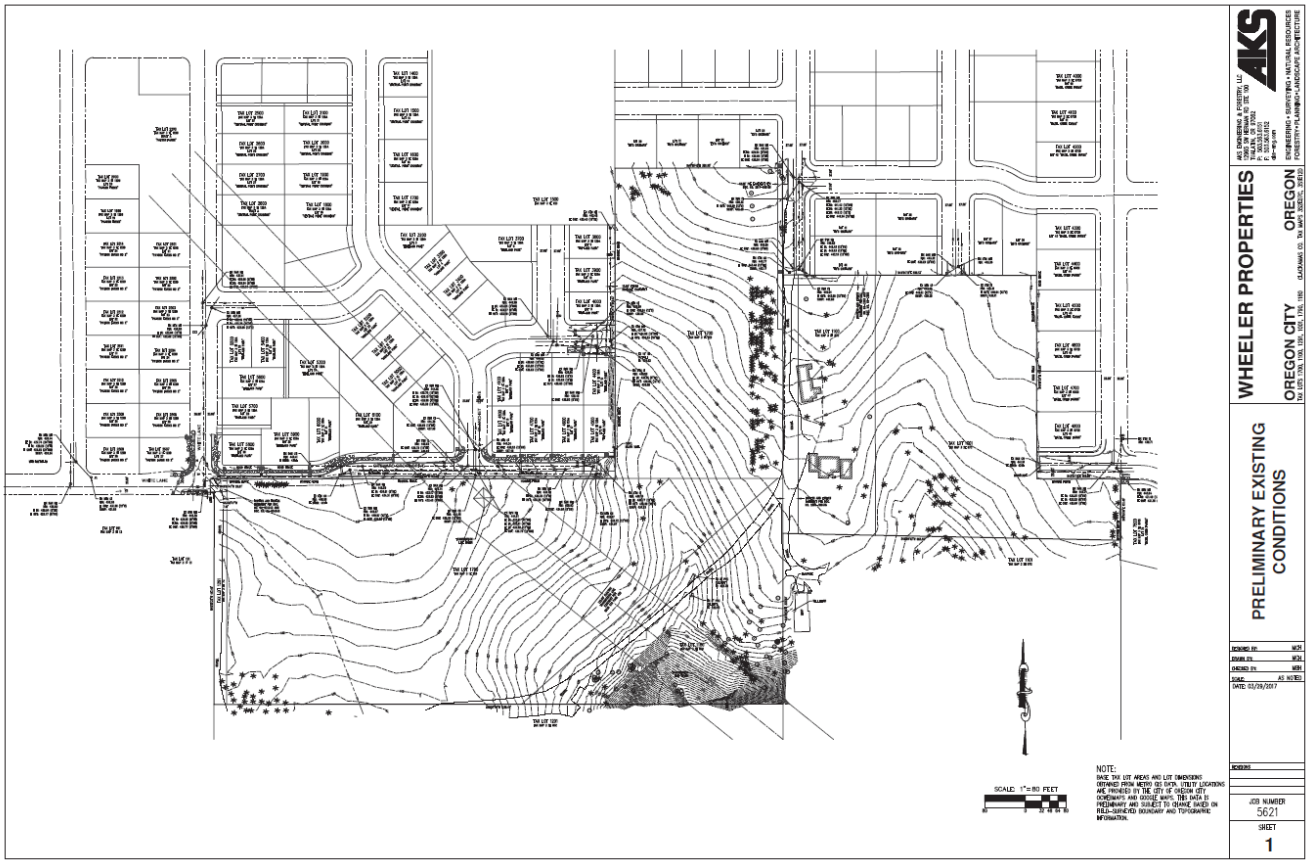


Figure 2: Existing Conditions Map from Applicant's Natural Resources Assessment



II. ANALYSIS AND FINDINGS

CHAPTER 17.49 NATURAL RESOURCE OVERLAY DISTRICT

17.49.250 Verification of NROD Boundary

The NROD boundary may have to be verified occasionally to determine the true location of a resource and its functional values on a site. This may through a site specific environmental survey or, in those cases where existing information demonstrates that the NROD significance rating does not apply to a site-specific area. Applications for development on a site located in the NROD area may request a determination that the subject site is not in an NROD area and therefore is not subject to the standards of Section 17.49.100. Verifications shall be processed as either a Type I or Type II process.

Finding: Applicable. The City of Oregon City's maps show a perennial stream that originates off-site to the west and flows into the center of the subject site. A Natural Resource Assessment dated April 3, 2017 has been prepared concluding that no potentially jurisdictional Title 3 wetlands or waters, or associated vegetated corridors were documented on-site and that the stream identified in the City's mapping is not present on the subject property. No development is associated with this application and it has been determined that a Type I NROD Verification application can accomplish the requested concurrence that the subject property is not in an NROD area.

17.49.255 - Type I verification.

A. Applicants for a determination under this section shall submit a site plan meeting the requirements of Section 17.49.220, as applicable.

Finding: Complies as Proposed. The applicant submitted a Natural Resource Assessment prepared by Lindsey Obermiller, Natural Resource Specialist, including site plans in accordance with Section 17.49.220, as applicable. The Natural Resource Assessment included in the application materials includes site plans and conclusions that no evidence of the characteristics found in criteria B.1. – B.6. exist on the subject site.

B. Alternatively, an applicant may request a Type I Verification determination by the community development director by making an application therefore and paying to the city a fee as set by resolution of the city commission. Such requests may be approved provided that there is evidence substantiating that all the requirements of this chapter relative to the proposed use are satisfied and demonstrates that the property also satisfies the following criteria, as applicable:
1. No soil, vegetation, hydrologic features have been disturbed;
2. No hydrologic features have been changed;
Finding: Complies as proposed. The applicant has not requested that the Community Development Director make this determination. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant provides the necessary evidence that the criteria for exemption are met.

3 There are no man-made drainage features, water marks, swash lines, drift lines present on trees or shrubs, sediment deposits on plants, or any other evidence of sustained inundation.
Finding: Complies as Proposed. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant identify that the site did not have any observable water marks, swash lines, drift lines on trees or shrubs, sediment deposits on plants, or any other evidence of sustained inundation in the vicinity of the steel building onsite.

4. The property does not contain a wetland as identified by the city's local wetland inventory or water quality and flood management areas map.
Finding: Complies as Proposed. The City's local wetland inventory and NROD map do not identify a wetland at the property. The Natural Resources Assessment and Wetland Delineation Data Forms submitted by the applicant also conclude that the site and adjacent locations do not possess any jurisdictional Title 3 wetlands or waters, or associated vegetated corridors.

5. There is no evidence of a perennial or intermittent stream system or other protected water feature. This does not include established irrigation ditches currently under active farm use, canals or manmade storm or surface water runoff structures or artificial water collection devices.
Finding: Complies as Proposed. The Natural Resources Assessment and Wetland Determination Data Forms submitted by the applicant identify that the site did not contain evidence of perennial or intermittent stream or other protected water features.

6. Evidence of prior land use approvals that conform to the City's existing Water Quality Resource Area Overlay District.
There is an existing physical barrier between the site and a protected water feature, including:
a. Streets, driveways, alleys, parking lots or other approved impervious areas wider than fifteen feet and which includes drainage improvements that are connected to the city storm sewer system, as approved by the city.
b. Walls, buildings, drainages, culverts or other structures and which form a physical barrier between the site and the protected water features, as approved by the city.
Finding: Complies as proposed. The Highland Park subdivision uphill and abutting the property received land use approval which included a prior NROD exemption regarding the subject mapped resource (Planning File TP 15-01, NR 14-08).

C. If a the city is not able to clearly determine, through the Type I verification process that the applicable criteria subsection B.1.—B.6. above are met the verification application shall be denied. An applicant may then opt to apply for a verification through the Type II process defined below.
Finding: Not Applicable. The applicant's submittal adequately demonstrates that a protected feature and associated vegetated buffer are not present onsite, and that the criteria in subsections B.1-B.6 are met. A Type II verification is not required.

17.49.260. Type II Verification
Finding: Not Applicable. The application does not include a Type II Verification request.

17.49.265 - Corrections to violations.
For correcting violations, the violator shall submit a remediation plan that meets all of the applicable standards of the NROD. The remediation plan shall be prepared by one or more qualified professionals with experience and credentials in natural resource areas, including wildlife biology, ecology, hydrology and forestry. If one or more of these standards cannot be met then the applicant's remediation plan shall demonstrate that there will be:
A. No permanent loss of any type of resource or functional value listed in Section 17.49.10, as determined by a qualified environmental professional;
B. A significant improvement of at least one functional value listed in section 17.49.10, as determined by a qualified environmental professional; and
C. There will be minimal loss of resources and functional values during the remediation action until it is fully established.
Finding: Not Applicable. No violations have been reported. Therefore, a remediation plan for the violation is not required.

CHAPTER 17.50 - ADMINISTRATION AND PROCEDURES
17.50.030 Summary of the City's Decision-Making Processes.
Finding: Complies as Proposed. The Natural Resource Overlay District verification application is being reviewed pursuant to the Type I process.

III. CONCLUSION AND DECISION

Based on the analysis and findings presented in this report, and the substantial evidence in the application materials, the properties identified are exempt from further review under Chapter 17.49 of the Oregon City Municipal Code. Though the site is exempt from further NROD review, portions of the property also fall within the Geologic Hazards Overlay District and development is subject to compliance with OCMC Chapter 17.44, *Geologic Hazards* at the time of land division application.

EXHIBITS

1. Vicinity Map (On File)
2. Map of the Site and Natural Resources Overlay District (On File)
2. Applicant's Submittal (On File)

Attachment A: Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: 5621: Wheeler Farms City/County: Oregon City/ Clackamas Sampling Date: 3/15/2017

Applicant/Owner: Rian Park Development State: OR Sampling Point: 1

Investigator(s): Kayla Katkin and Lindsey Obermiller Section, Township, Range: 3 1E 12D

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3%

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum:

Soil Map Unit Name: Jory Stony Silt Loam, 3%-8% Slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	
Hydric Soil Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes	No X	

Precipitation: According to the AgACIS Oregon City station, 1.30 inches of rainfall was received on the day of the site visit and 4.32 inches within the two weeks prior. Rainfall conditions received prior to site visit were above normal.

Remarks: Plot taken at low spot in tree farm area in the vicinity of the NROD mapped stream.

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Pseudotsuga menziesii*	40%	Yes	FACU
2. *Rubus armeniacus*	10%	Yes	FAC
3.			
4.			
5.			
	50% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Agrostis capillaris*	75%	Yes	FAC
2. *Daucus carota*	10%	No	FACU
3. *Hypochaeris radicata*	10%	No	FACU
4. *Plantago lanceolata*	2%	No	FACU
5. *Holcus lanatus*	2%	No	FAC
6. *Geranium molle*	2%	No	NOL
7.			
8.			
9.			
10.			
11.			
	101% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	87	x 3 =	261
FACU species	62	x 4 =	248
UPL species	2	x 5 =	10
Column Totals:	151 (A)		519 (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks: Shrub layer *Pseudotsuga menziesii are planted for Christmas tree farm.*

SOIL

Sampling Point: **1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+	10YR 3/4	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): >16"	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >16"	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: 5621: Wheeler Farms City/County: Oregon City/ Clackamas Sampling Date: 3/15/2017

Applicant/Owner: Rian Park Development State: OR Sampling Point: 2

Investigator(s): Kayla Katkin and Lindsey Obermiller Section, Township, Range: 3 1E 12D

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3%

Subregion (LRR): A, Northwest Forests and Coast Lat: Long: Datum:

Soil Map Unit Name: Jory Stony Silt Loam, 3%-8% Slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)

Are Vegetation ,Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ,Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X
Hydric Soil Present?	Yes	No X
Wetland Hydrology Present?	Yes	No X

Is the Sampled Area within a Wetland? Yes No X

Precipitation: According to the AgACIS Oregon City station, 1.30 inches of rainfall was received on the day of the site visit and 4.32 inches within the two weeks prior. Rainfall conditions received prior to site visit were above normal.

Remarks: Plot taken in low area, just outside of tree farm area in vicinty of NROD mapped stream. Approxiamtely 6" lower in elevation than Plot 1.

VEGETATION

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii*	25%	Yes	FACU
2.			
3.			
4.			
	25% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10' r)			
1. *Pseudotsuga menziesii*	30%	Yes	FACU
2. *Rubus armeniacus*	5%	No	FAC
3.			
4.			
5.			
	35% = Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Agrostis capillaris*	70%	Yes	FAC
2. *Daucus carota*	10%	No	FACU
3. *Hypochaeris radicata*	10%	No	FACU
4. *Holcus lanatus*	5%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 10' r)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 5%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	130 (A)		440 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks: Shrub layer *Pseudotsuga menziesii* are planted for Christmas tree farm.

SOIL

Sampling Point: **2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					SiL	
6-14	10YR 3/3	98	7.5YR 4/4	2	C	M, PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): >14"	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): >14"	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment B: Representative Site Photographs

Photo A. View south of Plot 2. Plot 2 is located just outside of the densely planted Christmas tree farm at the lowest point within the mapped NROD area.

Photo B. View facing north within Christmas tree farm.

Photo C. View south of driveway that extends through mapped NROD area.

Photo D. View north of Plot 1. Plot 1 is located within the Christmas tree farm in the vicinity of the mapped NROD area.

Photos taken by Kayla Katkin, March 15, 2017

Exhibit E: Transportation Impact Study

Wheeler Farms

Transportation Impact Study

Oregon City, Oregon

Date:
June 15, 2017

Prepared for:
Rian Park Development, Inc.

Prepared by:
Todd Mobley, PE
Richard Martin, EI

RENEWS: 12/31/2018

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Executive Summary

1. A zone change from R10 to R8 is proposed for a site that consists of six tax lots, totalling approximately 22.56 acres. The site is located to the southeast of S Central Point Road, southwest of Hazeldell Avenue, and northeast of S White Lane. A subdivision is proposed under the R8 zoning that would accommodate 77 lots for construction of single-family homes.
2. The trip generation calculations show that the proposed subdivision is projected to generate a total of 57 trips during the morning peak hour and 76 trips during the evening peak hour. The change in zoning is expected to result in a potential net increase in trips of 8 during the morning peak hour and 11 during the evening peak hour.
3. For 2019 conditions with the proposed Wheeler Farms subdivision in place, all study area intersections are expected to operate acceptably and no mitigations are necessary to accommodate the proposed subdivision.
4. By 2035, all study-area intersections will continue to operate acceptably, with the exception of the signalized intersection of Warner-Parrott/Warner-Milne Road at Linn Avenue/Leland Road, which will operate slightly over capacity. However, the proposed zone change will not degrade the operation of the intersection, since the net increase in trips associated with the change in zoning is quite small. As such, the Transportation Planning Rule is satisfied and there is no significant effect on the surrounding transportation system.
5. Based on the detailed review of all of the crash data, no significant patterns and no contributing design concerns were identified at the study intersections. Accordingly, no safety mitigations are recommended.

Introduction

The proposed subdivision consists of the construction of 77 single-family detached houses. The project site is located immediately to the southeast of S Central Point Road, southwest of Hazeldell Avenue, and northeast of S White Lane at 19584 and 19532 Central Point Road in Oregon City, Oregon. The project site consists of tax lots 1001, 1291, 1100, 1180, 1700, and 1790 and encompasses an approximate total of 22.56 acres. All six lots are currently utilized for agricultural purposes with lot 1100 containing one single-family detached house and outbuildings.

The proposed subdivision will connect to five street stubs from adjacent subdivisions and connect these streets within the site, completing the local street system in the immediate vicinity. This improved connectivity will offer multiple travel routes to the neighborhood, distributing trips and avoiding concentrated traffic impacts. Wheeler Farms will have access to S Central Point Road via four street connections, including Hazeldell Avenue, Skellenger Way, Blanchet Drive, and White Lane. However, given the site location, street layout, and expected travel patterns, White Lane is not expected to carry any significant traffic from the project.

This report addresses the impacts of the proposed development on the nearby street system and includes safety and capacity / level-of-service analyses at the following five intersections:

1. S Central Point Road at Blanchet Drive
2. S Central Point Road at Skellenger Way
3. S Central Point Road at Hazeldell Avenue
4. S Central Point Road at Warner Parrott Road
5. Warner Milne Road at Linn Avenue/Leland Road

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 mitigation that might be necessary to do so.

Vicinity Streets

S Central Point Road is classified as a Collector by the City of Oregon City. The roadway has a two-lane cross-section southwest of Trade Wind Street, widening to a three-lane cross-section, with one standard travel lane in each direction and a center two-way left-turn lane northeast of Trade Wind Street. It has a posted speed of 45 mph southwest of and a posted speed of 35 mph northeast of Partlow Road. Partial bike lanes, curbs and sidewalks are in place between the project site and Warner Parrott Road, however these facilities are not continuous. Some on-street parking is also available along both sides of the roadway.

Warner Parrott Road is classified as a Minor Arterial by the City of Oregon City. The roadway has a two-lane cross-section and has a posted speed of 30 mph. Bike lanes are in place on both sides of the street. Partial curbs and sidewalks are provided along both sides of the roadway within the study area.

Warner Milne Road is classified as a Minor Arterial by the City of Oregon City. The roadway has a two-lane cross-section and has a posted speed of 30 mph. Bike lanes are in place on both sides of the street. Partial curbs and sidewalks are provided along both sides of the roadway within the site vicinity.

Skellenger Way is classified as a Local Street by the City of Oregon City. The roadway has a two-lane cross-section without centerline striping and has a posted speed of 25 mph. On-street parking is permitted along both sides of the roadway. Curbs and sidewalks are also provided along both sides of the roadway.

Linn Avenue is classified as a Minor Arterial by the City of Oregon City. The roadway has a two-lane cross-section and has a posted speed of 35 mph. Bike lanes are in place on both sides of the street. On-street parking is generally permitted along both sides of the roadway between Williams Street and Ethel Street. Curbs and sidewalks are provided along both sides of the roadway within the site vicinity.

Leland Road is classified as a Minor Arterial by the City of Oregon City. The roadway has a two-lane cross-section and has a posted speed of 35 mph. Bike lanes are in place on both sides of the street. Partial curbs and sidewalks are provided along the eastern side of the roadway within the site vicinity.

Study Intersections

The intersection of Warner Parrott Road at S Central Point Road is a three-legged intersection that is stop-controlled for the northeast bound approach of S Central Point Road. The northeast bound approach has one left-turn lane, one right-turn lane, and a bicycle lane to the right of the outermost standard travel lane. The northwest bound approach has one through lane, one left-turn lane, and a bicycle lane to the right of the outermost standard travel lane. The southeast bound approach has one through lane that feeds into the left-turn lane at the traffic signal at Leland Road/Linn Avenue, one shared through/right-turn lane, and a bicycle lane to the right of the outermost standard travel lane. The southwestern intersection leg has a marked crosswalk while all other intersection leg crosswalks are unmarked.

The intersection of Warner Parrott/Milne Road at Linn Avenue/Leland Road is a four-legged intersection that is controlled by a traffic signal. The north-, south-, and eastbound approaches each have one left-turn lane served by protected phasing, one shared through/right-turn lane, and a bicycle lane to the right of the outermost standard travel lane. The westbound approach of Warner Milne Road has one left-turn lane served by protected phasing, one through lane, one shared through/right-turn lane, and a bicycle lane to the right of the outermost standard travel lane. All four intersection legs have marked crosswalks.

The intersection of S Central Point Road and Blanchet Drive is a three-legged intersection that is stop-controlled for the northwest bound approach of Blanchet Drive. The northeast and southeast bound approaches each have one through/turn lane and parking is available on the southeast side of the street. S Central Point Road has a posted speed limit of 45 mph in both directions and Blanchet Drive has a posted speed limit of 25 mph at the intersection.

The intersection of S Central Point Road and Skellenger Way is a three-legged intersection that is stop-controlled for the southeast bound approach of Skellenger Way. The northeast and southeast bound approaches each have one through/turn lane and parking is available on the northwest side of the street. S Central Point Road has a posted speed limit of 45 mph in both directions and Skellenger Way has a posted speed limit of 25 mph at the intersection.

The intersection of S Central Point Road and S Hazeldell Avenue is a four-legged intersection that is stop-controlled for the northwest and southeast bound approaches of S Hazeldell Avenue. The northeast and southeast bound approaches each have one through/turn lane and parking is available on the southeast side of the street. S Central Point Road has a posted speed limit of 45 mph in both directions and S Hazeldell Avenue has a posted speed limit of 25 mph at the intersection. All four approaches have sidewalks and unmarked crosswalks.

A vicinity map displaying the project site, vicinity streets, and the study area intersections with their associated lane configurations is shown in Figure 1**Error! Reference source not found.** on page five.

Traffic Counts

Traffic counts were conducted at study area intersections on Wednesday, April 5th, 2017 from 7:00 AM to 9:00 AM and on Tuesday, April 4th, 2017 from 4:00 PM to 6:00 PM. Data from each intersection peak hour was used for analysis.

Figure 2 on page six shows the existing AM and PM peak hour traffic volumes for the study area intersections.

Transit

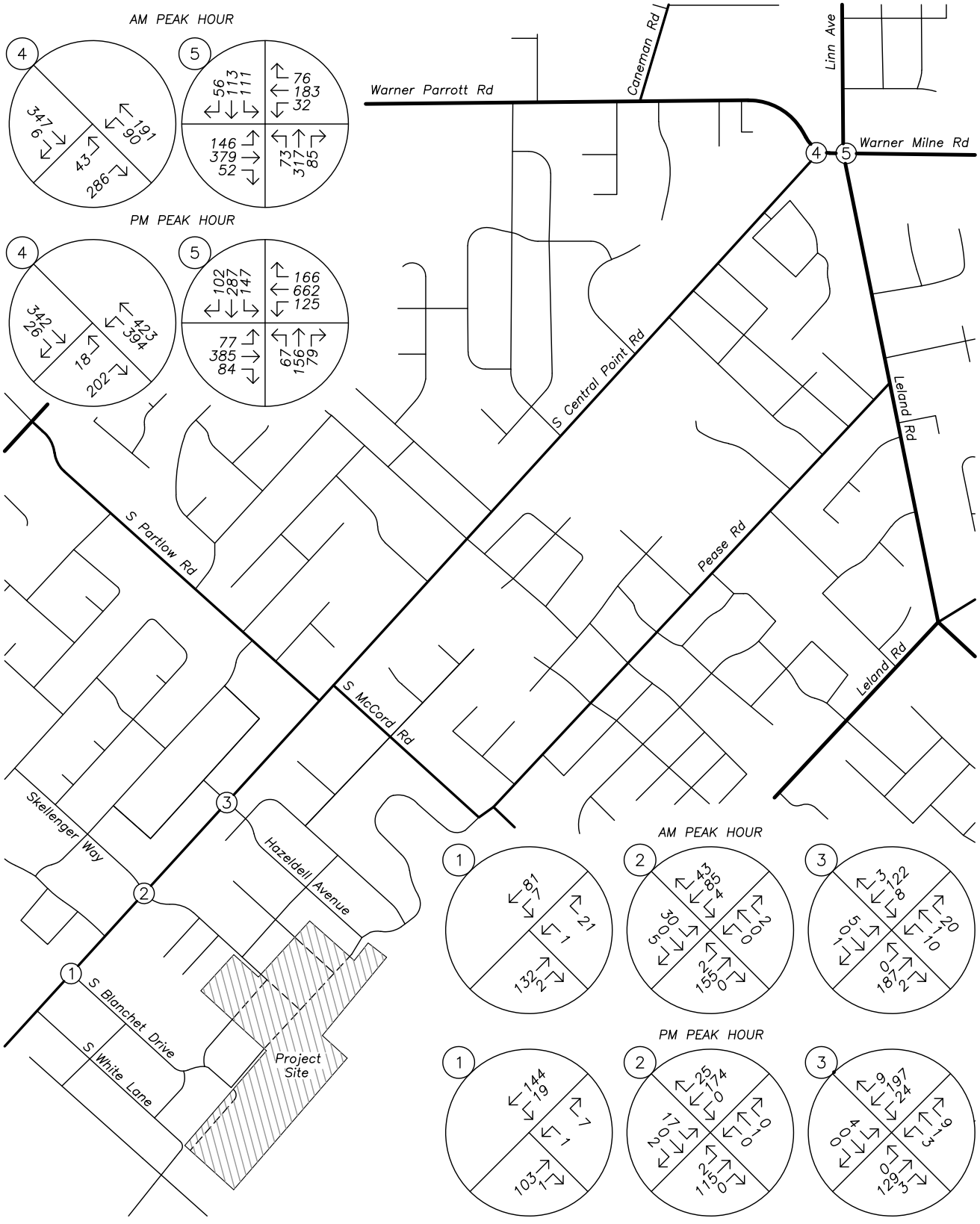
TriMet bus line *#33 – McLoughlin* operates along Warner Milne Road and Linn Avenue near the site vicinity, with the closest northbound/westbound and southbound/eastbound bus stops located approximately 1.35 miles from the project site. This route provides service between Portland City Center, the last stop at the intersection of NW 5th Avenue and NW Hoyt Street, and the Oregon City Transit Center/Clackamas Community College depending on the time of day. Weekday service is scheduled from approximately 4:30 AM to 1:45 AM, with headways of approximately 15 to 60 minutes. Saturday service is scheduled from approximately 5:45 AM to 1:30 AM with headways of about 15 to 60 minutes. Sunday service is scheduled from 6:00 AM to 1:30 AM with headways of approximately 15 to 60 minutes.

VICINITY MAP

no scale

FIGURE 1

PAGE 5



TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours

no scale

FIGURE 2

PAGE 6

Project-Generated Trips

Under the proposed R-8 zoning, the Wheeler Farms subdivision includes 77 single-family detached homes. There is currently one single-family home on the site that will be removed with site development. The sections below describe the methodology used to calculate the number of trips generated by the new homes and the way they are expected to use the transportation system in the project study area.

Trip Generation

To estimate the number of trips that will be generated by the proposed subdivision, trip rates from the *TRIP GENERATION MANUAL*[1] were used. Data from land-use code 210, *Single-Family Detached Housing*, was used to estimate the proposed development's trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate a net increase of 57 trips during the morning peak hour and 76 trips during the evening peak hour. The trip generation estimates are summarized in Table 1 below. Detailed trip generation calculations are included in the technical appendix to this report.

Table 1: Subdivision Trip Generation Summary

	ITE		Morning Peak Hour			Evening Peak Hour			Weekday
	Code	Size	In	Out	Total	In	Out	Total	Total
Single-Family Detached Housing									
Proposed Development	210	77 units	15	43	58	49	28	77	734
Existing Development	210	1 unit	*0*	*-1*	*-1*	*-1*	*0*	*-1*	*-10*
Total		**83 units**	**15**	**42**	**57**	**48**	**28**	**76**	**724**

Because a change in zoning is proposed for the site, a comparison of the reasonable worst-case development potential under both the existing and proposed zoning designations is necessary to gauge the traffic impact that could occur due to the change. Under the existing R-10 zoning, approximately 73 dwelling units could be constructed. Under the proposed R-8 zone, approximately 84 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.

[1] Institute of Transportation Engineers (ITE), *TRIP GENERATION MANUAL, 9th Edition*, 2012

Table 2: Zone Change Trip Generation Summary

	ITE Code	Size	Morning Peak Hour In	Morning Peak Hour Out	Morning Peak Hour Total	Evening Peak Hour In	Evening Peak Hour Out	Evening Peak Hour Total	Weekday Total
Single-Family Detached Housing									
R-8 Zoning Potential	210	84 units	16	47	63	53	31	84	800
R-10 Zoning Potential	210	73 units	14	41	55	46	27	73	694
Potential Net Increase in Trips		**11 units**	**2**	**6**	**8**	**7**	**4**	**11**	**106**

Trip Distribution

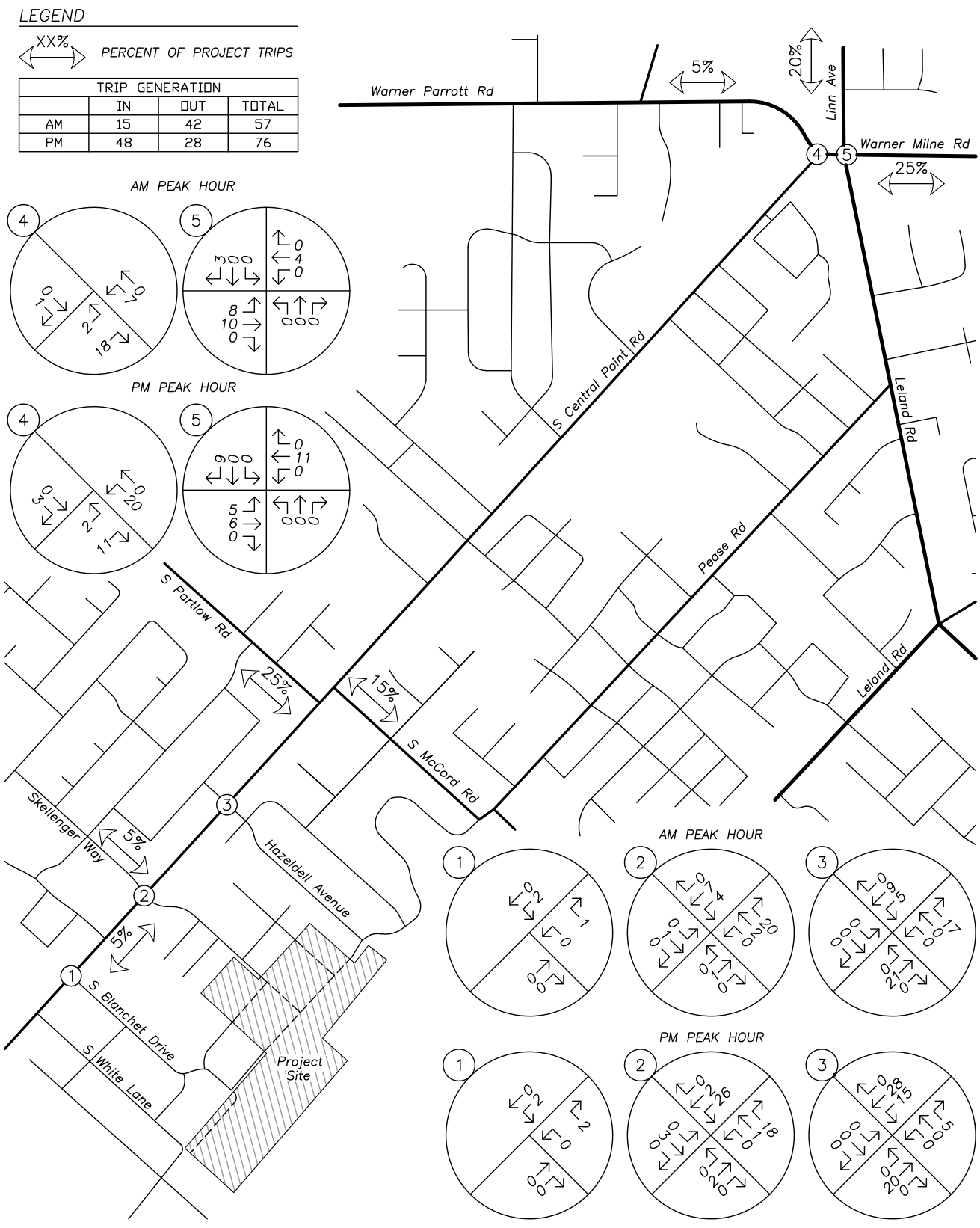
The directional distribution of site trips to and from the proposed development was estimated based on locations of likely trip destinations, locations of major transportation facilities in the site vicinity, and existing travel patterns at the study area intersections.

The following trip distribution was estimated and used for analysis:

- Approximately 25 percent of trips will travel to/from the east along Warner Milne Road.
- Approximately 25 percent of trips will travel to/from the northwest along S Partlow Road.
- Approximately 20 percent of trips will travel to/from the north along Linn Avenue.
- Approximately 15 percent of trips will travel to/from the southeast along S McCord Road.
- Approximately 5 percent of trips will travel to/from the west along Warner Parrott Road.
- Approximately 5 percent of trips will travel to/from the northwest along Skellenger Way.
- Approximately 5 percent of trips will travel to/from the southwest along S Central Point Road.

As described previously, there are three primary streets that the subdivision will use to reach S Central Point Road. Approximately one-third of site trips were assumed to utilize each access point along S Central Point Road at Skellenger Way, S Hazeldell Avenue, and Blanchet Drive.

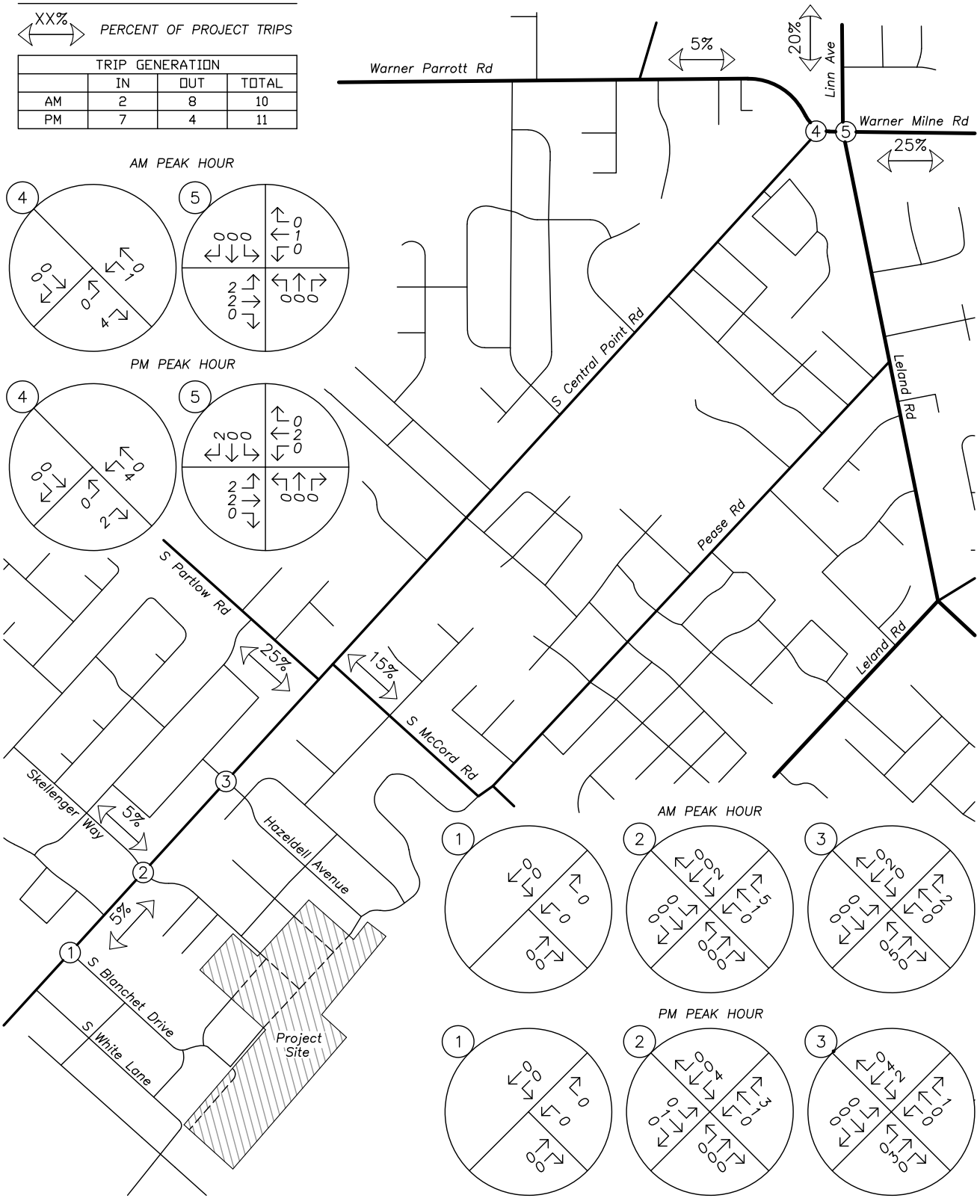
The trip assignment for the AM and PM peak hours for build out of the subdivision is shown in Figure 3 on page 9 and the assignment of the potential net increase in trips from the zone chage is shown in Figure 4 on page 10.



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Site Trips
AM & PM Peak Hours

no scale

FIGURE 3



ZONE CHANGE DISTRIBUTION & ASSIGNMENT
Net Increase in Trips from Zone Change
AM & PM Peak Hour

no scale

FIGURE 4

PAGE 10

Operational Analysis

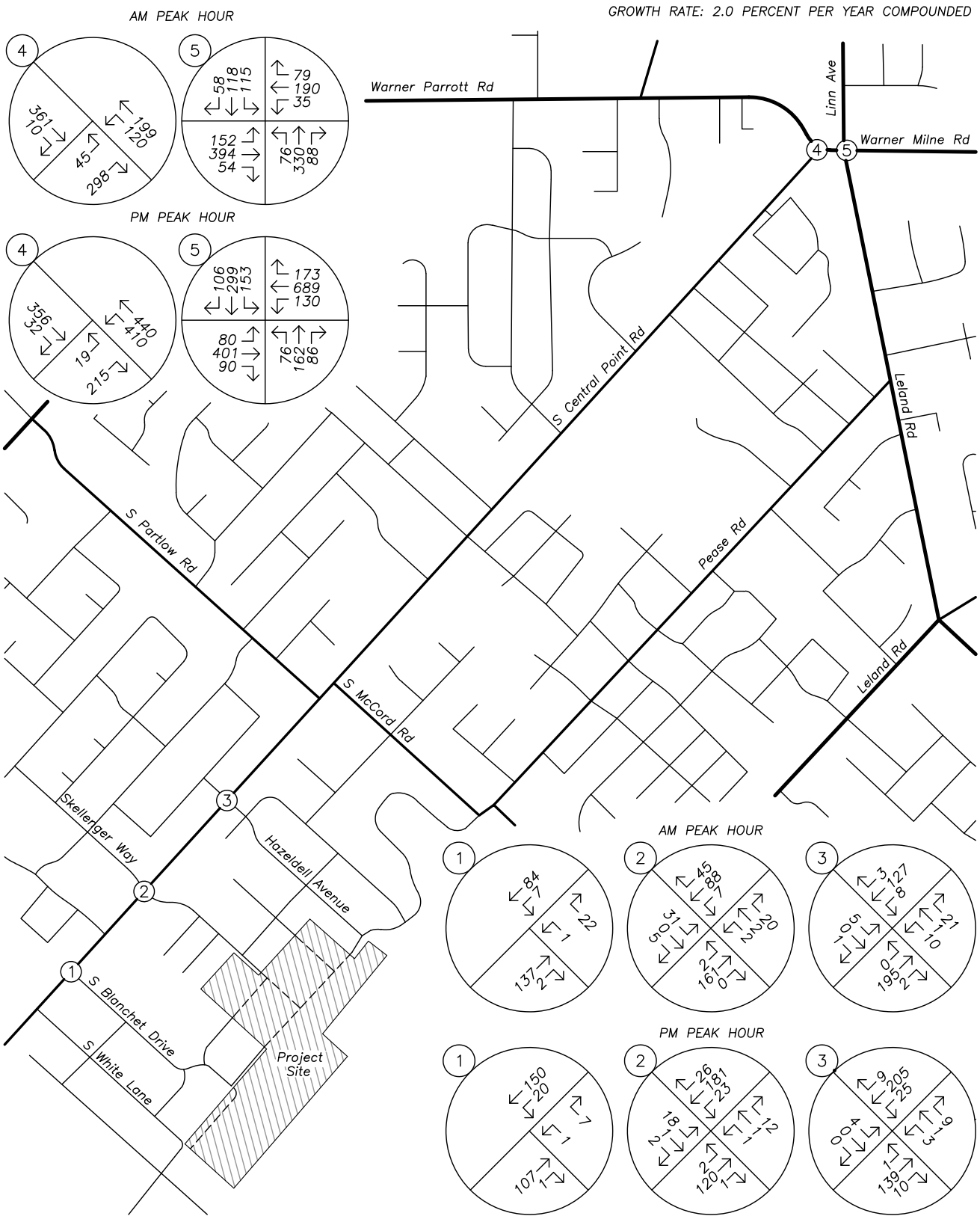
To gauge the operation of the study area intersections, an operational analysis was conducted. The following subsections describe how future traffic volumes were derived as well as the operation (level of service, delay, and volume-to-capacity ratio) of the study area intersections.

Background Traffic

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. Growth in traffic voloumes was estimated based on data from the 2013 Transportation System Plan (TSP), which examines a base year of 2010 and a future year of 2035. Growth in the TSP averages a rate of two percent per year, which was applied to all intersection movements.

It was assumed that the proposed subdivision would be completed by 2019. In order to calculate traffic volumes in 2019 without the subdivision in place, a compounded growth rate of two percent per year was applied over a period of two years. In addition, trips from nearby and adjacent subdivisions that have been approved but are not yet built out were added. Year 2019 background volumes (conditions without the proposed subdivision) are shown in Figure 5 on page 12. Year 2019 conditions with the subdivision at build out are shown in Figure 6 on page 13.

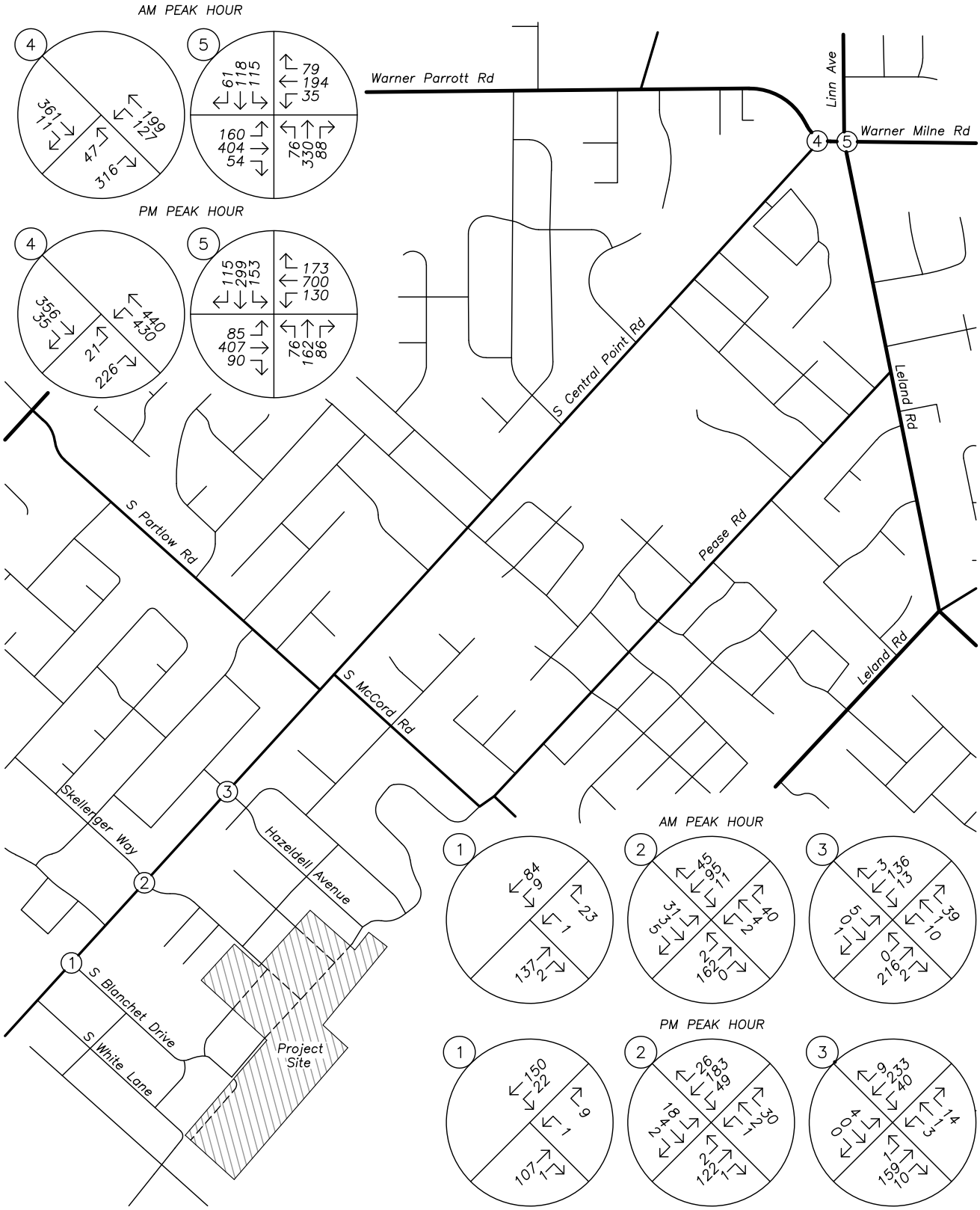
In order to assess the impacts of the proposed zone change on traffic conditions at the planning horizon, the existing traffic volumes at the study area intersections were increased to account for anticipated growth through year 2035. Background conditions for the year 2035, including development on the site under the existing zone, are shown in Figure 7 on page 14. Figure 8 of page 15 shows the sum of 2035 background conditions plus the net increase in trips from the zone change.



TRAFFIC VOLUMES
Year 2019 Background Conditions
AM & PM Peak Hours

no scale

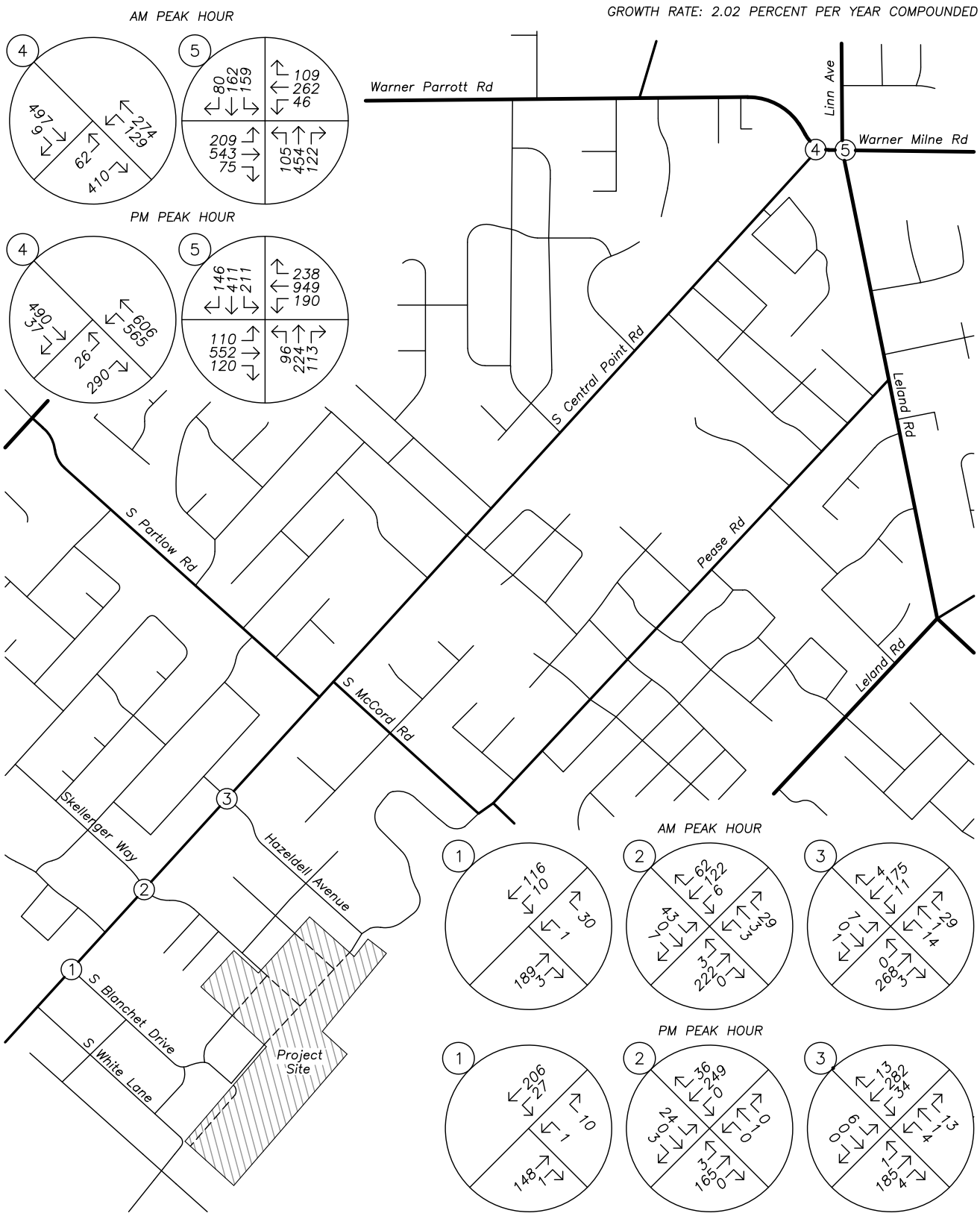
FIGURE 5



TRAFFIC VOLUMES
Year 2019 Background plus Site Trips
AM & PM Peak Hours

no scale

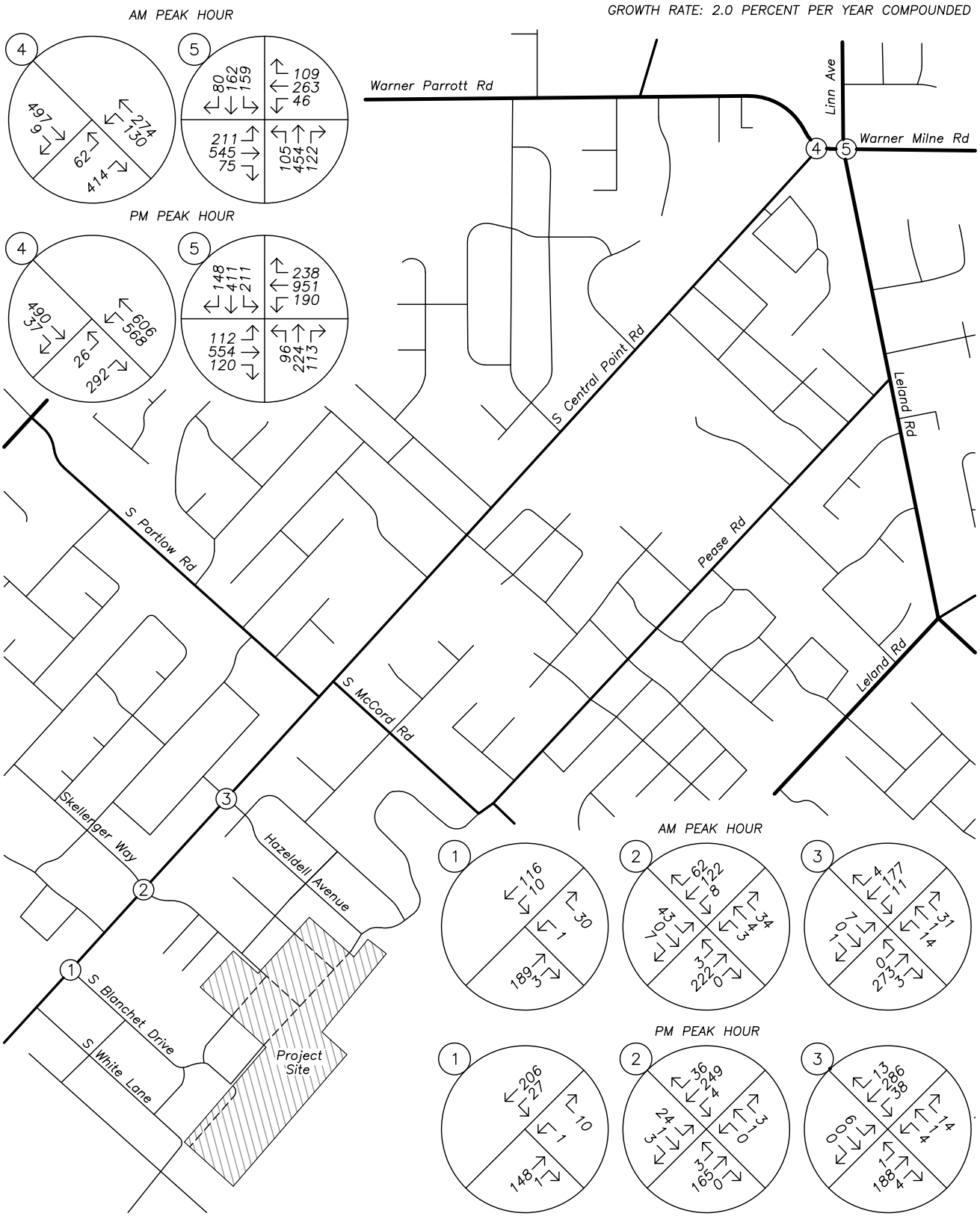
FIGURE 6



TRAFFIC VOLUMES
Year 2035 Background Conditions
AM & PM Peak Hour

no scale

FIGURE 7



TRAFFIC VOLUMES
Year 2035 Existing plus Net Increase in Trips
AM & PM Peak Hour

no scale

FIGURE 8

PAGE 15

Intersection Capacity and Level-of-Service Analysis

To determine the performance of the study intersections, a capacity analysis was conducted for the morning and evening peak hours for existing conditions, year 2019 background conditions, and year 2019 background plus site trips from the proposed development. The analysis was conducted according to the unsignalized and signalized intersection analysis methodologies given in the *HIGHWAY CAPACITY MANUAL* (HCM), published by the Transportation Research Board.

Intersections outside the Regional Center but designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, shall operate with a v/c ratio of 0.99 or less. This standard applies to signalized intersections as a whole. For unsignalized intersections this standard applies to movements on the major street, whereas there is no performance standard for the minor street approach. The study intersections of Warner Parrott Road at S Central Point Road and Warner Parrott/Milne Road at Linn Avenue/Leland Road are subject to these standards.

For unsignalized intersections outside the Regional Center and not designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, all movements serving more than 20 vehicles are required to operate at level of service (LOS) E or better during both the morning and evening peak hours, however LOS F is tolerated for movements serving 20 or less vehicles. Levels of service can range from LOS A, which indicates very little or no delay experience by vehicles, to LOS F, which indicates a high degree of congestion and delay. The intersections of Hazeldell Avenue, Skellenger Way, and Blanchet Drive with S Central Point Road are subject to these standards.

The intersection of S Central Point Road at Blanchet Drive currently operates at LOS A during both the morning and evening peak hours. The intersection is projected to operated at LOS A under all peak hour conditions, except for 2035 background plus zone change conditions, under which it will operate at LOS B.

The intersection of S Central Point Road at Skellenger Way currently operates at LOS B during both the morning and evening peak hours. The intersection is projected to operate at LOS B under all peak hour conditions, except for 2035 background and background plus zone change conditions. Under those conditions, the intersection is projected to operate at LOS C in the evening peak hour.

The intersection of S Central Point Road at Hazeldell Avenue currently operates at LOS B during both the morning and evening peak hours. It is projected to operate at LOS B under all potential peak hour conditions.

The intersection of Warner Parrott Road at S Central Point Road operates at LOS A during both the morning and evening peak hours, with a maximum V/C ratio of 0.36 for the westbound left turn movement. The intersection is projected to operate at LOS A during the morning peak hour and LOS B during the evening peak hour for all projections, with a maximum V/C ratio of 0.60 for the westbound left turn movement.

The intersection of Warner Parrott/Milne Road at Linn Avenue/Leland Road currently operates at LOS D during both the morning and evening peak hours, with a maximum V/C ratio of 0.82. Failure levels are seen under 2035 background and background plus zone change conditions in the morning and evening peak

hours. Under these conditions, the intersection is projected to operate at LOS E with a v/c ratio of 1.01 for both the morning and evening peak hours.

The results of the capacity analysis, along with the levels of service, delay, and v/c ratios are shown in Table 3. Detailed calculations, as well as tables showing the relationships between delay and level of service are included in the appendix to this report.

Based on the results of the operational analysis, all study area intersections will operating acceptably through 2019, even with the proposed development in place. It is important to note that because of the City of Oregon City's performance standard, the northbound stop-controlled approach on S Central Point Road is not subject to a level of service or v/c standard.

The intersection of Warner Milne Road/Warner Parrott Road at Linn Avenue/Leland Road is projected to operate above capacity by 2035, even without the proposed zone change. The proposed zone change has very little impact on operation of the intersection at the planning horizon, since the net increase in trips from the change in zoning is very low.

Also, Oregon City's TSP includes a potential future roundabout at the intersection of Warner Milne Road/Warner Parrott Road and Linn Avenue/Leland Road. This roundabout would mitigate the operation of the intersection and bring it into compliance with the applicable performance standard.

Table 3: Capacity and LOS Summary

	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
S Central Point Rd at Blanchet Drive						
Existing Conditions	A	10	0.06	A	9	0.02
2019 Background Conditions	A	9	0.03	A	9	0.02
2019 Background + Site Trips	A	9	0.03	A	9	0.02
2035 Background Conditions	A	10	0.05	A	10	0.02
2035 Background + Zone Change	A	10	0.04	A	9	0.02
S Central Point Rd at Skellenger Way						
Existing Conditions	B	11	0.07	B	12	0.04
2019 Background Conditions	B	12	0.08	B	12	0.05
2019 Background + Site Trips	B	12	0.10	B	14	0.07
2035 Background Conditions	B	14	0.14	B	13	0.07
2035 Background + Zone Change	B	14	0.14	B	13	0.07
S Central Point Rd at S Hazeldell Avenue						
Existing Conditions	B	11	0.06	B	12	0.04
2019 Background Conditions	B	12	0.06	B	12	0.02
2019 Background + Site Trips	B	13	0.10	B	14	0.03
2035 Background Conditions	B	14	0.10	C	15	0.03
2035 Background + Zone Change	B	14	0.10	C	15	0.04
S Central Point Rd at Warner Parrott Road*						
Existing Conditions	A	8	0.08	A	10	0.36
2019 Background Conditions	A	9	0.11	B	10	0.38
2019 Background + Site Trips	A	9	0.12	B	10	0.40
2035 Background Conditions	A	9	0.14	B	14	0.59
2035 Background + Zone Change	A	9	0.14	B	14	0.60
Warner Parrott/Milne Road at Linn Ave/Leland Road						
Existing Conditions	D	42	0.71	D	38	0.82
2019 Background Conditions	D	35	0.82	D	40	0.82
2019 Background + Site Trips	D	36	0.83	D	43	0.83
2035 Background Conditions	E	67	1.01	E	66	1.01
2035 Background + Zone Change	E	67	1.01	E	69	1.01

***Westbound left turn LOS, delay, and v/c are reported

Safety Analysis

Safety of the transportation system is related to the operations discussed in the previous section, but is a separate consideration. The safety of the roads and intersections within the project study area are addressed in the following subsection.

Crash Analysis

Using data obtained from ODOT's Crash Data Analysis and Reporting Unit, a review of the most recent available five years of crash history (2011 – 2015) at the study area intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection. Crash rates provide the ability to compare relative safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak hour represents 10% of the average annual daily traffic (AADT) at the intersection. Crash rates more than 1.0 crashes per million entering vehicles (CMEV) may be indicative of safety hazards that should be further investigated and mitigated.

The intersections of S Central Point Road at Skellenger Way, Blanchet Drive, and Hazeldell Avenue had no reported crashes during the five-year analysis period.

The intersection of Warner Parrott Road at S Central Point Road had seven reported crashes during the analysis period. The crashes consisted of three turning-type collisions, two rear-end collisions, one backing collision, and one fixed-object collision. Of these reported crashes, four were classified as "Property Damage Only" (*PDO*), two as "Possible Injury – Complaint of Pain" (*Injury-C*), and one as "Non-Incapacitating Injury" (*Injury-B*). The crash rate at the intersection was calculated to be 0.27 CMEV.

The intersection of Warner Parrott/Milne Road at Linn Avenue/Leland Road had two reported crashes during the analysis period. The crashes consisted of one angle-type collision and one collision involving a pedestrian. Of these reported crashes one was classified as "Property Damage Only" (*PDO*) and one as "Non-Incapacitating Injury" (*Injury-B*). The crash rate at the intersection was calculated to be 0.04 CMEV.

Based on the detailed review of all the crash data, no significant patterns and no contributing design concerns were identified at the study intersections. Accordingly, no safety mitigations are 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 the addition of the net increase in trips from the zone change will not degrade the performance of the one intersection in the project study area that is projected to not meet performance standards at the planning horizon.

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

Conclusions

For 2019 conditions, all study area intersections are expected to operate acceptably and no mitigations are necessary to accommodate the proposed 77-lot subdivision.

By 2035, all study-area intersections will continue to operate acceptably, with the exception of the signalized intersection of Warner-Parrott/Warner-Milne Road at Linn Avenue/Leland Road, which will operate slightly over capacity. However, the proposed zone change will not degrade the operation of the intersection, since the net increase in trips associated with the change in zoning is quite small. As such, the Transportation Planning Rule is satisfied and there is no significant effect on the surrounding transportation system.

Appendix

SCALE 1" = 80 FEET
SCALE AT HALF SIZE (11"x17") 1" = 160 FEET
DATE: 04/17/2017

NOTES:
1. INFORMATION SHOWN IS BASED ON A VARIETY OF SOURCES, INCLUDING GEOGRAPHIC INFORMATION SYSTEMS (GIS), AERIAL PHOTOGRAPHS, AS-BUILT INFORMATION, AND TAX ASSESSOR MAP INFORMATION.
2. DIMENSIONS SHOWN ARE APPROXIMATE.

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ENGINEERING • SURVEYING • NATURAL RESOURCES
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WHEELER FARMS

OREGON CITY OREGON

TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

PRELIMINARY SUBDIVISION LAYOUT

DESIGNED BY:
DRAWN BY:
CHECKED BY: MBH
SCALE: AS NOTED
DATE: 05/16/2017

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

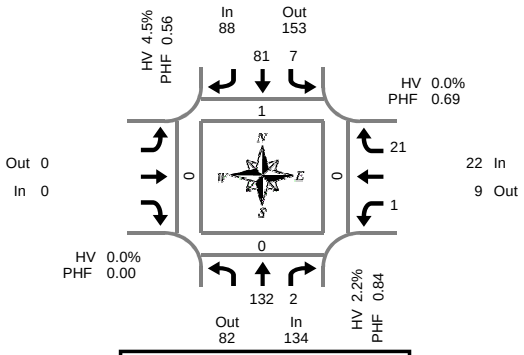
JOB NUMBER 5621

SHEET 2

AKS DRAWING FILE: 5621 NEIGHBOR PLANS.DWG | LAYOUT: 2

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Central Point Rd & Blanchet Dr

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:15 AM to 8:15 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	3	0	0		1	3		0				0	0		1	0	8	0	0	0	0
7:05 AM	2	0	0		1	4		0				0	0		1	0	8	0	0	0	0
7:10 AM	6	0	0		0	6		0				0	0		2	0	14	0	0	0	0
7:15 AM	15	0	0		0	4		0				0	0		1	0	20	0	0	0	0
7:20 AM	8	0	0		0	6		0				0	0		2	0	16	0	0	0	0
7:25 AM	8	0	0		0	4		0				0	1		1	0	14	0	0	0	0
7:30 AM	13	1	0		2	4		0				0	0		3	0	23	0	0	0	0
7:35 AM	8	0	0		0	1		0				0	0		2	0	11	0	0	0	0
7:40 AM	12	1	0		1	9		0				0	0		3	0	26	0	0	0	0
7:45 AM	16	0	0		0	7		0				0	0		3	0	26	0	0	0	0
7:50 AM	11	0	0		1	12		0				0	0		0	0	24	1	0	0	0
7:55 AM	13	0	0		1	12		1				0	0		0	0	26	0	0	0	0
8:00 AM	9	0	0		1	12		0				0	0		0	0	22	0	0	0	0
8:05 AM	5	0	0		0	5		0				0	0		2	0	12	0	0	0	0
8:10 AM	14	0	0		1	5		0				0	0		4	0	24	0	0	0	0
8:15 AM	7	0	0		0	4		0				0	0		0	0	11	0	0	0	0
8:20 AM	9	0	0		1	7		0				0	0		0	0	17	0	0	0	0
8:25 AM	9	0	0		0	4		0				0	0		0	0	13	0	0	0	0
8:30 AM	2	0	0		1	7		0				0	0		0	0	10	0	0	0	0
8:35 AM	7	0	0		0	8		0				0	0		1	0	16	0	0	2	0
8:40 AM	7	0	0		0	2		0				0	0		2	0	11	0	0	0	0
8:45 AM	7	0	0		1	4		0				0	0		1	0	13	0	0	0	0
8:50 AM	10	0	0		2	9		0				0	0		1	0	22	0	0	0	0
8:55 AM	8	0	0		1	4		0				0	0		1	0	14	0	0	0	0
Total Survey	209	2	0		15	143		1				0	1		31	0	401	1	0	2	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	11	0	0		2	13		0				0	0		4	0	30	0	0	0	0
7:15 AM	31	0	0		0	14		0				0	1		4	0	50	0	0	0	0
7:30 AM	33	2	0		3	14		0				0	0		8	0	60	0	0	0	0
7:45 AM	40	0	0		2	31		1				0	0		3	0	76	1	0	0	0
8:00 AM	28	0	0		2	22		0				0	0		6	0	58	0	0	0	0
8:15 AM	25	0	0		1	15		0				0	0		0	0	41	0	0	0	0
8:30 AM	16	0	0		1	17		0				0	0		3	0	37	0	0	2	0
8:45 AM	25	0	0		4	17		0				0	0		3	0	49	0	0	0	0
Total Survey	209	2	0		15	143		1				0	1		31	0	401	1	0	2	0

Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	134	82	216	0	88	153	241	1	0	0	0	0	22	9	31	0	244	1	0	0	0
%HV	2.2%				4.5%				0.0%				0.0%				2.9%				
PHF	0.84				0.56				0.00				0.69				0.80				

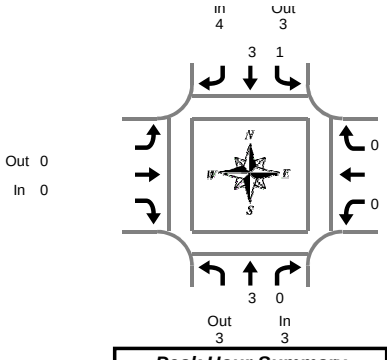
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	132	2	134		7	81		88				0	1		21	22	244
%HV	NA	2.3%	0.0%	2.2%	14.3%	3.7%	NA	4.5%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	2.9%
PHF		0.83	0.25	0.84	0.58	0.56		0.56				0.00	0.25		0.66	0.69	0.80

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	115	2	0		7	72		1				0	1		19	0	216	1	0	0	0
7:15 AM	132	2	0		7	81		1				0	1		21	0	244	1	0	0	0
7:30 AM	126	2	0		8	82		1				0	0		17	0	235	1	0	0	0
7:45 AM	109	0	0		6	85		1				0	0		12	0	212	1	0	2	0
8:00 AM	94	0	0		8	71		0				0	0		12	0	185	0	0	2	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Blanchet Dr

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:15 AM to 8:15 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		0	0	0	0	0		0				0	0		0	0	0
7:05 AM		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
7:15 AM		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
7:25 AM		1	0	1	0	0		0				0	0		0	0	1
7:30 AM		0	0	0	1	0		1				0	0		0	0	1
7:35 AM		1	0	1	0	0		0				0	0		0	0	1
7:40 AM		0	0	0	0	0		0				0	0		0	0	0
7:45 AM		0	0	0	0	1		1				0	0		0	0	1
7:50 AM		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
8:00 AM		0	0	0	0	1		1				0	0		0	0	1
8:05 AM		0	0	0	0	0		0				0	0		0	0	0
8:10 AM		1	0	1	0	1		1				0	0		0	0	2
8:15 AM		0	0	0	0	0		0				0	0		0	0	0
8:20 AM		1	0	1	1	1		2				0	0		0	0	3
8:25 AM		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
8:35 AM		0	0	0	0	2		2				0	0		0	0	2
8:40 AM		1	0	1	0	0		0				0	0		0	0	1
8:45 AM		0	0	0	0	0		0				0	0		0	0	0
8:50 AM		0	0	0	0	0		0				0	0		0	0	0
8:55 AM		1	0	1	0	0		0				0	0		0	0	1
Total Survey		6	0	6	2	6		8				0	0		0	0	14

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		0	0	0	0	0		0				0	0		0	0	0
7:15 AM		1	0	1	0	0		0				0	0		0	0	1
7:30 AM		1	0	1	1	0		1				0	0		0	0	2
7:45 AM		0	0	0	0	1		1				0	0		0	0	1
8:00 AM		1	0	1	0	2		2				0	0		0	0	3
8:15 AM		1	0	1	1	1		2				0	0		0	0	3
8:30 AM		1	0	1	0	2		2				0	0		0	0	3
8:45 AM		1	0	1	0	0		0				0	0		0	0	1
Total Survey		6	0	6	2	6		8				0	0		0	0	14

Heavy Vehicle Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Blanchet Dr			Westbound Blanchet Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	3	3	6	4	3	7	0	0	0	0	1	1	7
PHF	0.38			0.50			0.00			0.00			0.58

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		3	0	3	1	3		4				0	0		0	0	7
PHF		0.38	0.00	0.38	0.25	0.38		0.50				0.00	0.00		0.00	0.00	0.58

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		2	0	2	1	1		2				0	0		0	0	4
7:15 AM		3	0	3	1	3		4				0	0		0	0	7
7:30 AM		3	0	3	2	4		6				0	0		0	0	9
7:45 AM		3	0	3	1	6		7				0	0		0	0	10
8:00 AM		4	0	4	1	5		6				0	0		0	0	10

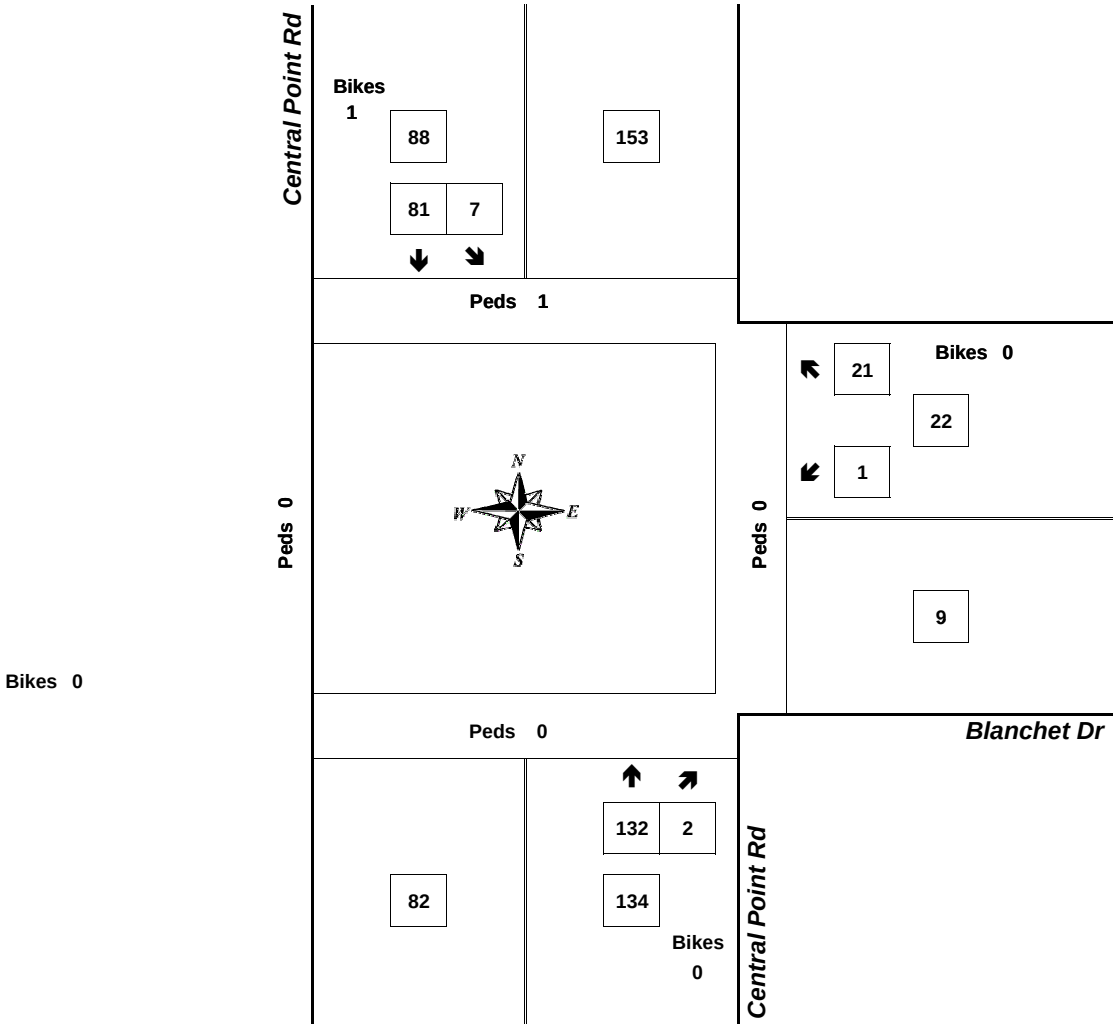
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Central Point Rd & Blanchet Dr

7:15 AM to 8:15 AM
Wednesday, April 05, 2017

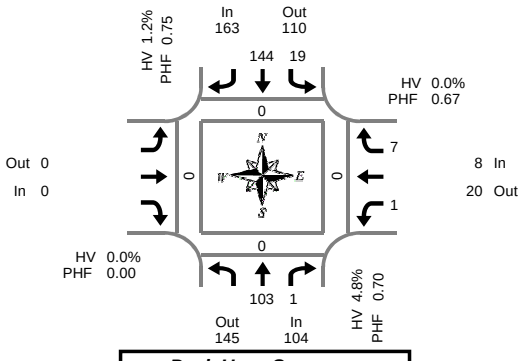


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.69	0.0%	22
NB	0.84	2.2%	134
SB	0.56	4.5%	88
Intersection	0.80	2.9%	244

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Central Point Rd & Blanchet Dr

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	4	1	0		0	8		0				0	0		1	0	14	0	0	0	0
4:05 PM	5	0	0		1	12		0				0	1		0	0	19	0	0	0	0
4:10 PM	6	0	1		1	7		1				0	0		0	0	14	0	0	0	0
4:15 PM	11	0	0		0	9		0				0	0		1	0	21	0	0	0	0
4:20 PM	3	0	0		1	10		0				0	0		0	0	14	0	0	0	0
4:25 PM	4	0	0		0	14		0				0	0		0	0	18	0	0	0	0
4:30 PM	7	0	0		1	6		0				0	0		0	0	14	0	0	0	0
4:35 PM	6	0	0		0	11		0				0	0		0	0	17	0	0	0	0
4:40 PM	11	0	0		2	9		0				0	0		0	0	22	0	0	0	0
4:45 PM	6	0	0		0	6		0				0	0		0	0	12	0	0	0	0
4:50 PM	7	0	0		2	2		0				0	0		0	0	11	0	0	0	0
4:55 PM	8	0	0		2	16		0				0	0		0	0	26	0	0	0	0
5:00 PM	5	0	0		0	10		0				0	0		2	0	17	0	0	0	0
5:05 PM	14	0	2		2	4		0				0	0		1	0	21	0	0	0	0
5:10 PM	10	0	0		5	14		0				0	0		0	0	29	0	0	0	0
5:15 PM	13	0	0		0	9		0				0	1		1	0	24	0	0	0	0
5:20 PM	6	0	0		3	20		0				0	0		0	0	29	0	0	0	0
5:25 PM	11	0	0		1	5		0				0	0		1	0	18	0	0	0	0
5:30 PM	7	0	0		2	9		0				0	0		2	0	20	0	0	0	0
5:35 PM	9	1	0		0	7		0				0	0		0	0	17	0	0	0	0
5:40 PM	9	0	0		0	14		0				0	0		0	0	23	0	0	0	0
5:45 PM	5	0	0		2	16		0				0	0		0	0	23	0	0	0	0
5:50 PM	6	0	0		2	20		0				0	0		0	0	28	0	0	0	0
5:55 PM	3	0	0		2	8		0				0	0		0	0	13	0	0	1	0
Total Survey	176	2	3		29	246		1				0	2		9	0	464	0	0	1	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	15	1	1		2	27		1				0	1		1	0	47	0	0	0	0
4:15 PM	18	0	0		1	33		0				0	0		1	0	53	0	0	0	0
4:30 PM	24	0	0		3	26		0				0	0		0	0	53	0	0	0	0
4:45 PM	21	0	0		4	24		0				0	0		0	0	49	0	0	0	0
5:00 PM	29	0	2		7	28		0				0	0		3	0	67	0	0	0	0
5:15 PM	30	0	0		4	34		0				0	1		2	0	71	0	0	0	0
5:30 PM	25	1	0		2	30		0				0	0		2	0	60	0	0	0	0
5:45 PM	14	0	0		6	44		0				0	0		0	0	64	0	0	1	0
Total Survey	176	2	3		29	246		1				0	2		9	0	464	0	0	1	0

Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	104	145	249	2	163	110	273	0	0	0	0	0	8	20	28	0	275	0	0	0	0
%HV	4.8%				1.2%				0.0%				0.0%				2.5%				
PHF	0.70				0.75				0.00				0.67				0.84				

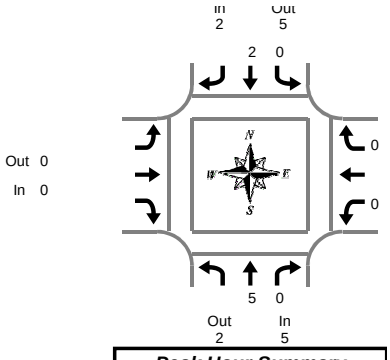
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	103	1	104		19	144		163				0	1		7	8	275
%HV	NA	4.9%	0.0%	4.8%	0.0%	1.4%	NA	1.2%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	2.5%
PHF		0.70	0.25	0.70	0.59	0.72		0.75				0.00	0.25		0.58	0.67	0.84

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	78	1	1		10	110		1				0	1		2	0	202	0	0	0	0
4:15 PM	92	0	2		15	111		0				0	0		4	0	222	0	0	0	0
4:30 PM	104	0	2		18	112		0				0	1		5	0	240	0	0	0	0
4:45 PM	105	1	2		17	116		0				0	1		7	0	247	0	0	0	0
5:00 PM	98	1	2		19	136		0				0	1		7	0	262	0	0	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Blanchet Dr

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		0	0	0	0	0		0				0	0		0	0	0
4:05 PM		0	0	0	0	0		0				0	1		0	1	1
4:10 PM		0	0	0	0	2		2				0	0		0	0	2
4:15 PM		0	0	0	0	0		0				0	0		0	0	0
4:20 PM		0	0	0	0	1		1				0	0		0	0	1
4:25 PM		1	0	1	0	1		1				0	0		0	0	2
4:30 PM		0	0	0	0	0		0				0	0		0	0	0
4:35 PM		0	0	0	0	1		1				0	0		0	0	1
4:40 PM		0	0	0	0	0		0				0	0		0	0	0
4:45 PM		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
4:55 PM		1	0	1	0	0		0				0	0		0	0	1
5:00 PM		1	0	1	0	0		0				0	0		0	0	1
5:05 PM		0	0	0	0	0		0				0	0		0	0	0
5:10 PM		0	0	0	0	1		1				0	0		0	0	1
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		2	0	2	0	0		0				0	0		0	0	2
5:30 PM		0	0	0	0	0		0				0	0		0	0	0
5:35 PM		1	0	1	0	0		0				0	0		0	0	1
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	1		1				0	0		0	0	1
5:55 PM		0	0	0	0	0		0				0	0		0	0	0
Total Survey		6	0	6	0	8		8				0	1		0	1	15

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		0	0	0	0	2		2				0	1		0	1	3
4:15 PM		1	0	1	0	2		2				0	0		0	0	3
4:30 PM		0	0	0	0	1		1				0	0		0	0	1
4:45 PM		1	0	1	0	1		1				0	0		0	0	2
5:00 PM		1	0	1	0	1		1				0	0		0	0	2
5:15 PM		2	0	2	0	0		0				0	0		0	0	2
5:30 PM		1	0	1	0	0		0				0	0		0	0	1
5:45 PM		0	0	0	0	1		1				0	0		0	0	1
Total Survey		6	0	6	0	8		8				0	1		0	1	15

Heavy Vehicle Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Blanchet Dr			Westbound Blanchet Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	2	7	2	5	7	0	0	0	0	0	0	7
PHF	0.42			0.50			0.00			0.00			0.58

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		5	0	5	0	2		2				0	0		0	0	7
PHF		0.42	0.00	0.42	0.00	0.50		0.50				0.00	0.00		0.00	0.00	0.58

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

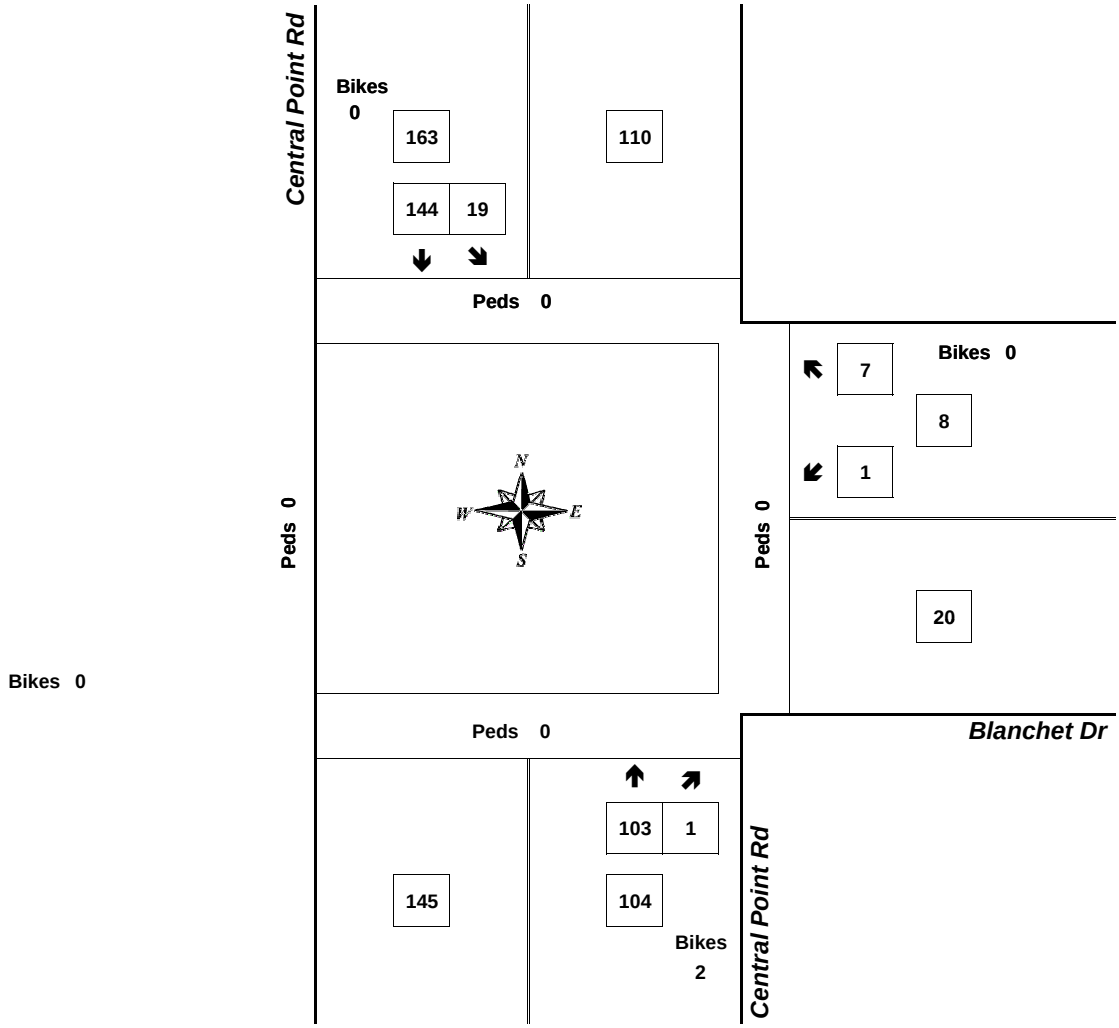
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Blanchet Dr				Westbound Blanchet Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		2	0	2	0	6		6				0	1		0	1	9
4:15 PM		3	0	3	0	5		5				0	0		0	0	8
4:30 PM		4	0	4	0	3		3				0	0		0	0	7
4:45 PM		5	0	5	0	2		2				0	0		0	0	7
5:00 PM		4	0	4	0	2		2				0	0		0	0	6

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Blanchet Dr

4:55 PM to 5:55 PM
Tuesday, April 04, 2017

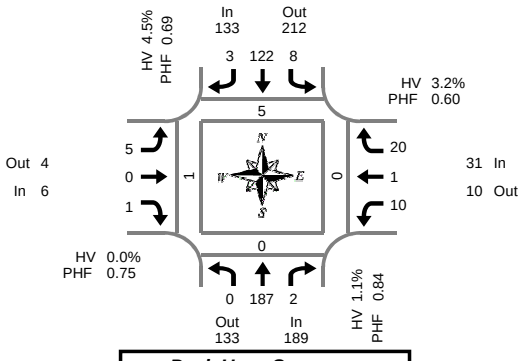


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.67	0.0%	8
NB	0.70	4.8%	104
SB	0.75	1.2%	163
Intersection	0.84	2.5%	275

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:15 AM to 8:15 AM

Central Point Rd & Hazeldell Ave

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	0	7	0	0	1	4	1	0	2	0	0	0	0	0	1	0	16	0	0	0	0
7:05 AM	0	8	0	0	1	6	0	0	0	0	0	0	0	0	2	0	17	0	0	0	0
7:10 AM	0	15	0	0	0	9	0	0	2	0	0	0	0	0	0	0	26	0	0	0	0
7:15 AM	0	20	0	0	1	5	0	0	0	0	0	0	1	0	1	0	28	0	0	0	0
7:20 AM	0	15	0	0	1	9	0	0	1	0	0	0	0	0	1	0	27	0	0	0	0
7:25 AM	0	14	0	0	0	6	0	0	0	0	0	0	0	0	1	0	21	0	0	0	0
7:30 AM	0	16	0	0	3	13	0	0	1	0	0	0	2	0	3	0	38	1	0	0	0
7:35 AM	0	15	1	0	0	7	0	0	1	0	0	0	1	0	1	0	26	0	0	0	0
7:40 AM	0	17	1	0	1	23	1	0	0	0	0	0	1	0	3	0	47	1	0	0	0
7:45 AM	0	22	0	0	0	5	0	0	0	0	0	0	5	0	2	0	34	0	0	0	0
7:50 AM	0	13	0	0	1	14	1	0	1	0	0	0	0	0	2	0	32	0	0	0	0
7:55 AM	0	16	0	0	0	17	1	0	0	0	0	0	0	0	0	0	34	0	0	0	1
8:00 AM	0	10	0	0	1	11	0	0	0	0	0	0	0	0	2	0	24	1	0	0	0
8:05 AM	0	10	0	0	0	3	0	0	0	0	1	0	0	0	1	0	15	2	0	0	0
8:10 AM	0	19	0	0	0	9	0	0	1	0	0	0	0	1	3	0	33	0	0	0	0
8:15 AM	0	9	0	0	0	5	0	0	3	0	0	0	0	0	2	0	19	0	0	0	0
8:20 AM	0	12	0	0	1	12	1	0	1	0	0	0	0	0	0	0	27	0	0	0	0
8:25 AM	0	7	1	0	0	5	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0
8:30 AM	0	5	0	0	0	9	0	0	0	0	0	0	0	0	2	0	16	0	0	0	0
8:35 AM	0	11	0	0	0	10	0	0	0	0	0	0	0	0	2	0	23	0	0	0	0
8:40 AM	0	9	0	0	0	5	0	0	0	0	0	0	0	0	1	0	15	0	0	0	0
8:45 AM	0	10	0	0	1	10	0	0	0	0	0	0	0	0	1	0	22	0	0	0	0
8:50 AM	0	15	0	0	1	9	0	0	0	0	0	0	0	0	2	0	27	0	0	0	1
8:55 AM	0	10	0	0	1	7	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0
Total Survey	0	305	3	0	14	213	5	0	13	0	1	0	10	1	33	0	598	5	0	0	2

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	0	30	0	0	2	19	1	0	4	0	0	0	0	0	3	0	59	0	0	0	0
7:15 AM	0	49	0	0	2	20	0	0	1	0	0	0	1	0	3	0	76	0	0	0	0
7:30 AM	0	48	2	0	4	43	1	0	2	0	0	0	4	0	7	0	111	2	0	0	0
7:45 AM	0	51	0	0	1	36	2	0	1	0	0	0	5	0	4	0	100	0	0	0	1
8:00 AM	0	39	0	0	1	23	0	0	1	0	1	0	0	1	6	0	72	3	0	0	0
8:15 AM	0	28	1	0	1	22	1	0	4	0	0	0	0	0	2	0	59	0	0	0	0
8:30 AM	0	25	0	0	0	24	0	0	0	0	0	0	0	0	5	0	54	0	0	0	0
8:45 AM	0	35	0	0	3	26	0	0	0	0	0	0	0	0	3	0	67	0	0	0	1
Total Survey	0	305	3	0	14	213	5	0	13	0	1	0	10	1	33	0	598	5	0	0	2

Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	189	133	322	0	133	212	345	0	6	4	10	0	31	10	41	0	359	5	0	0	1
%HV	1.1%				4.5%				0.0%				3.2%				2.5%				
PHF	0.84				0.69				0.75				0.60				0.79				

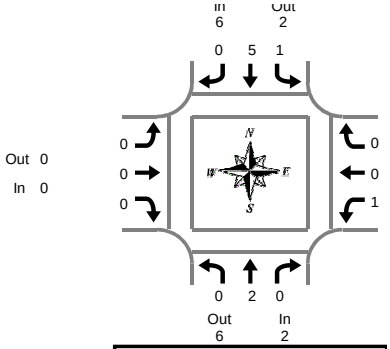
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	187	2	189	8	122	3	133	5	0	1	6	10	1	20	31	359
%HV	0.0%	1.1%	0.0%	1.1%	12.5%	4.1%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	3.2%	2.5%
PHF	0.00	0.87	0.25	0.84	0.50	0.71	0.38	0.69	0.63	0.00	0.25	0.75	0.36	0.25	0.71	0.60	0.79

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	0	178	2	0	9	118	4	0	8	0	0	0	10	0	17	0	346	2	0	0	1
7:15 AM	0	187	2	0	8	122	3	0	5	0	1	0	10	1	20	0	359	5	0	0	1
7:30 AM	0	166	3	0	7	124	4	0	8	0	1	0	9	1	19	0	342	5	0	0	1
7:45 AM	0	143	1	0	3	105	3	0	6	0	1	0	5	1	17	0	285	3	0	0	1
8:00 AM	0	127	1	0	5	95	1	0	5	0	1	0	0	1	16	0	252	3	0	0	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Hazeldell Ave

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:15 AM to 8:15 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	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	0	0	0	0	0
7:15 AM	0	0	0	0	0	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	0	0	0	0	0
7:25 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	1	1	0	2	0	0	0	0	1	0	0	1	3
7:35 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:50 AM	0	0	0	0	0	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	0	0	0	0	0
8:00 AM	0	0	0	0	0	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	0	0	0	0	0
8:10 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
8:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:20 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
8:25 AM	0	0	0	0	0	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	0	0	0	0	0
8:35 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:40 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	5	0	5	1	9	0	10	0	0	0	0	1	0	0	1	16

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	1	2	0	3	0	0	0	0	1	0	0	1	4
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
8:15 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
8:30 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	5	0	5	1	9	0	10	0	0	0	0	1	0	0	1	16

Heavy Vehicle Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Hazeldell Ave			Westbound Hazeldell Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	6	8	6	2	8	0	0	0	1	1	2	9
PHF	0.50			0.38			0.00			0.25			0.38

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	2	0	2	1	5	0	6	0	0	0	0	1	0	0	1	9
PHF	0.00	0.50	0.00	0.50	0.25	0.42	0.00	0.38	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.38

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

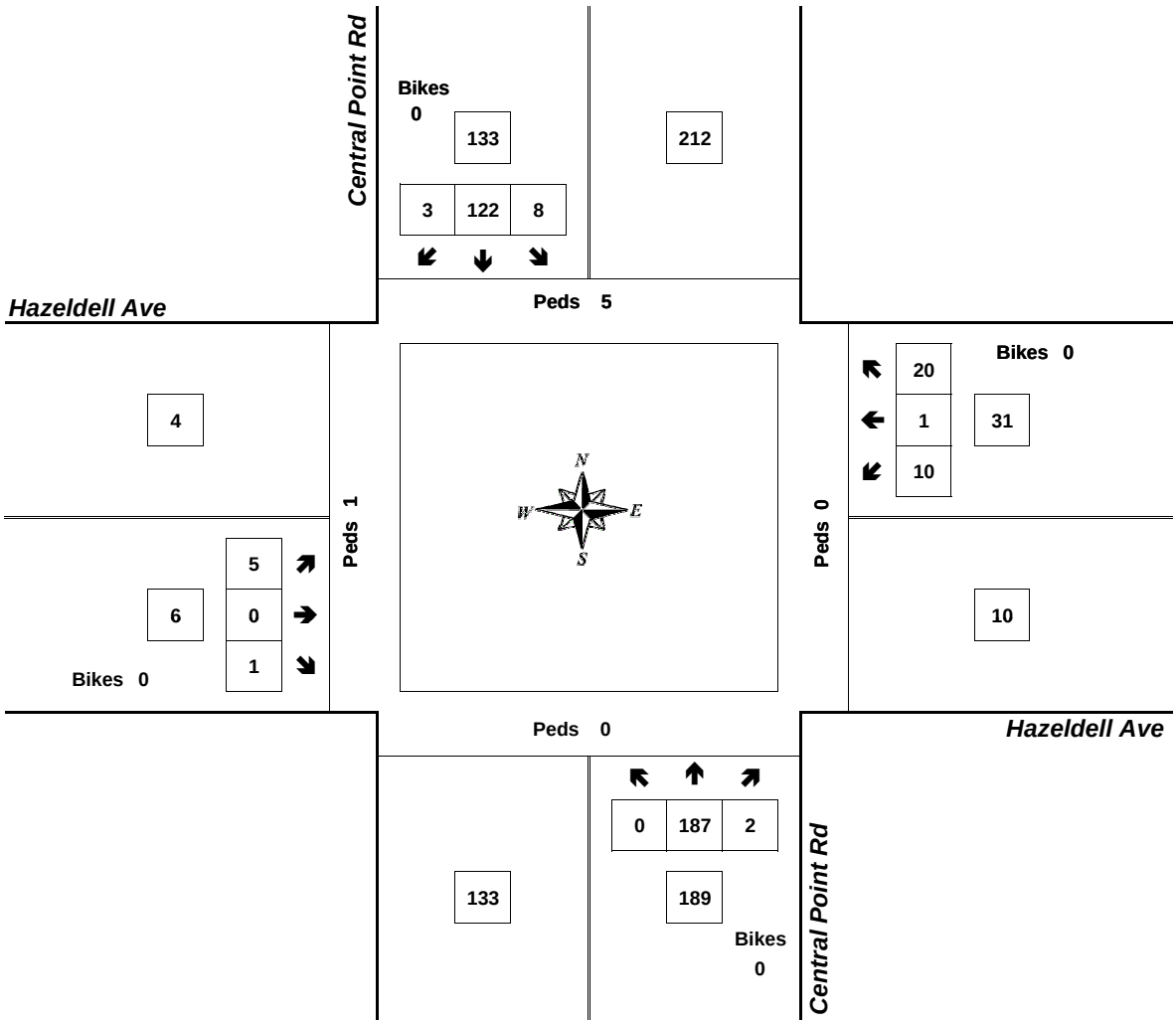
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	1	4	0	5	0	0	0	0	1	0	0	1	7
7:15 AM	0	2	0	2	1	5	0	6	0	0	0	0	1	0	0	1	9
7:30 AM	0	3	0	3	1	6	0	7	0	0	0	0	1	0	0	1	11
7:45 AM	0	4	0	4	0	6	0	6	0	0	0	0	0	0	0	0	10
8:00 AM	0	4	0	4	0	5	0	5	0	0	0	0	0	0	0	0	9

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Hazeldell Ave

7:15 AM to 8:15 AM
Wednesday, April 05, 2017

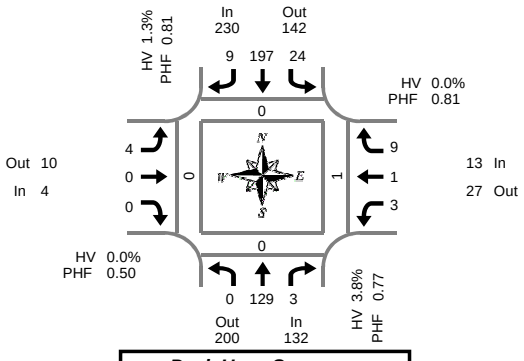


Approach	PHF	HV%	Volume
EB	0.75	0.0%	6
WB	0.60	3.2%	31
NB	0.84	1.1%	189
SB	0.69	4.5%	133
Intersection	0.79	2.5%	359

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:55 PM to 5:55 PM

Central Point Rd & Hazeldell Ave

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	0	7	0	0	0	11	1	0	2	0	0	0	0	0	0	0	21	0	0	0	0
4:05 PM	0	6	0	0	2	16	0	1	0	0	0	0	0	0	0	0	24	0	0	0	0
4:10 PM	0	7	0	1	1	11	0	0	1	0	0	0	1	0	0	0	21	0	0	0	0
4:15 PM	0	0	0	0	1	18	1	0	0	0	0	0	0	0	0	0	20	0	0	0	0
4:20 PM	0	5	0	0	2	10	0	0	0	0	0	0	0	1	0	0	18	0	0	0	0
4:25 PM	0	5	0	0	3	20	0	0	0	0	0	0	0	0	3	0	31	0	0	0	0
4:30 PM	0	7	0	0	2	12	1	0	0	0	0	0	0	0	1	0	23	0	0	0	0
4:35 PM	0	9	0	0	2	15	0	0	1	1	0	0	0	0	1	0	29	0	0	0	0
4:40 PM	0	11	0	0	4	15	1	0	0	0	0	0	0	0	0	0	31	0	0	0	0
4:45 PM	0	8	0	0	1	6	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0
4:50 PM	1	6	1	0	3	9	0	0	0	0	0	0	0	0	2	0	22	0	0	0	0
4:55 PM	0	13	0	0	1	21	1	0	2	0	0	0	0	0	0	0	38	0	0	0	0
5:00 PM	0	10	0	0	1	12	3	0	0	0	0	0	0	0	2	0	28	0	0	0	0
5:05 PM	0	16	0	0	0	10	3	0	0	0	0	0	0	0	0	0	29	0	0	0	0
5:10 PM	0	10	0	0	2	25	0	1	0	0	0	0	1	0	1	0	39	0	0	0	0
5:15 PM	0	17	0	0	3	14	0	0	0	0	0	0	0	1	0	0	35	0	0	0	0
5:20 PM	0	9	0	0	4	23	0	0	1	0	0	0	0	0	1	0	38	0	0	0	0
5:25 PM	0	12	0	0	2	10	0	0	0	0	0	0	0	0	1	0	25	0	0	0	0
5:30 PM	0	9	1	0	2	10	0	0	1	0	0	0	1	0	1	0	25	0	0	0	0
5:35 PM	0	9	1	0	3	13	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0
5:40 PM	0	9	0	0	0	19	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0
5:45 PM	0	9	0	0	3	16	1	0	0	0	0	0	0	0	1	0	30	0	0	0	0
5:50 PM	0	6	1	0	3	24	1	0	0	0	0	0	1	0	2	0	38	0	0	1	0
5:55 PM	0	4	0	0	1	10	0	0	1	0	0	0	0	0	0	0	16	0	0	0	0
Total Survey	1	204	4	1	46	350	13	2	9	1	0	0	4	2	16	0	650	0	0	1	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	0	20	0	1	3	38	1	1	3	0	0	0	1	0	0	0	66	0	0	0	0
4:15 PM	0	10	0	0	6	48	1	0	0	0	0	0	0	1	3	0	69	0	0	0	0
4:30 PM	0	27	0	0	8	42	2	0	1	1	0	0	0	0	2	0	83	0	0	0	0
4:45 PM	1	27	1	0	5	36	1	0	2	0	0	0	0	0	2	0	75	0	0	0	0
5:00 PM	0	36	0	0	3	47	6	1	0	0	0	0	1	0	3	0	96	0	0	0	0
5:15 PM	0	38	0	0	9	47	0	0	1	0	0	0	0	1	2	0	98	0	0	0	0
5:30 PM	0	27	2	0	5	42	0	0	1	0	0	0	1	0	1	0	79	0	0	0	0
5:45 PM	0	19	1	0	7	50	2	0	1	0	0	0	1	0	3	0	84	0	0	1	0
Total Survey	1	204	4	1	46	350	13	2	9	1	0	0	4	2	16	0	650	0	0	1	0

Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	200	332	0	230	142	372	1	4	10	14	0	13	27	40	0	379	0	0	1	0
%HV	3.8%				1.3%				0.0%				0.0%				2.1%				
PHF	0.77				0.81				0.50				0.81				0.85				

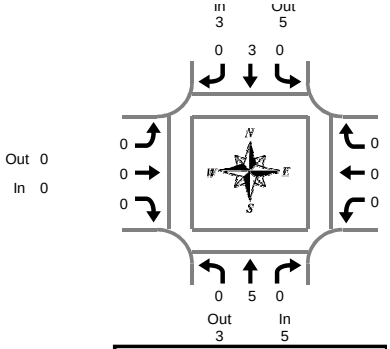
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	129	3	132	24	197	9	230	4	0	0	4	3	1	9	13	379
%HV	0.0%	3.9%	0.0%	3.8%	0.0%	1.5%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%
PHF	0.00	0.75	0.38	0.77	0.67	0.79	0.32	0.81	0.50	0.00	0.00	0.50	0.75	0.25	0.75	0.81	0.85

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	1	84	1	1	22	164	5	1	6	1	0	0	1	1	7	0	293	0	0	0	0
4:15 PM	1	100	1	0	22	173	10	1	3	1	0	0	1	1	10	0	323	0	0	0	0
4:30 PM	1	128	1	0	25	172	9	1	4	1	0	0	1	1	9	0	352	0	0	0	0
4:45 PM	1	128	3	0	22	172	7	1	4	0	0	0	2	1	8	0	348	0	0	0	0
5:00 PM	0	120	3	0	24	186	8	1	3	0	0	0	3	1	9	0	357	0	0	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Hazeldell Ave

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				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	1	0	1	0	0	0	0	0	0	0	0	1
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	1	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	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	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:10 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:25 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:40 PM	0	0	0	0	0	0	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	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	7	0	7	1	7	0	8	0	0	0	0	0	0	0	0	15

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
4:15 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
5:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	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	0	7	0	7	1	7	0	8	0	0	0	0	0	0	0	0	15

Heavy Vehicle Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Hazeldell Ave			Westbound Hazeldell Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	3	8	3	5	8	0	0	0	0	0	0	8
PHF	0.42			0.38			0.00			0.00			0.67

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	5	0	5	0	3	0	3	0	0	0	0	0	0	0	0	8
PHF	0.00	0.42	0.00	0.42	0.00	0.38	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67

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

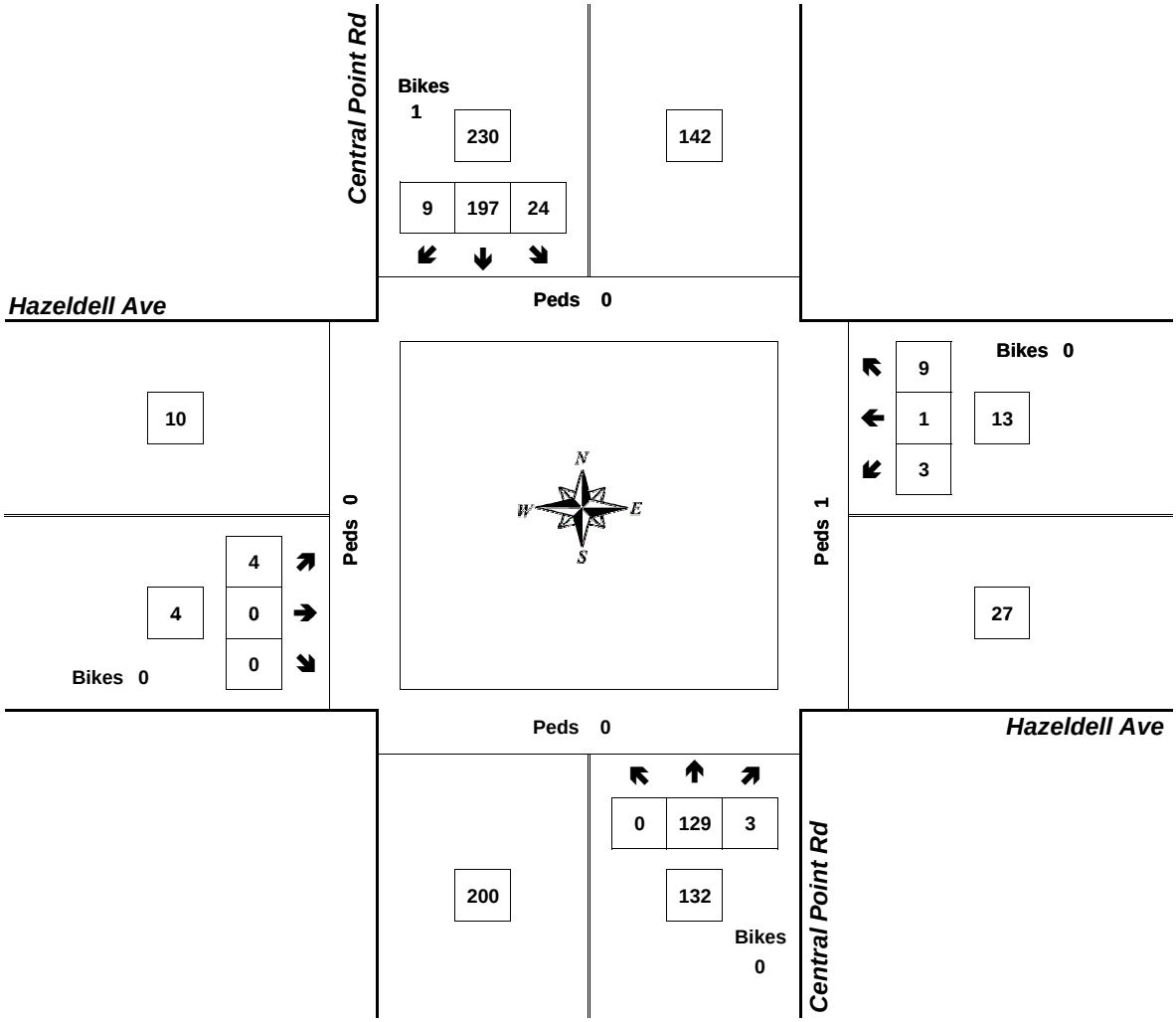
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Hazeldell Ave				Westbound Hazeldell Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	3	0	3	1	4	0	5	0	0	0	0	0	0	0	0	8
4:15 PM	0	2	0	2	1	3	0	4	0	0	0	0	0	0	0	0	6
4:30 PM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7
4:45 PM	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0	7
5:00 PM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Hazeldell Ave

4:55 PM to 5:55 PM
Tuesday, April 04, 2017

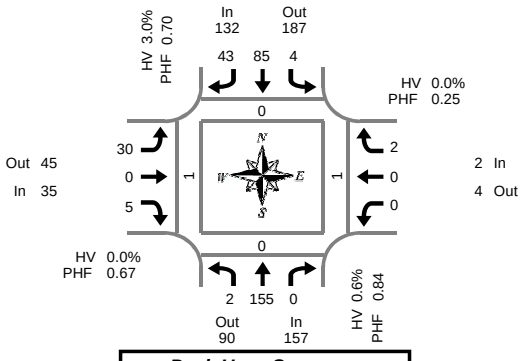


Approach	PHF	HV%	Volume
EB	0.50	0.0%	4
WB	0.81	0.0%	13
NB	0.77	3.8%	132
SB	0.81	1.3%	230
Intersection	0.85	2.1%	379

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:10 AM to 8:10 AM

Central Point Rd & Skellenger Way

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	0	3	0	0	0	3	1	0	5	0	1	0	0	0	0	0	13	0	0	0	0
7:05 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	1	0	13	0	0	0	0
7:10 AM	0	10	0	0	0	6	2	0	7	0	1	0	0	0	0	0	26	0	0	0	0
7:15 AM	0	16	0	0	0	5	2	0	3	0	0	0	0	0	0	0	26	0	0	0	0
7:20 AM	0	12	0	0	0	8	1	0	2	0	0	0	0	0	0	0	23	0	0	0	0
7:25 AM	0	12	0	0	1	4	1	0	2	0	0	0	0	0	0	0	20	0	0	0	0
7:30 AM	0	17	0	0	2	6	7	0	0	0	0	0	0	0	0	0	32	0	0	0	0
7:35 AM	0	13	0	0	0	1	7	0	2	0	0	0	0	0	0	0	23	0	0	0	0
7:40 AM	0	16	0	0	0	10	12	0	2	0	1	0	0	0	0	0	41	0	0	0	0
7:45 AM	2	16	0	0	0	7	3	0	6	0	1	0	0	0	0	0	35	0	0	0	0
7:50 AM	0	10	0	0	0	11	4	0	2	0	1	0	0	0	0	0	28	0	0	0	1
7:55 AM	0	15	0	0	0	14	3	0	1	0	0	0	0	0	1	0	34	0	0	0	0
8:00 AM	0	8	0	0	1	9	1	0	2	0	0	0	0	0	0	0	21	0	0	0	0
8:05 AM	0	10	0	0	0	4	0	0	1	0	1	0	0	0	1	0	17	0	0	1	0
8:10 AM	0	16	0	0	0	8	1	0	0	0	0	0	0	0	0	0	25	0	0	3	0
8:15 AM	0	8	0	0	0	3	2	0	2	0	0	0	0	0	0	0	15	0	0	0	0
8:20 AM	0	10	0	0	0	10	2	0	1	0	0	0	0	0	0	0	23	0	0	0	0
8:25 AM	0	9	0	0	0	4	1	0	1	0	0	0	0	0	0	0	15	0	0	0	0
8:30 AM	0	2	0	0	0	9	0	0	1	0	1	0	0	0	0	0	13	0	0	0	0
8:35 AM	0	9	0	0	0	8	3	0	2	0	0	0	0	0	0	0	22	0	0	0	0
8:40 AM	0	10	0	0	0	4	1	0	0	0	0	0	0	0	0	0	15	0	0	0	0
8:45 AM	0	7	0	0	0	7	2	0	2	0	0	0	0	0	0	0	18	0	0	0	0
8:50 AM	0	12	0	0	0	8	0	0	3	0	0	0	0	0	0	0	23	0	0	0	0
8:55 AM	1	8	0	0	0	5	1	0	1	0	0	0	0	0	1	0	17	0	0	0	0
Total Survey	3	255	0	0	4	160	57	0	48	0	7	0	0	0	4	0	538	0	0	4	1

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	0	19	0	0	0	15	3	0	12	0	2	0	0	0	1	0	52	0	0	0	0
7:15 AM	0	40	0	0	1	17	4	0	7	0	0	0	0	0	0	0	69	0	0	0	0
7:30 AM	0	46	0	0	2	17	26	0	4	0	1	0	0	0	0	0	96	0	0	0	0
7:45 AM	2	41	0	0	0	32	10	0	9	0	2	0	0	0	1	0	97	0	0	0	1
8:00 AM	0	34	0	0	1	21	2	0	3	0	1	0	0	0	1	0	63	0	0	4	0
8:15 AM	0	27	0	0	0	17	5	0	4	0	0	0	0	0	0	0	53	0	0	0	0
8:30 AM	0	21	0	0	0	21	4	0	3	0	1	0	0	0	0	0	50	0	0	0	0
8:45 AM	1	27	0	0	0	20	3	0	6	0	0	0	0	0	1	0	58	0	0	0	0
Total Survey	3	255	0	0	4	160	57	0	48	0	7	0	0	0	4	0	538	0	0	4	1

Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	157	90	247	0	132	187	319	0	35	45	80	0	2	4	6	0	326	0	0	1	1
%HV	0.6%				3.0%				0.0%				0.0%				1.5%				
PHF	0.84				0.70				0.67				0.25				0.78				

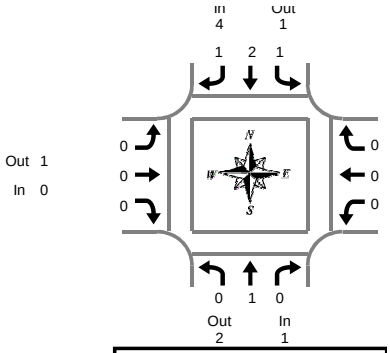
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	155	0	157	4	85	43	132	30	0	5	35	0	0	2	2	326
%HV	0.0%	0.6%	0.0%	0.6%	25.0%	2.4%	2.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%
PHF	0.25	0.84	0.00	0.84	0.33	0.63	0.41	0.70	0.63	0.00	0.42	0.67	0.00	0.00	0.25	0.25	0.78

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	2	146	0	0	3	81	43	0	32	0	5	0	0	0	2	0	314	0	0	0	1
7:15 AM	2	161	0	0	4	87	42	0	23	0	4	0	0	0	2	0	325	0	0	4	1
7:30 AM	2	148	0	0	3	87	43	0	20	0	4	0	0	0	2	0	309	0	0	4	1
7:45 AM	2	123	0	0	1	91	21	0	19	0	4	0	0	0	2	0	263	0	0	4	1
8:00 AM	1	109	0	0	1	79	14	0	16	0	2	0	0	0	2	0	224	0	0	4	0

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Central Point Rd & Skellenger Way

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:10 AM to 8:10 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	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	0	0	0	0	0
7:15 AM	0	0	0	0	0	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	0	0	0	0	0
7:25 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
7:35 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:50 AM	0	0	0	0	0	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	0	0	0	0	0
8:00 AM	0	0	0	0	0	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	0	0	0	0	0
8:10 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
8:20 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
8:25 AM	0	0	0	0	0	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	0	0	0	0	0
8:35 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:40 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Survey	0	4	0	4	1	7	1	9	1	0	0	1	0	0	0	0	14

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	1	1	1	3	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	1	0	2	0	2	1	0	0	1	0	0	0	0	4
8:30 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
8:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Survey	0	4	0	4	1	7	1	9	1	0	0	1	0	0	0	0	14

Heavy Vehicle Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Skellenger Way			Westbound Skellenger Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	2	3	4	1	5	0	1	1	0	1	1	5
PHF	0.25			0.33			0.00			0.00			0.31

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	1	0	1	1	2	1	4	0	0	0	0	0	0	0	0	5
PHF	0.00	0.25	0.00	0.25	0.25	0.50	0.25	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

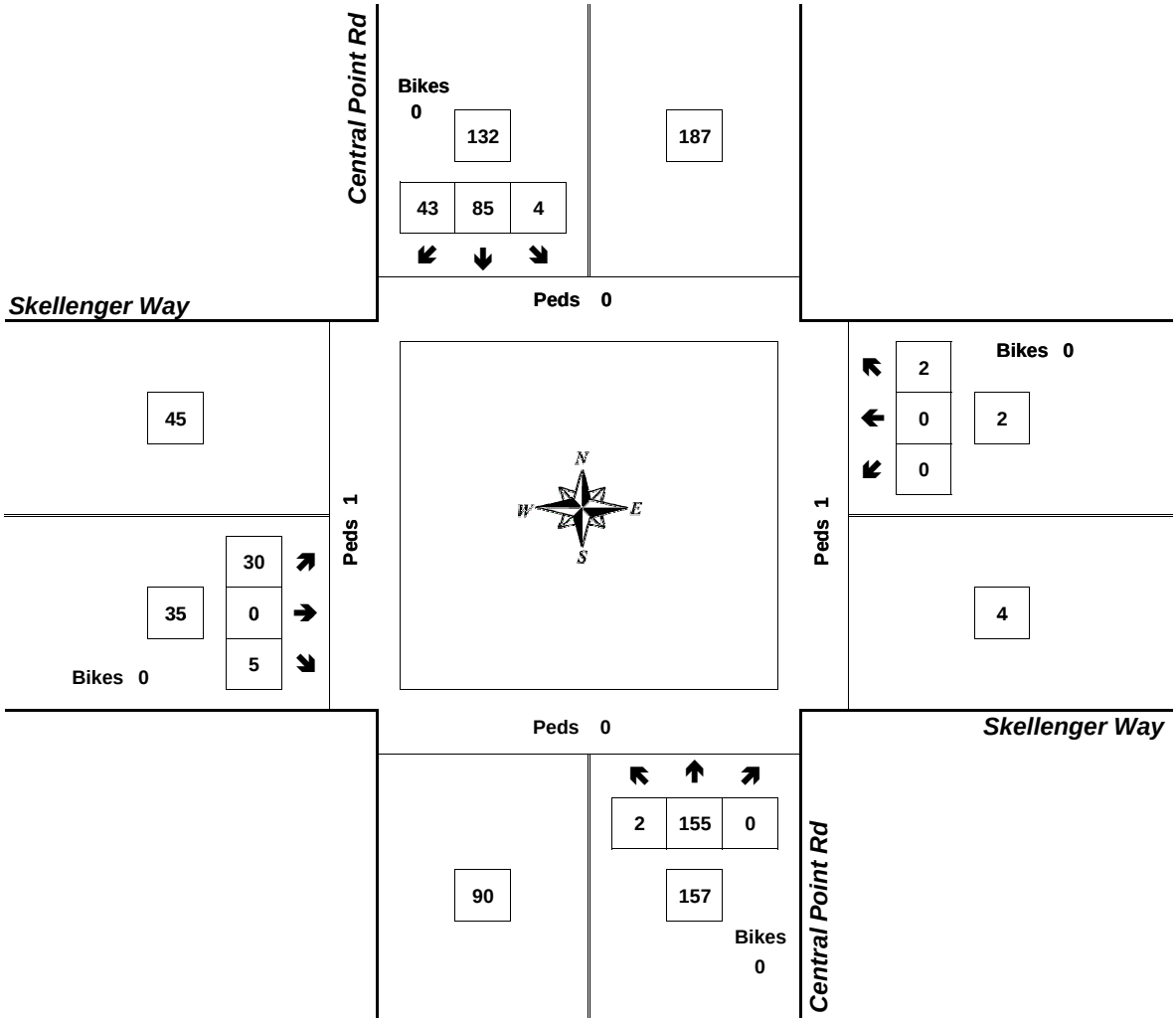
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	1	2	1	4	0	0	0	0	0	0	0	0	5
7:15 AM	0	1	0	1	1	3	1	5	0	0	0	0	0	0	0	0	6
7:30 AM	0	1	0	1	1	5	1	7	1	0	0	1	0	0	0	0	9
7:45 AM	0	2	0	2	0	6	0	6	1	0	0	1	0	0	0	0	9
8:00 AM	0	3	0	3	0	5	0	5	1	0	0	1	0	0	0	0	9

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Skellenger Way

7:10 AM to 8:10 AM
Wednesday, April 05, 2017

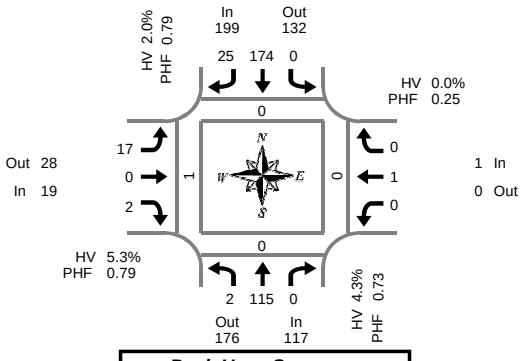


Approach	PHF	HV%	Volume
EB	0.67	0.0%	35
WB	0.25	0.0%	2
NB	0.84	0.6%	157
SB	0.70	3.0%	132
Intersection	0.78	1.5%	326

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Central Point Rd & Skellenger Way

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	0	5	0	0	0	6	3	0	0	0	1	0	0	0	0	0	15	0	0	0	0
4:05 PM	1	5	0	0	0	15	2	1	2	0	0	0	0	0	0	0	25	0	0	0	0
4:10 PM	0	7	0	1	0	12	1	0	2	0	0	0	0	0	0	0	22	0	0	0	0
4:15 PM	1	11	0	0	0	14	4	0	1	0	0	0	0	0	0	0	31	0	0	0	0
4:20 PM	0	5	0	0	0	8	2	0	0	0	0	0	0	0	0	0	15	0	0	0	0
4:25 PM	0	4	0	0	0	16	3	0	0	0	0	0	0	0	0	0	23	0	0	0	0
4:30 PM	0	8	0	0	0	8	4	0	0	0	0	0	0	0	0	0	20	0	0	0	0
4:35 PM	0	6	0	0	0	12	2	0	3	0	0	0	0	0	0	0	23	2	0	0	0
4:40 PM	0	11	0	0	0	12	1	0	2	0	0	0	0	0	0	0	26	0	0	0	0
4:45 PM	0	6	0	0	0	8	1	0	0	0	0	0	0	0	0	0	15	0	0	0	0
4:50 PM	0	6	0	0	0	8	1	0	4	1	0	0	0	0	0	0	20	0	0	0	0
4:55 PM	1	8	0	0	0	19	2	0	2	0	0	0	0	0	0	0	32	0	0	0	0
5:00 PM	0	10	0	0	0	10	2	0	2	0	0	0	0	0	0	0	24	0	0	0	0
5:05 PM	0	14	0	0	0	10	0	0	1	0	0	0	0	1	0	0	26	0	0	0	0
5:10 PM	0	10	0	0	0	21	3	1	0	0	1	0	0	0	0	0	35	0	0	0	0
5:15 PM	0	16	0	0	0	13	3	0	3	0	0	0	0	0	0	0	35	0	0	0	0
5:20 PM	0	8	0	0	0	21	2	0	2	0	0	0	0	0	0	0	33	0	0	0	0
5:25 PM	0	11	0	0	0	5	3	0	0	0	0	0	0	0	0	0	19	0	0	0	0
5:30 PM	1	8	0	0	0	10	2	0	2	0	0	0	0	0	0	0	23	0	0	0	0
5:35 PM	0	9	0	0	0	12	2	0	1	0	0	0	0	0	0	0	24	0	0	0	0
5:40 PM	0	8	0	0	0	15	2	0	1	0	0	0	0	0	0	0	26	0	0	0	0
5:45 PM	0	7	0	0	0	17	1	0	2	0	1	0	0	0	0	0	28	0	0	0	0
5:50 PM	0	6	0	0	0	21	3	0	1	0	0	0	0	0	0	0	31	0	0	0	1
5:55 PM	0	3	0	0	0	11	0	0	1	0	0	0	0	0	0	0	15	0	0	0	0
Total Survey	4	192	0	1	0	304	49	2	32	1	3	0	0	1	0	0	586	2	0	0	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	1	17	0	1	0	33	6	1	4	0	1	0	0	0	0	0	62	0	0	0	0
4:15 PM	1	20	0	0	0	38	9	0	1	0	0	0	0	0	0	0	69	0	0	0	0
4:30 PM	0	25	0	0	0	32	7	0	5	0	0	0	0	0	0	0	69	2	0	0	0
4:45 PM	1	20	0	0	0	35	4	0	6	1	0	0	0	0	0	0	67	0	0	0	0
5:00 PM	0	34	0	0	0	41	5	1	3	0	1	0	0	1	0	0	85	0	0	0	0
5:15 PM	0	35	0	0	0	39	8	0	5	0	0	0	0	0	0	0	87	0	0	0	0
5:30 PM	1	25	0	0	0	37	6	0	4	0	0	0	0	0	0	0	73	0	0	0	0
5:45 PM	0	16	0	0	0	49	4	0	4	0	1	0	0	0	0	0	74	0	0	0	1
Total Survey	4	192	0	1	0	304	49	2	32	1	3	0	0	1	0	0	586	2	0	0	1

Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	117	176	293	0	199	132	331	1	19	28	47	0	1	0	1	0	336	0	0	0	1
%HV	4.3%				2.0%				5.3%				0.0%				3.0%				
PHF	0.73				0.79				0.79				0.25				0.82				

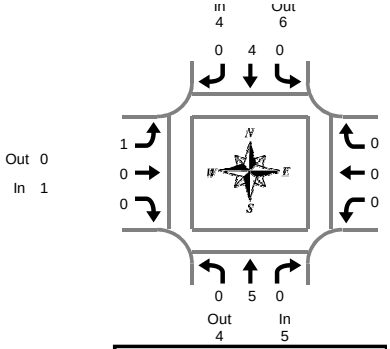
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	115	0	117	0	174	25	199	17	0	2	19	0	1	0	1	336
%HV	0.0%	4.3%	0.0%	4.3%	0.0%	2.3%	0.0%	2.0%	5.9%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	3.0%
PHF	0.50	0.72	0.00	0.73	0.00	0.79	0.78	0.79	0.85	0.00	0.50	0.79	0.00	0.25	0.00	0.25	0.82

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	3	82	0	1	0	138	26	1	16	1	1	0	0	0	0	0	267	2	0	0	0
4:15 PM	2	99	0	0	0	146	25	1	15	1	1	0	0	1	0	0	290	2	0	0	0
4:30 PM	1	114	0	0	0	147	24	1	19	1	1	0	0	1	0	0	308	2	0	0	0
4:45 PM	2	114	0	0	0	152	23	1	18	1	1	0	0	1	0	0	312	0	0	0	0
5:00 PM	1	110	0	0	0	166	23	1	16	0	2	0	0	1	0	0	319	0	0	0	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Skellenger Way

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	0	1	1	0	0	0	0	0	0	0	0	1
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	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	0	0	0	0	0	0
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	1	0	1	0	0	0	0	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	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:05 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:10 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	1
5:25 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	6	0	6	0	7	1	8	2	0	0	2	0	0	0	0	16

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger 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	1	3	1	0	0	1	0	0	0	0	4
4:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
5:15 PM	0	2	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
5:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Survey	0	6	0	6	0	7	1	8	2	0	0	2	0	0	0	0	16

Heavy Vehicle Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Skellenger Way			Westbound Skellenger Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	4	9	4	6	10	1	0	1	0	0	0	10
PHF	0.42			0.50			0.25			0.00			0.83

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	5	0	5	0	4	0	4	1	0	0	1	0	0	0	0	10
PHF	0.00	0.42	0.00	0.42	0.00	0.50	0.00	0.50	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.83

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

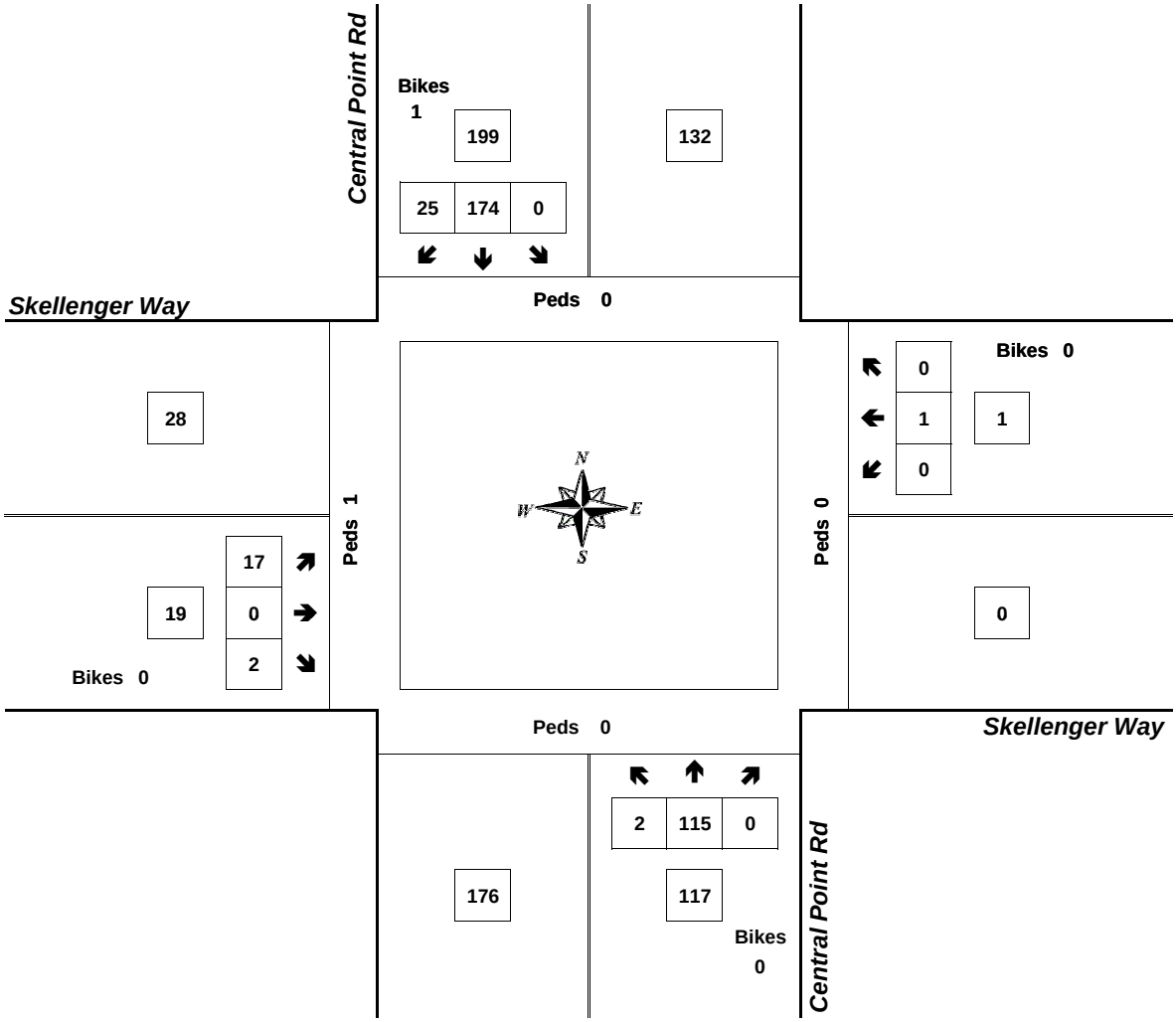
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Skellenger Way				Westbound Skellenger Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	0	3	1	4	1	0	0	1	0	0	0	0	7
4:15 PM	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	6
4:30 PM	0	4	0	4	0	3	0	3	1	0	0	1	0	0	0	0	8
4:45 PM	0	5	0	5	0	3	0	3	1	0	0	1	0	0	0	0	9
5:00 PM	0	4	0	4	0	4	0	4	1	0	0	1	0	0	0	0	9

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Skellenger Way

4:55 PM to 5:55 PM
Tuesday, April 04, 2017

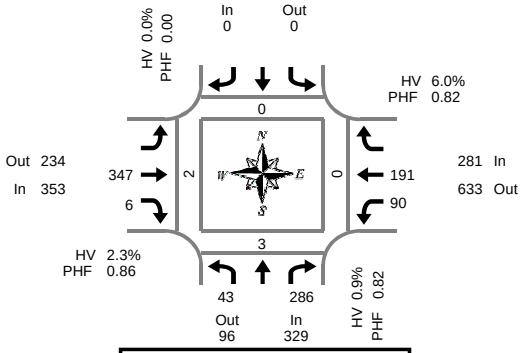


Approach	PHF	HV%	Volume
EB	0.79	5.3%	19
WB	0.25	0.0%	1
NB	0.73	4.3%	117
SB	0.79	2.0%	199
Intersection	0.82	3.0%	336

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Central Point Rd & Warner Parrott Rd

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes			North	South	East	West
7:00 AM	2		30	0				0	22	1	0	8	14		0	77		0	0	0	0
7:05 AM	2		22	0				0	29	1	0	4	10		0	68		0	0	0	0
7:10 AM	4		24	0				0	30	1	0	10	8		0	77		0	0	0	0
7:15 AM	4		23	0				0	26	0	0	6	13		0	72		0	0	0	0
7:20 AM	3		19	0				0	43	0	0	6	15		0	86		0	1	0	0
7:25 AM	4		21	0				0	33	1	0	9	18		0	86		0	0	0	0
7:30 AM	4		24	0				0	22	0	0	11	18		0	79		0	0	0	0
7:35 AM	5		29	0				0	22	0	0	7	23		0	86		0	1	0	0
7:40 AM	4		27	0				0	25	0	0	8	13		0	77		0	0	0	0
7:45 AM	8		27	0				0	24	0	0	7	21		0	87		0	0	0	0
7:50 AM	2		21	0				0	36	1	0	9	20		0	89		0	1	0	2
7:55 AM	1		19	0				0	35	1	0	5	18		0	79		0	0	0	0
8:00 AM	1		23	0				0	22	0	0	9	15		1	70		0	0	0	0
8:05 AM	5		16	0				0	25	0	0	5	12		0	63		0	1	0	0
8:10 AM	3		22	0				0	18	1	0	6	14		0	64		0	1	0	0
8:15 AM	1		21	0				0	32	0	0	7	25		0	86		0	4	0	0
8:20 AM	4		21	0				0	16	0	0	12	22		0	75		0	0	0	0
8:25 AM	5		24	0				0	27	0	0	6	18		0	80		0	1	0	0
8:30 AM	4		18	0				0	33	1	0	12	16		0	84		0	2	0	0
8:35 AM	3		19	0				0	24	0	0	5	22		0	73		0	1	0	0
8:40 AM	1		15	0				0	20	0	0	16	20		0	72		0	0	0	0
8:45 AM	3		19	0				0	25	2	0	12	21		0	82		0	1	0	0
8:50 AM	2		20	0				0	28	1	0	12	23		0	86		0	0	0	0
8:55 AM	1		19	0				0	33	1	0	10	26		0	90		0	0	0	0
Total Survey	76		523	0				0	650	12	0	202	425		1	1,888		0	14	0	2

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes			North	South	East	West
7:00 AM	8		76	0				0	81	3	0	22	32		0	222		0	0	0	0
7:15 AM	11		63	0				0	102	1	0	21	46		0	244		0	1	0	0
7:30 AM	13		80	0				0	69	0	0	26	54		0	242		0	1	0	0
7:45 AM	11		67	0				0	95	2	0	21	59		0	255		0	1	0	2
8:00 AM	9		61	0				0	65	1	0	20	41		1	197		0	2	0	0
8:15 AM	10		66	0				0	75	0	0	25	65		0	241		0	5	0	0
8:30 AM	8		52	0				0	77	1	0	33	58		0	229		0	3	0	0
8:45 AM	6		58	0				0	86	4	0	34	70		0	258		0	1	0	0
Total Survey	76		523	0				0	650	12	0	202	425		1	1,888		0	14	0	2

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott 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	329	96	425	0	0	0	0	0	353	234	587	0	281	633	914	0	963	0	3	0	2
%HV	0.9%				0.0%				2.3%				6.0%				2.9%				
PHF	0.82				0.00				0.86				0.82				0.94				

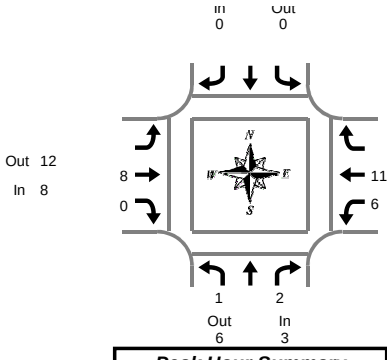
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	43		286	329				0		347	6	353	90	191		281	963
%HV	2.3%	NA	0.7%	0.9%	NA	NA	NA	0.0%	NA	2.3%	0.0%	2.3%	6.7%	5.8%	NA	6.0%	2.9%
PHF	0.63		0.86	0.82				0.00		0.85	0.50	0.86	0.83	0.81		0.82	0.94

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes			North	South	East	West
7:00 AM	43		286	0				0	347	6	0	90	191		0	963		0	3	0	2
7:15 AM	44		271	0				0	331	4	0	88	200		1	938		0	5	0	2
7:30 AM	43		274	0				0	304	3	0	92	219		1	935		0	9	0	2
7:45 AM	38		246	0				0	312	4	0	99	223		1	922		0	11	0	2
8:00 AM	33		237	0				0	303	6	0	112	234		1	925		0	11	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Warner Parrott Rd

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
7:00 AM	0		1	1				0	0	0	0		0	0		0	1
7:05 AM	0		0	0				0	1	0	1		0	1		1	2
7:10 AM	0		0	0				0	1	0	1		0	0		0	1
7:15 AM	0		0	0				0	0	0	0		2	2		4	4
7:20 AM	0		1	1				0	0	0	0		0	0		0	1
7:25 AM	0		0	0				0	2	0	2		2	1		3	5
7:30 AM	0		0	0				0	1	0	1		1	1		2	3
7:35 AM	0		0	0				0	0	0	0		0	1		1	1
7:40 AM	1		0	1				0	1	0	1		0	1		1	3
7:45 AM	0		0	0				0	0	0	0		1	2		3	3
7:50 AM	0		0	0				0	1	0	1		0	1		1	2
7:55 AM	0		0	0				0	1	0	1		0	1		1	2
8:00 AM	0		0	0				0	0	0	0		2	2		4	4
8:05 AM	0		0	0				0	0	0	0		0	2		2	2
8:10 AM	0		1	1				0	2	0	2		0	0		0	3
8:15 AM	0		0	0				0	1	0	1		0	0		0	1
8:20 AM	0		2	2				0	1	0	1		2	1		3	6
8:25 AM	0		0	0				0	0	0	0		0	0		0	0
8:30 AM	0		2	2				0	1	0	1		2	0		2	5
8:35 AM	0		1	1				0	1	0	1		0	1		1	3
8:40 AM	0		0	0				0	1	0	1		0	0		0	1
8:45 AM	0		2	2				0	1	0	1		0	1		1	4
8:50 AM	0		0	0				0	2	0	2		0	1		1	3
8:55 AM	0		1	1				0	0	0	0		0	2		2	3
Total Survey	1		11	12				0	18	0	18		12	21		33	63

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
7:00 AM	0		1	1				0	2	0	2		0	1		1	4
7:15 AM	0		1	1				0	2	0	2		4	3		7	10
7:30 AM	1		0	1				0	2	0	2		1	3		4	7
7:45 AM	0		0	0				0	2	0	2		1	4		5	7
8:00 AM	0		1	1				0	2	0	2		2	4		6	9
8:15 AM	0		2	2				0	2	0	2		2	1		3	7
8:30 AM	0		3	3				0	3	0	3		2	1		3	9
8:45 AM	0		3	3				0	3	0	3		0	4		4	10
Total Survey	1		11	12				0	18	0	18		12	21		33	63

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Warner Parrott Rd			Westbound Warner Parrott Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	3	6	9	0	0	0	8	12	20	17	10	27	28
PHF	0.75			0.00			0.67			0.61			0.70

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L		R	Total				Total	T	R	Total		L	T		Total	
Volume	1		2	3				0	8	0	8		6	11		17	28
PHF	0.25		0.50	0.75				0.00	0.67	0.00	0.67		0.38	0.69		0.61	0.70

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

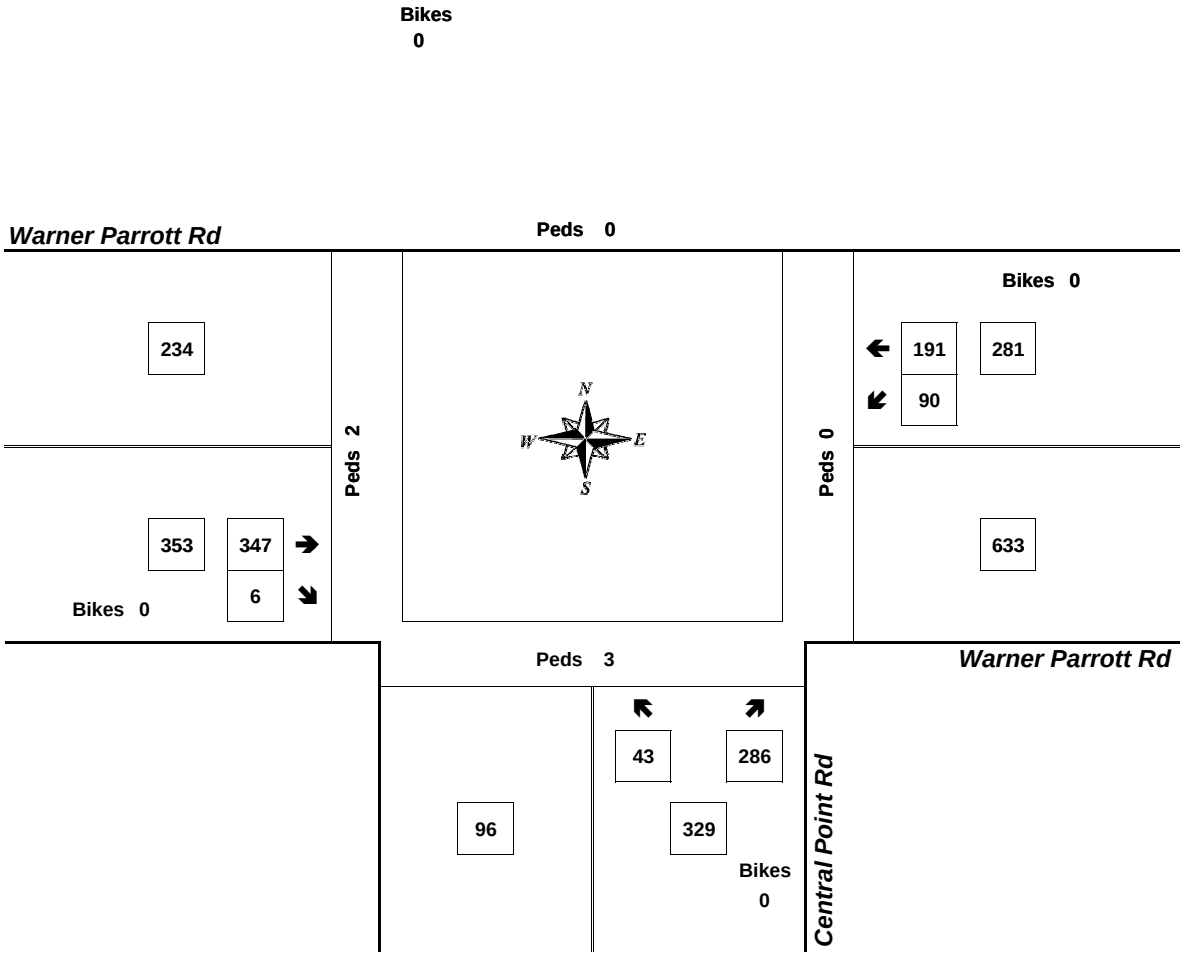
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
7:00 AM	1		2	3				0	8	0	8		6	11		17	28
7:15 AM	1		2	3				0	8	0	8		8	14		22	33
7:30 AM	1		3	4				0	8	0	8		6	12		18	30
7:45 AM	0		6	6				0	9	0	9		7	10		17	32
8:00 AM	0		9	9				0	10	0	10		6	10		16	35

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Central Point Rd & Warner Parrott Rd

7:00 AM to 8:00 AM
Wednesday, April 05, 2017

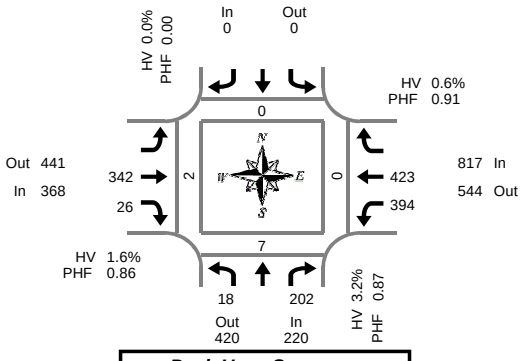


Approach	PHF	HV%	Volume
EB	0.86	2.3%	353
WB	0.82	6.0%	281
NB	0.82	0.9%	329
SB	0.00	0.0%	0
Intersection	0.94	2.9%	963

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:50 PM to 5:50 PM

Central Point Rd & Warner Parrott Rd

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	0		6	0				0	49	2	0	17	36		0	110	0	0	0	0
4:05 PM	0		9	0				0	37	0	0	31	29		0	106	0	1	0	0
4:10 PM	1		22	0				0	23	3	0	29	41		0	119	0	0	0	0
4:15 PM	1		16	1				0	35	4	0	34	38		0	128	0	0	0	0
4:20 PM	1		15	0				0	33	2	0	29	25		0	105	0	0	0	0
4:25 PM	2		11	0				0	28	3	0	21	22		0	87	0	0	0	0
4:30 PM	1		19	0				0	15	0	0	25	28		0	88	0	0	0	0
4:35 PM	1		15	0				0	26	2	0	25	36		0	105	0	1	0	0
4:40 PM	2		21	0				0	23	3	0	25	25		0	99	0	0	0	0
4:45 PM	1		19	0				0	32	4	0	23	43		0	122	0	0	0	0
4:50 PM	3		17	0				0	27	1	0	35	30		0	113	0	1	0	0
4:55 PM	2		24	0				0	24	5	0	40	26		0	121	0	1	0	0
5:00 PM	0		16	0				0	21	2	0	31	37		0	107	0	0	0	0
5:05 PM	1		10	0				0	33	0	0	38	50		1	132	0	2	0	0
5:10 PM	2		14	0				0	15	2	0	36	32		0	101	0	0	0	1
5:15 PM	2		13	0				0	36	4	0	28	39		0	122	0	0	0	1
5:20 PM	2		18	0				0	30	3	0	42	34		0	129	0	0	0	0
5:25 PM	0		19	0				0	33	1	0	26	28		0	107	0	0	0	0
5:30 PM	3		21	0				0	28	4	0	13	33		0	102	0	0	0	0
5:35 PM	1		12	0				0	36	1	0	27	48		0	125	0	0	0	0
5:40 PM	1		20	0				0	26	2	0	33	40		0	122	0	1	0	0
5:45 PM	1		18	0				0	33	1	0	45	26		0	124	0	2	0	0
5:50 PM	1		18	0				0	25	1	0	35	28		0	108	0	0	0	2
5:55 PM	1		13	0				0	30	6	0	21	40		0	111	0	0	0	0
Total Survey	30		386	1				0	698	56	0	709	814		1	2,693	0	9	0	4

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	1		37	0				0	109	5	0	77	106		0	335	0	1	0	0
4:15 PM	4		42	1				0	96	9	0	84	85		0	320	0	0	0	0
4:30 PM	4		55	0				0	64	5	0	75	89		0	292	0	1	0	0
4:45 PM	6		60	0				0	83	10	0	98	99		0	356	0	2	0	0
5:00 PM	3		40	0				0	69	4	0	105	119		1	340	0	2	0	1
5:15 PM	4		50	0				0	99	8	0	96	101		0	358	0	0	0	1
5:30 PM	5		53	0				0	90	7	0	73	121		0	349	0	1	0	0
5:45 PM	3		49	0				0	88	8	0	101	94		0	343	0	2	0	2
Total Survey	30		386	1				0	698	56	0	709	814		1	2,693	0	9	0	4

Peak Hour Summary
4:50 PM to 5:50 PM

By Approach	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott 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	220	420	640	0	0	0	0	0	368	441	809	0	817	544	1,361	1	1,405	0	7	0	2
%HV	3.2%				0.0%				1.6%				0.6%				1.3%				
PHF	0.87				0.00				0.86				0.91				0.95				

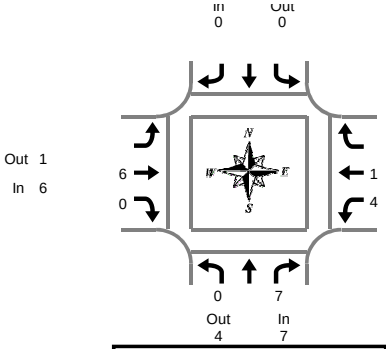
By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	18		202	220				0		342	26	368	394	423		817	1,405
%HV	0.0%	NA	3.5%	3.2%	NA	NA	NA	0.0%	NA	1.8%	0.0%	1.6%	1.0%	0.2%	NA	0.6%	1.3%
PHF	0.75		0.87	0.87				0.00		0.86	0.72	0.86	0.90	0.87		0.91	0.95

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes	T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	15		194	1				0	352	29	0	334	379		0	1,303	0	4	0	0
4:15 PM	17		197	1				0	312	28	0	362	392		1	1,308	0	5	0	1
4:30 PM	17		205	0				0	315	27	0	374	408		1	1,346	0	5	0	2
4:45 PM	18		203	0				0	341	29	0	372	440		1	1,403	0	5	0	2
5:00 PM	15		192	0				0	346	27	0	375	435		1	1,390	0	5	0	4

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Central Point Rd & Warner Parrott Rd

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:50 PM to 5:50 PM

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
4:00 PM	0		1	1				0	2	0	2		0	0		0	3
4:05 PM	0		1	1				0	1	0	1		0	0		0	2
4:10 PM	0		0	0				0	2	0	2		0	1		1	3
4:15 PM	0		0	0				0	0	0	0		1	1		2	2
4:20 PM	0		0	0				0	0	0	0		1	1		2	2
4:25 PM	0		1	1				0	0	0	0		0	0		0	1
4:30 PM	0		3	3				0	0	0	0		0	0		0	3
4:35 PM	0		0	0				0	0	0	0		0	2		2	2
4:40 PM	0		0	0				0	1	0	1		1	0		1	2
4:45 PM	0		0	0				0	1	0	1		1	0		1	2
4:50 PM	0		0	0				0	0	0	0		0	0		0	0
4:55 PM	0		2	2				0	2	0	2		0	0		0	4
5:00 PM	0		1	1				0	0	0	0		0	0		0	1
5:05 PM	0		1	1				0	0	0	0		1	0		1	2
5:10 PM	0		0	0				0	0	0	0		1	0		1	1
5:15 PM	0		0	0				0	0	0	0		0	0		0	0
5:20 PM	0		0	0				0	1	0	1		1	1		2	3
5:25 PM	0		0	0				0	1	0	1		1	0		1	2
5:30 PM	0		2	2				0	1	0	1		0	0		0	3
5:35 PM	0		0	0				0	0	0	0		0	0		0	0
5:40 PM	0		1	1				0	0	0	0		0	0		0	1
5:45 PM	0		0	0				0	1	0	1		0	0		0	1
5:50 PM	0		0	0				0	1	0	1		0	0		0	1
5:55 PM	0		0	0				0	0	0	0		0	0		0	0
Total Survey	0		13	13				0	14	0	14		8	6		14	41

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

Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
4:00 PM	0		2	2				0	5	0	5		0	1		1	8
4:15 PM	0		1	1				0	0	0	0		2	2		4	5
4:30 PM	0		3	3				0	1	0	1		1	2		3	7
4:45 PM	0		2	2				0	3	0	3		1	0		1	6
5:00 PM	0		2	2				0	0	0	0		2	0		2	4
5:15 PM	0		0	0				0	2	0	2		2	1		3	5
5:30 PM	0		3	3				0	1	0	1		0	0		0	4
5:45 PM	0		0	0				0	2	0	2		0	0		0	2
Total Survey	0		13	13				0	14	0	14		8	6		14	41

Heavy Vehicle Peak Hour Summary
4:50 PM to 5:50 PM

By Approach	Northbound Central Point Rd			Southbound Central Point Rd			Eastbound Warner Parrott Rd			Westbound Warner Parrott Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	4	11	0	0	0	6	1	7	5	13	18	18
PHF	0.44			0.00			0.50			0.42			0.56

By Movement	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L		R	Total				Total	T	R	Total		L	T		Total	
Volume	0		7	7				0	6	0	6		4	1		5	18
PHF	0.00		0.44	0.44				0.00	0.50	0.00	0.50		0.50	0.25		0.42	0.56

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

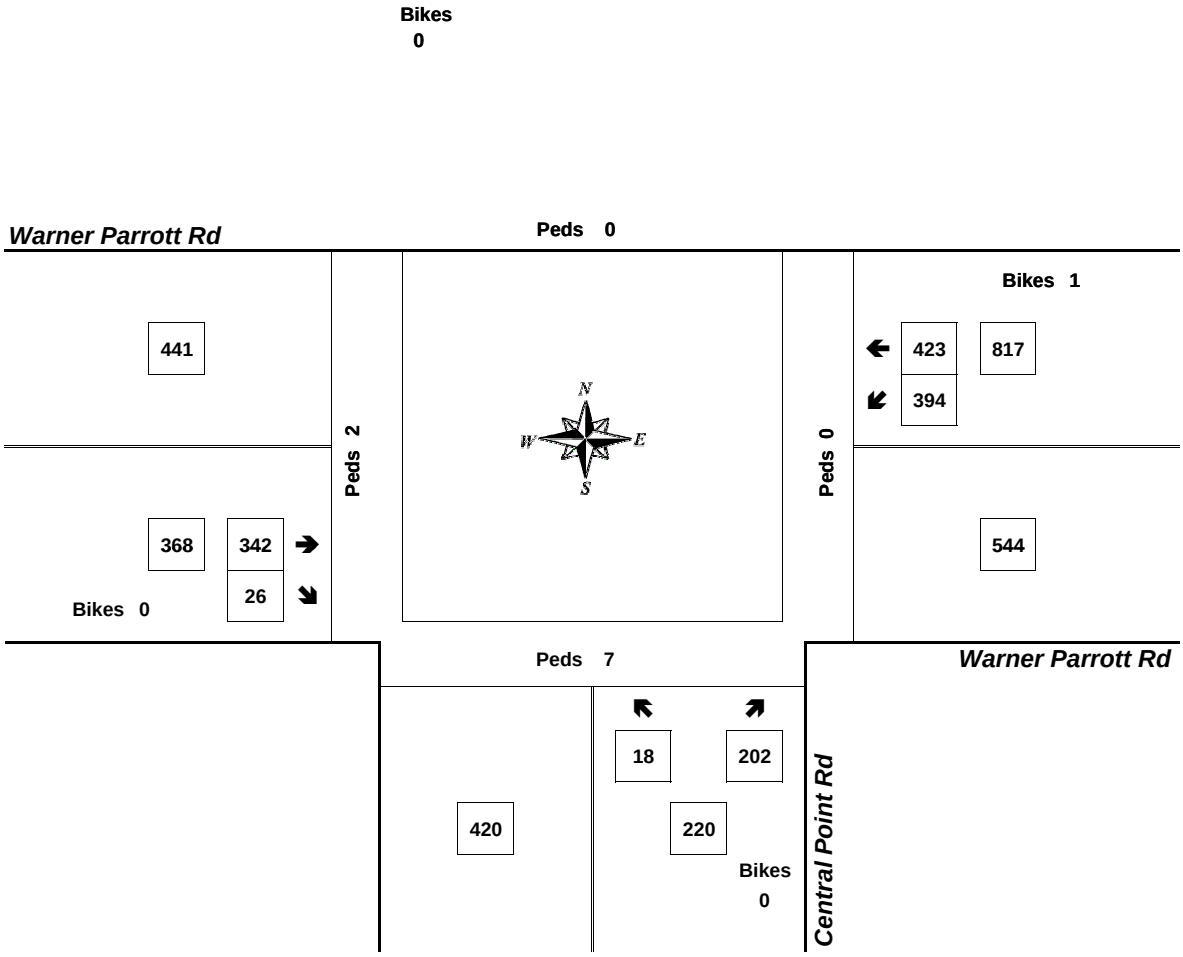
Interval Start Time	Northbound Central Point Rd				Southbound Central Point Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L		R	Total				Total	T	R	Total		L	T		Total	
4:00 PM	0		8	8				0	9	0	9		4	5		9	26
4:15 PM	0		8	8				0	4	0	4		6	4		10	22
4:30 PM	0		7	7				0	6	0	6		6	3		9	22
4:45 PM	0		7	7				0	6	0	6		5	1		6	19
5:00 PM	0		5	5				0	5	0	5		4	1		5	15

Peak Hour Summary

Clay Carney
(503) 833-2740

Central Point Rd & Warner Parrott Rd

4:50 PM to 5:50 PM
Tuesday, April 04, 2017

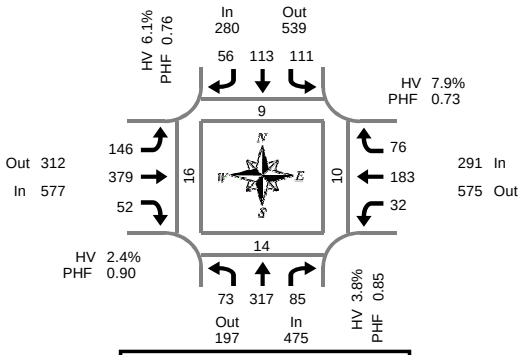


Approach	PHF	HV%	Volume
EB	0.86	1.6%	368
WB	0.91	0.6%	817
NB	0.87	3.2%	220
SB	0.00	0.0%	0
Intersection	0.95	1.3%	1,405

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:40 AM to 8:40 AM

Leland Rd & Warner Parrott Rd

Wednesday, April 05, 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 Warner Parrott Rd				Westbound Warner Parrott Rd				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	3	25	12	0	6	3	3	0	5	46	3	1	4	15	5	0	130	0	0	0	0
7:05 AM	1	24	10	0	7	3	1	0	8	37	7	0	1	12	7	0	118	0	0	0	0
7:10 AM	6	20	3	0	10	4	2	0	7	42	5	0	0	10	6	0	115	0	0	0	0
7:15 AM	6	32	11	0	10	6	2	0	7	40	3	0	1	11	3	0	132	0	0	0	0
7:20 AM	4	38	6	0	10	5	2	0	9	40	7	0	3	15	5	0	144	0	0	0	0
7:25 AM	8	21	8	0	8	1	0	0	7	45	5	0	4	19	4	0	130	0	1	0	0
7:30 AM	9	23	2	0	9	5	3	0	6	38	3	0	3	19	4	0	124	1	0	0	0
7:35 AM	12	27	10	0	2	8	2	0	10	39	3	0	0	14	3	0	130	1	0	0	1
7:40 AM	2	34	10	0	12	10	5	0	11	33	6	0	2	14	4	0	143	0	0	0	0
7:45 AM	9	35	6	0	5	11	2	0	13	30	5	0	1	17	6	0	140	0	0	0	0
7:50 AM	8	23	13	0	7	10	2	0	10	48	4	0	3	19	4	0	151	0	2	0	0
7:55 AM	10	21	11	0	10	6	4	0	5	37	9	0	4	11	7	0	135	0	0	0	0
8:00 AM	6	24	9	0	13	10	4	0	9	35	3	0	5	12	5	0	135	1	1	0	2
8:05 AM	3	23	6	0	6	8	0	1	10	31	5	0	0	13	7	0	112	2	0	0	3
8:10 AM	7	14	7	0	8	10	5	0	12	22	4	0	2	8	6	0	105	0	3	2	0
8:15 AM	11	27	3	0	11	6	4	0	12	34	2	0	2	18	4	0	134	3	3	4	5
8:20 AM	3	33	6	0	6	7	6	0	14	26	0	0	2	24	7	0	134	1	0	0	3
8:25 AM	3	29	7	0	7	7	8	0	13	30	4	0	3	17	8	0	136	0	1	1	0
8:30 AM	6	29	5	0	8	13	7	0	20	33	4	0	6	18	14	0	163	2	3	3	3
8:35 AM	5	25	2	1	18	15	9	0	17	20	6	0	2	12	4	0	135	0	1	0	0
8:40 AM	6	25	5	0	14	15	10	0	5	25	3	0	4	22	8	0	142	1	0	2	0
8:45 AM	5	13	9	0	13	11	4	0	3	40	4	0	2	22	5	0	131	0	3	0	0
8:50 AM	7	15	4	0	10	5	6	0	4	36	3	0	3	22	6	0	121	1	0	0	1
8:55 AM	7	14	7	0	5	12	6	0	9	34	10	0	3	23	5	0	135	0	0	0	0
Total Survey	147	594	172	1	215	191	97	1	226	841	108	1	60	387	137	0	3,175	13	18	12	18

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				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	10	69	25	0	23	10	6	0	20	125	15	1	5	37	18	0	363	0	0	0	0
7:15 AM	18	91	25	0	28	12	4	0	23	125	15	0	8	45	12	0	406	0	1	0	0
7:30 AM	23	84	22	0	23	23	10	0	27	110	12	0	5	47	11	0	397	2	0	0	1
7:45 AM	27	79	30	0	22	27	8	0	28	115	18	0	8	47	17	0	426	0	2	0	0
8:00 AM	16	61	22	0	27	28	9	1	31	88	12	0	7	33	18	0	352	3	4	2	5
8:15 AM	17	89	16	0	24	20	18	0	39	90	6	0	7	59	19	0	404	4	4	5	8
8:30 AM	17	79	12	1	40	43	26	0	42	78	13	0	12	52	26	0	440	3	4	5	3
8:45 AM	19	42	20	0	28	28	16	0	16	110	17	0	8	67	16	0	387	1	3	0	1
Total Survey	147	594	172	1	215	191	97	1	226	841	108	1	60	387	137	0	3,175	13	18	12	18

Peak Hour Summary
7:40 AM to 8:40 AM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott 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	475	197	672	1	280	539	819	1	577	312	889	0	291	575	866	0	1,623	9	14	10	16
%HV	3.8%				6.1%				2.4%				7.9%				4.4%				
PHF	0.85				0.76				0.90				0.73				0.93				

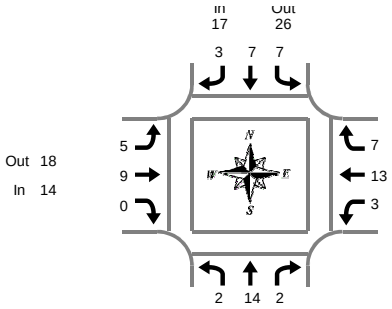
By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	73	317	85	475	111	113	56	280	146	379	52	577	32	183	76	291	1,623
%HV	2.7%	4.4%	2.4%	3.8%	6.3%	6.2%	5.4%	6.1%	3.4%	2.4%	0.0%	2.4%	9.4%	7.1%	9.2%	7.9%	4.4%
PHF	0.68	0.86	0.64	0.85	0.84	0.81	0.58	0.76	0.73	0.79	0.72	0.90	0.67	0.78	0.66	0.73	0.93

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				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	78	323	102	0	96	72	28	0	98	475	60	1	26	176	58	0	1,592	2	3	0	1
7:15 AM	84	315	99	0	100	90	31	1	109	438	57	0	28	172	58	0	1,581	5	7	2	6
7:30 AM	83	313	90	0	96	98	45	1	125	403	48	0	27	186	65	0	1,579	9	10	7	14
7:45 AM	77	308	80	1	113	118	61	1	140	371	49	0	34	191	80	0	1,622	10	14	12	16
8:00 AM	69	271	70	1	119	119	69	1	128	366	48	0	34	211	79	0	1,583	11	15	12	17

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Leland Rd & Warner Parrott Rd

Wednesday, April 05, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:40 AM to 8:40 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
7:10 AM	0	0	0	0	2	0	0	2	0	1	0	1	0	0	1	1	4
7:15 AM	1	0	1	2	1	0	1	2	0	1	0	1	0	1	0	1	6
7:20 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	1	1	3
7:25 AM	2	0	0	2	1	0	0	1	1	1	0	2	1	1	0	2	7
7:30 AM	0	1	0	1	0	2	0	2	0	1	0	1	0	2	1	3	7
7:35 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
7:40 AM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
7:45 AM	0	1	1	2	0	1	0	1	0	0	0	0	0	3	1	4	7
7:50 AM	1	1	0	2	1	0	0	1	0	2	0	2	0	0	1	1	6
7:55 AM	1	0	0	1	1	0	1	2	0	1	0	1	0	0	0	0	4
8:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	3	1	5	6
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
8:10 AM	0	0	0	0	1	0	0	1	1	1	0	2	0	0	1	1	4
8:15 AM	0	1	0	1	1	0	0	1	1	1	0	2	0	0	1	1	5
8:20 AM	0	1	0	1	0	0	0	0	1	1	0	2	0	3	0	3	6
8:25 AM	0	5	1	6	0	0	0	0	1	0	0	1	2	0	0	2	9
8:30 AM	0	3	0	3	0	1	1	2	0	2	0	2	0	1	1	2	9
8:35 AM	0	1	0	1	2	5	0	7	1	1	0	2	0	1	1	2	12
8:40 AM	0	0	0	0	1	0	1	2	0	0	1	1	0	0	0	0	3
8:45 AM	0	0	0	0	0	3	0	3	0	2	1	3	0	2	1	3	9
8:50 AM	1	1	0	2	0	0	0	0	0	0	2	2	0	0	0	0	4
8:55 AM	1	0	0	1	0	0	0	0	1	0	0	1	0	1	0	1	3
Total Survey	7	16	3	26	14	12	5	31	7	17	4	28	4	22	12	38	123

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	2	0	0	2	0	2	0	2	0	1	2	3	7
7:15 AM	3	0	1	4	3	0	1	4	1	3	0	4	1	2	1	4	16
7:30 AM	0	1	0	1	2	2	1	5	0	1	0	1	0	3	1	4	11
7:45 AM	2	2	1	5	2	1	1	4	0	3	0	3	0	3	2	5	17
8:00 AM	0	1	0	1	1	0	0	1	1	1	0	2	1	5	2	8	12
8:15 AM	0	7	1	8	1	0	0	1	3	2	0	5	2	3	1	6	20
8:30 AM	0	4	0	4	3	6	2	11	1	3	1	5	0	2	2	4	24
8:45 AM	2	1	0	3	0	3	0	3	1	2	3	6	0	3	1	4	16
Total Survey	7	16	3	26	14	12	5	31	7	17	4	28	4	22	12	38	123

Heavy Vehicle Peak Hour Summary
7:40 AM to 8:40 AM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound Warner Parrott Rd			Westbound Warner Parrott Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	18	10	28	17	26	43	14	18	32	23	18	41	72
PHF	0.45			0.47			0.58			0.72			0.60

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	14	2	18	7	7	3	17	5	9	0	14	3	13	7	23	72
PHF	0.25	0.39	0.50	0.45	0.88	0.29	0.75	0.47	0.42	0.75	0.00	0.58	0.38	0.65	0.88	0.72	0.60

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	5	3	2	10	9	3	3	15	1	9	0	10	1	9	6	16	51
7:15 AM	5	4	2	11	8	3	3	14	2	8	0	10	2	13	6	21	56
7:30 AM	2	11	2	15	6	3	2	11	4	7	0	11	3	14	6	23	60
7:45 AM	2	14	2	18	7	7	3	17	5	9	1	15	3	13	7	23	73
8:00 AM	2	13	1	16	5	9	2	16	6	8	4	18	3	13	6	22	72

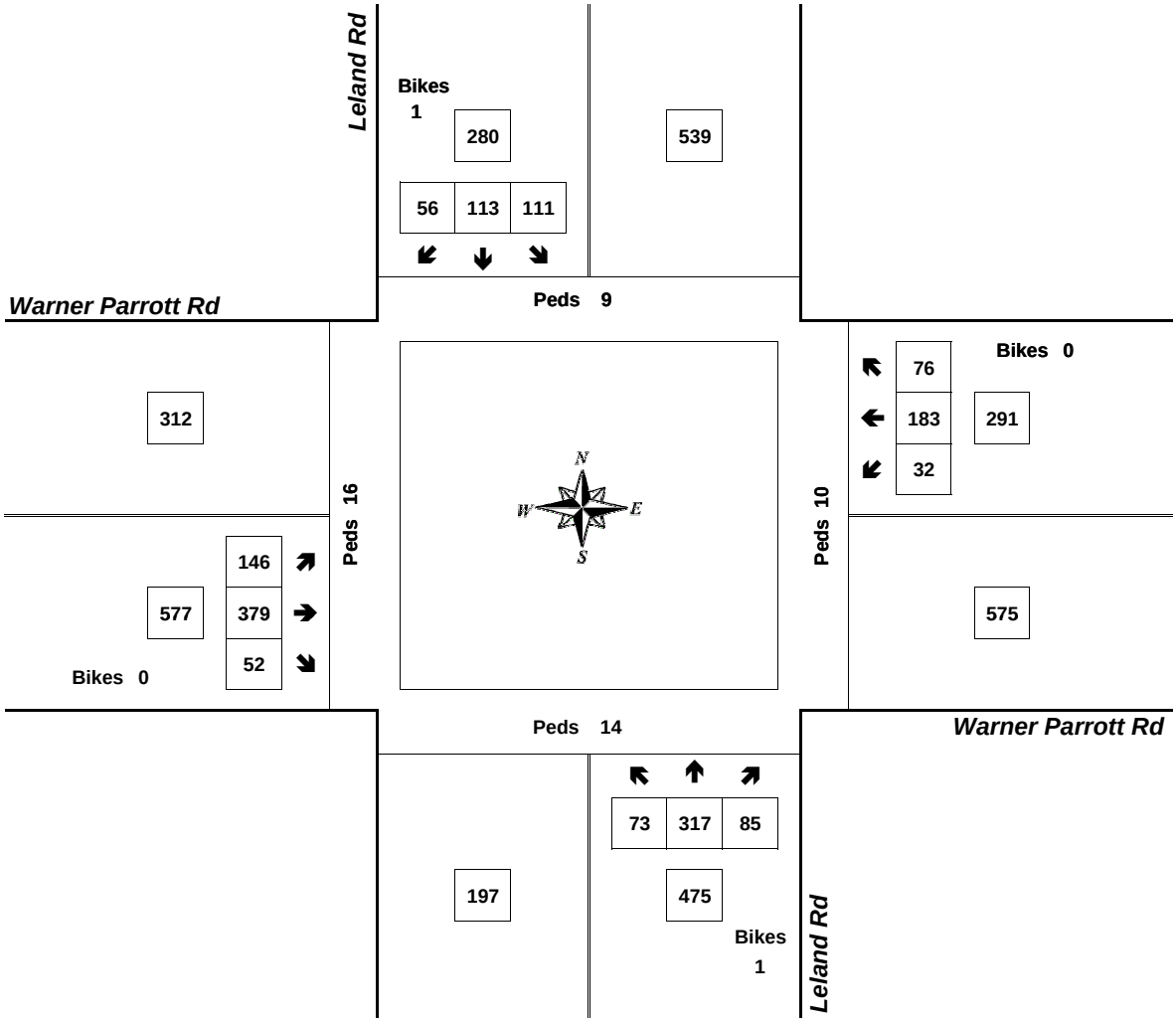
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Leland Rd & Warner Parrott Rd

7:40 AM to 8:40 AM
Wednesday, April 05, 2017

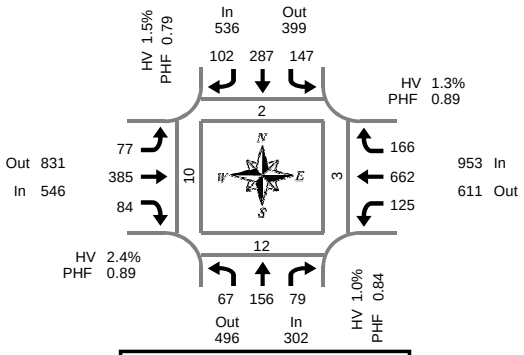


Approach	PHF	HV%	Volume
EB	0.90	2.4%	577
WB	0.73	7.9%	291
NB	0.85	3.8%	475
SB	0.76	6.1%	280
Intersection	0.93	4.4%	1,623

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:45 PM to 5:45 PM

Leland Rd & Warner Parrott Rd

Tuesday, April 04, 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 Warner Parrott Rd				Westbound Warner Parrott Rd				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	7	9	8	0	17	17	8	0	4	38	10	0	4	39	9	0	170	0	0	1	3
4:05 PM	5	8	8	0	6	20	12	0	3	37	9	1	19	45	16	0	188	1	0	0	1
4:10 PM	8	13	5	0	16	24	16	0	6	29	8	0	12	39	10	0	186	0	2	0	0
4:15 PM	5	6	5	0	13	21	11	0	6	38	9	0	13	58	18	0	203	0	3	3	0
4:20 PM	4	10	7	0	11	22	12	0	2	39	3	0	7	38	5	0	160	0	0	1	0
4:25 PM	4	10	2	0	12	19	5	0	5	28	6	0	12	38	7	0	148	1	2	0	0
4:30 PM	9	11	6	0	12	19	5	0	7	25	4	0	12	38	7	0	155	0	0	0	0
4:35 PM	6	19	3	0	3	17	6	0	5	32	5	0	6	56	12	0	170	0	0	0	0
4:40 PM	6	14	4	0	11	31	8	0	5	29	7	0	11	28	11	2	165	0	0	1	0
4:45 PM	3	5	4	0	16	18	6	0	7	35	10	0	4	61	12	0	181	0	1	1	0
4:50 PM	1	21	12	0	11	24	8	0	8	34	5	0	9	60	14	0	207	0	1	0	1
4:55 PM	8	19	9	0	12	18	10	0	8	34	5	0	4	44	20	0	191	0	2	0	2
5:00 PM	7	11	2	0	12	33	12	0	11	19	3	0	13	45	6	0	174	0	0	0	3
5:05 PM	5	12	2	0	10	24	12	1	4	35	9	0	18	78	15	0	224	1	0	0	1
5:10 PM	12	12	6	0	12	37	13	0	2	21	2	0	14	43	20	0	194	1	1	0	1
5:15 PM	8	11	6	0	9	25	12	0	7	38	9	0	10	59	12	0	206	0	1	1	0
5:20 PM	4	17	11	0	20	28	13	0	8	22	11	0	6	52	16	0	208	0	0	0	0
5:25 PM	4	5	7	0	10	16	3	2	9	39	10	0	11	48	10	0	172	0	1	0	0
5:30 PM	4	13	9	0	13	24	2	0	5	35	6	0	13	41	8	0	173	0	1	1	2
5:35 PM	6	21	3	0	9	22	4	0	4	38	6	0	12	69	19	0	213	0	2	0	0
5:40 PM	5	9	8	0	13	18	7	0	4	35	8	0	11	62	14	0	194	0	2	0	0
5:45 PM	9	5	2	0	10	14	10	0	3	36	10	0	12	56	11	0	178	0	0	0	0
5:50 PM	6	17	5	0	6	21	11	0	4	32	10	0	9	44	17	0	182	0	0	0	0
5:55 PM	10	6	11	0	11	28	10	0	4	29	8	0	7	38	9	0	171	0	1	0	0
Total Survey	146	284	145	0	275	540	216	3	131	777	173	1	249	1,179	298	2	4,413	4	20	9	14

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				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	20	30	21	0	39	61	36	0	13	104	27	1	35	123	35	0	544	1	2	1	4
4:15 PM	13	26	14	0	36	62	28	0	13	105	18	0	32	134	30	0	511	1	5	4	0
4:30 PM	21	44	13	0	26	67	19	0	17	86	16	0	29	122	30	2	490	0	0	1	0
4:45 PM	12	45	25	0	39	60	24	0	23	103	20	0	17	165	46	0	579	0	4	1	3
5:00 PM	24	35	10	0	34	94	37	1	17	75	14	0	45	166	41	0	592	2	1	0	5
5:15 PM	16	33	24	0	39	69	28	2	24	99	30	0	27	159	38	0	586	0	2	1	0
5:30 PM	15	43	20	0	35	64	13	0	13	108	20	0	36	172	41	0	580	0	5	1	2
5:45 PM	25	28	18	0	27	63	31	0	11	97	28	0	28	138	37	0	531	0	1	0	0
Total Survey	146	284	145	0	275	540	216	3	131	777	173	1	249	1,179	298	2	4,413	4	20	9	14

Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott 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	302	496	798	0	536	399	935	3	546	831	1,377	0	953	611	1,564	0	2,337	2	12	3	10
%HV	1.0%				1.5%				2.4%				1.3%				1.5%				
PHF	0.84				0.79				0.89				0.89				0.94				

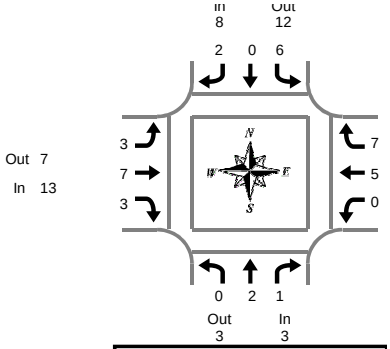
By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	67	156	79	302	147	287	102	536	77	385	84	546	125	662	166	953	2,337
%HV	0.0%	1.3%	1.3%	1.0%	4.1%	0.0%	2.0%	1.5%	3.9%	1.8%	3.6%	2.4%	0.0%	0.8%	4.2%	1.3%	1.5%
PHF	0.67	0.76	0.73	0.84	0.85	0.76	0.67	0.79	0.71	0.86	0.70	0.89	0.69	0.92	0.86	0.89	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				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	66	145	73	0	140	250	107	0	66	398	81	1	113	544	141	2	2,124	2	11	7	7
4:15 PM	70	150	62	0	135	283	108	1	70	369	68	0	123	587	147	2	2,172	3	10	6	8
4:30 PM	73	157	72	0	138	290	108	3	81	363	80	0	118	612	155	2	2,247	2	7	3	8
4:45 PM	67	156	79	0	147	287	102	3	77	385	84	0	125	662	166	0	2,337	2	12	3	10
5:00 PM	80	139	72	0	135	290	109	3	65	379	92	0	136	635	157	0	2,289	2	9	2	7

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Leland Rd & Warner Parrott Rd

Tuesday, April 04, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

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

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				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	0	0	0	0	1	2	3	0	0	1	1	4
4:05 PM	0	1	0	1	1	1	0	2	0	1	1	2	1	0	0	1	6
4:10 PM	0	0	0	0	0	1	1	2	0	1	0	1	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	2	3	4
4:20 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	2	0	2	5
4:25 PM	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
4:30 PM	0	1	2	3	1	0	0	1	1	1	1	3	0	0	0	0	7
4:35 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
4:40 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	1	2	4
4:45 PM	0	0	1	1	0	0	1	1	0	0	1	1	0	0	0	0	3
4:50 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:55 PM	0	1	0	1	1	0	0	1	0	3	0	3	0	0	4	4	9
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
5:05 PM	0	0	0	0	1	0	0	1	1	1	0	2	0	1	0	1	4
5:10 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	1	3
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	2
5:20 PM	0	0	0	0	0	0	1	1	0	0	1	1	0	2	0	2	4
5:25 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	1	1	4
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	1	0	1	0	1	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:55 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Survey	0	6	3	9	12	4	3	19	4	15	9	28	1	10	12	23	79

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

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	1	2	1	4	0	3	3	6	1	0	1	2	13
4:15 PM	0	1	0	1	2	2	0	4	0	1	1	2	0	3	2	5	12
4:30 PM	0	2	2	4	2	0	0	2	1	2	1	4	0	2	1	3	13
4:45 PM	0	2	1	3	1	0	1	2	0	3	1	4	0	0	4	4	13
5:00 PM	0	0	0	0	3	0	0	3	2	1	0	3	0	2	1	3	9
5:15 PM	0	0	0	0	2	0	1	3	0	0	2	2	0	2	1	3	8
5:30 PM	0	0	0	0	0	0	0	0	1	3	0	4	0	1	1	2	6
5:45 PM	0	0	0	0	1	0	0	1	0	2	1	3	0	0	1	1	5
Total Survey	0	6	3	9	12	4	3	19	4	15	9	28	1	10	12	23	79

Heavy Vehicle Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound Leland Rd			Southbound Leland Rd			Eastbound Warner Parrott Rd			Westbound Warner Parrott Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	3	3	6	8	12	20	13	7	20	12	14	26	36
PHF	0.25			0.50			0.54			0.50			0.60

By Movement	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	2	1	3	6	0	2	8	3	7	3	13	0	5	7	12	36
PHF	0.00	0.25	0.25	0.25	0.38	0.00	0.50	0.50	0.38	0.44	0.38	0.54	0.00	0.42	0.35	0.50	0.60

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

Interval Start Time	Northbound Leland Rd				Southbound Leland Rd				Eastbound Warner Parrott Rd				Westbound Warner Parrott Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	6	3	9	6	4	2	12	1	9	6	16	1	5	8	14	51
4:15 PM	0	5	3	8	8	2	1	11	3	7	3	13	0	7	8	15	47
4:30 PM	0	4	3	7	8	0	2	10	3	6	4	13	0	6	7	13	43
4:45 PM	0	2	1	3	6	0	2	8	3	7	3	13	0	5	7	12	36
5:00 PM	0	0	0	0	6	0	1	7	3	6	3	12	0	5	4	9	28

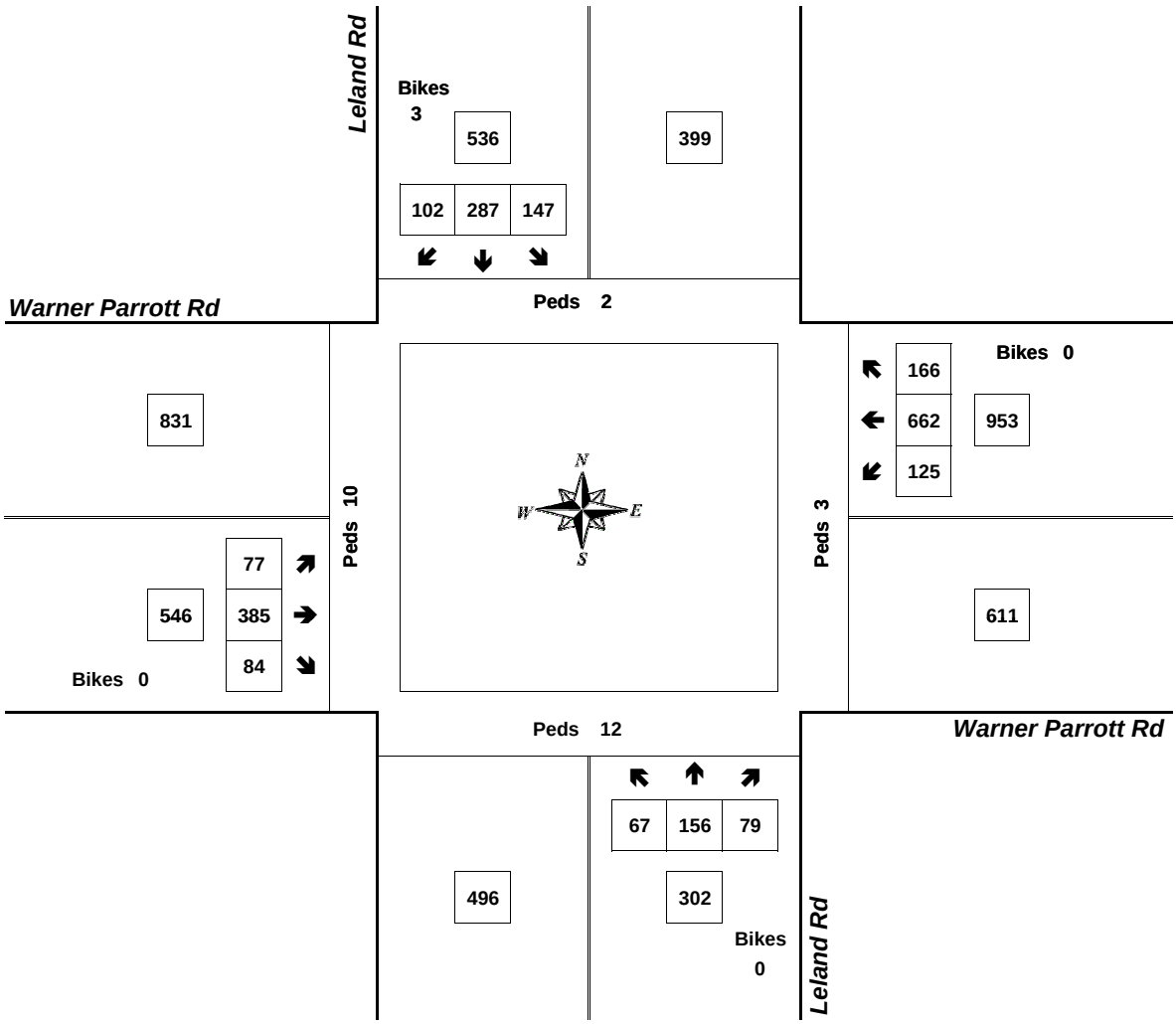
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Leland Rd & Warner Parrott Rd

4:45 PM to 5:45 PM
Tuesday, April 04, 2017



Approach	PHF	HV%	Volume
EB	0.89	2.4%	546
WB	0.89	1.3%	953
NB	0.84	1.0%	302
SB	0.79	1.5%	536
Intersection	0.94	1.5%	2,337

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

TRIP GENERATION CALCULATIONS

Land Use:	**Single-Family Detached Housing**
Land Use Code:	210
Variable:	Dwelling Units
Variable Value:	77

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**15**	**43**	**58**

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**49**	**28**	**77**

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**367**	**367**	**734**

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**382**	**382**	**764**

Source: TRIP GENERATION, Ninth Edition

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 84

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**16**	**47**	**63**

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**53**	**31**	**84**

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**400**	**400**	**800**

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**416**	**416**	**832**

Source: TRIP GENERATION, Ninth Edition

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 73

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**14**	**41**	**55**

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**46**	**27**	**73**

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**347**	**347**	**694**

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**362**	**362**	**724**

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	1.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	19	21	132	2	7	81
Future Vol, veh/h	19	21	132	2	7	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	5
Mvmt Flow	24	26	165	3	9	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	285	166	0	0	168	0
Stage 1	166	-	-	-	-	-
Stage 2	119	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	710	884	-	-	1392	-
Stage 1	868	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	705	884	-	-	1392	-
Mov Cap-2 Maneuver	705	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	905	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	789	1392	-
HCM Lane V/C Ratio	-	-	0.063	0.006	-
HCM Control Delay (s)	-	-	9.9	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	0	5	0	0	2	2	155	0	4	85	43
Future Vol, veh/h	31	0	5	0	0	2	2	155	0	4	85	43
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	40	0	6	0	0	3	3	199	0	5	109	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	353	353	138	355	380	200	165	0	0	200	0	0
Stage 1	148	148	-	205	205	-	-	-	-	-	-	-
Stage 2	205	205	-	150	175	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	606	575	916	604	556	846	1419	-	-	1366	-	-
Stage 1	859	779	-	802	736	-	-	-	-	-	-	-
Stage 2	802	736	-	857	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	601	570	915	596	552	845	1419	-	-	1366	-	-
Mov Cap-2 Maneuver	601	570	-	596	552	-	-	-	-	-	-	-
Stage 1	856	775	-	800	734	-	-	-	-	-	-	-
Stage 2	798	734	-	848	754	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.2	9.3	0.1	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1419	-	-	845	631	1366	-	-
HCM Lane V/C Ratio	0.002	-	-	0.003	0.073	0.004	-	-
HCM Control Delay (s)	7.5	0	-	9.3	11.2	7.6	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	9	3	10	1	20	0	187	2	8	122	3
Future Vol, veh/h	6	9	3	10	1	20	0	187	2	8	122	3
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	3	3	1	1	1	5	5	5
Mvmt Flow	8	11	4	13	1	25	0	237	3	10	154	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	434	417	157	422	417	243	159	0	0	239	0	0
Stage 1	178	178	-	238	238	-	-	-	-	-	-	-
Stage 2	256	239	-	184	179	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.11	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.209	-	-	2.245	-	-
Pot Cap-1 Maneuver	536	530	894	540	525	793	1427	-	-	1310	-	-
Stage 1	828	756	-	763	706	-	-	-	-	-	-	-
Stage 2	753	711	-	815	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	512	525	893	526	520	789	1427	-	-	1304	-	-
Mov Cap-2 Maneuver	512	525	-	526	520	-	-	-	-	-	-	-
Stage 1	827	749	-	763	706	-	-	-	-	-	-	-
Stage 2	724	711	-	793	742	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.7	10.7	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1427	-	-	670	559	1304	-	-
HCM Lane V/C Ratio	-	-	-	0.059	0.041	0.008	-	-
HCM Control Delay (s)	0	-	-	10.7	11.7	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

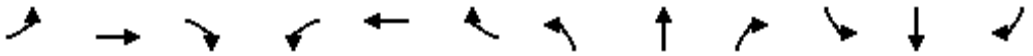
Intersection	
Int Delay, s/veh	5.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	358	6	90	191	43	297
Future Vol, veh/h	358	6	90	191	43	297
Conflicting Peds, #/hr	0	3	3	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	381	6	96	203	46	316

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	390	0	784	197
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	397	-
Critical Hdwy	-	-	4.19	-	7.315	6.915
Critical Hdwy Stg 1	-	-	-	-	6.515	-
Critical Hdwy Stg 2	-	-	-	-	6.115	-
Follow-up Hdwy	-	-	2.257	-	3.5095	3.3095
Pot Cap-1 Maneuver	-	-	1142	-	298	815
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1142	-	278	813
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	NE
HCM Control Delay, s	0	2.7	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	278	813	-	-	1142	-
HCM Lane V/C Ratio	0.165	0.389	-	-	0.084	-
HCM Control Delay (s)	20.5	12.2	-	-	8.4	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	1.9	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	388	54	32	183	76	73	317	85	111	113	56
Future Volume (vph)	147	388	54	32	183	76	73	317	85	111	113	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1671	3151		1736	1750		1703	1681	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1815		1671	3151		1736	1750		1703	1681	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	158	417	58	34	197	82	78	341	91	119	122	60
RTOR Reduction (vph)	0	4	0	0	39	0	0	7	0	0	13	0
Lane Group Flow (vph)	158	471	0	34	240	0	78	425	0	119	169	0
Confl. Peds. (#/hr)	9		14	14		9	16		10	10		16
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.4	32.7		3.0	21.3		8.3	44.5		11.5	47.7	
Effective Green, g (s)	14.4	32.7		3.0	21.3		8.3	44.5		11.5	47.7	
Actuated g/C Ratio	0.13	0.30		0.03	0.19		0.08	0.41		0.10	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	541		45	611		131	709		178	730	
v/s Ratio Prot	c0.09	c0.26		0.02	0.08		0.04	c0.24		c0.07	c0.10	
v/s Ratio Perm												
v/c Ratio	0.68	0.87		0.76	0.39		0.60	0.60		0.67	0.23	
Uniform Delay, d1	45.5	36.5		53.0	38.6		49.1	25.6		47.3	19.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	14.2		51.4	0.4		7.1	3.7		9.1	0.7	
Delay (s)	53.4	50.7		104.4	39.0		56.2	29.3		56.4	20.2	
Level of Service	D	D		F	D		E	C		E	C	
Approach Delay (s)		51.4			46.1			33.4			34.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	7	103	1	19	144
Future Vol, veh/h	1	7	103	1	19	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	5	5	1	1
Mvmt Flow	1	8	123	1	23	171

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	340	123	0	0	124	0
Stage 1	123	-	-	-	-	-
Stage 2	217	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	660	933	-	-	1469	-
Stage 1	907	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	933	-	-	1469	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.1	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	885	1469	-
HCM Lane V/C Ratio	-	-	0.011	0.015	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	2	0	1	0	2	115	0	0	174	25
Future Vol, veh/h	17	0	2	0	1	0	2	115	0	0	174	25
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	21	0	2	0	1	0	2	140	0	0	212	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	374	373	228	374	389	140	244	0	0	140	0	0
Stage 1	228	228	-	145	145	-	-	-	-	-	-	-
Stage 2	146	145	-	229	244	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	587	561	816	587	549	913	1328	-	-	1437	-	-
Stage 1	779	719	-	863	781	-	-	-	-	-	-	-
Stage 2	861	781	-	778	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	585	559	815	584	547	913	1328	-	-	1437	-	-
Mov Cap-2 Maneuver	585	559	-	584	547	-	-	-	-	-	-	-
Stage 1	777	718	-	861	779	-	-	-	-	-	-	-
Stage 2	858	779	-	776	707	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.2	11.6	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1328	-	-	547	603	1437	-	-
HCM Lane V/C Ratio	0.002	-	-	0.002	0.038	-	-	-
HCM Control Delay (s)	7.7	0	-	11.6	11.2	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	9	2	3	1	9	0	129	3	24	197	9
Future Vol, veh/h	5	9	2	3	1	9	0	129	3	24	197	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	1	1	1
Mvmt Flow	6	11	2	4	1	11	0	152	4	28	232	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	453	450	237	455	454	155	242	0	0	156	0	0
Stage 1	294	294	-	155	155	-	-	-	-	-	-	-
Stage 2	159	156	-	300	299	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.14	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.236	-	-	2.209	-	-
Pot Cap-1 Maneuver	520	508	807	519	505	896	1313	-	-	1430	-	-
Stage 1	719	673	-	852	773	-	-	-	-	-	-	-
Stage 2	848	772	-	713	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	504	496	807	500	493	895	1313	-	-	1430	-	-
Mov Cap-2 Maneuver	504	496	-	500	493	-	-	-	-	-	-	-
Stage 1	719	658	-	851	772	-	-	-	-	-	-	-
Stage 2	837	771	-	683	655	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.1	10.1	0	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1313	-	-	719	524	1430	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.036	0.02	-	-
HCM Control Delay (s)	0	-	-	10.1	12.1	7.6	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

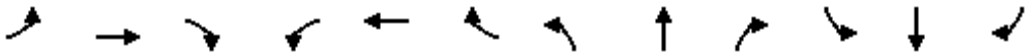
Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	342	26	399	430	18	202
Future Vol, veh/h	342	26	399	430	18	202
Conflicting Peds, #/hr	0	7	7	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	360	27	420	453	19	213

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	394	0	1676	201
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	1295	-
Critical Hdwy	-	-	4.115	-	7.345	6.945
Critical Hdwy Stg 1	-	-	-	-	6.545	-
Critical Hdwy Stg 2	-	-	-	-	6.145	-
Follow-up Hdwy	-	-	2.2095	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1169	-	68	804
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	197	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1169	-	49	799
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	126	-

Approach	EB	WB	NE
HCM Control Delay, s	0	4.7	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	49	799	-	-	1169	-
HCM Lane V/C Ratio	0.387	0.266	-	-	0.359	-
HCM Control Delay (s)	118.9	11.1	-	-	9.8	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	1.4	1.1	-	-	1.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	394	86	125	662	166	67	156	79	147	287	102
Future Volume (vph)	78	394	86	125	662	166	67	156	79	147	287	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1798		1787	3450		1787	1770		1770	1776	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1798		1787	3450		1787	1770		1770	1776	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	83	419	91	133	704	177	71	166	84	156	305	109
RTOR Reduction (vph)	0	10	0	0	27	0	0	22	0	0	15	0
Lane Group Flow (vph)	83	500	0	133	854	0	71	228	0	156	399	0
Confl. Peds. (#/hr)	2		12	12		2	10		3	3		10
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.3	24.6		7.5	26.8		4.4	22.5		8.5	26.6	
Effective Green, g (s)	5.3	24.6		7.5	26.8		4.4	22.5		8.5	26.6	
Actuated g/C Ratio	0.07	0.30		0.09	0.33		0.05	0.28		0.10	0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	545		165	1140		96	491		185	582	
v/s Ratio Prot	0.05	c0.28		c0.07	0.25		0.04	0.13		c0.09	c0.22	
v/s Ratio Perm												
v/c Ratio	0.72	0.92		0.81	0.75		0.74	0.46		0.84	0.68	
Uniform Delay, d1	37.2	27.3		36.1	24.2		37.8	24.3		35.6	23.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.9	20.4		24.1	2.7		25.5	3.1		27.9	6.4	
Delay (s)	57.1	47.6		60.2	26.9		63.2	27.4		63.5	30.0	
Level of Service	E	D		E	C		E	C		E	C	
Approach Delay (s)		49.0			31.3			35.3			39.2	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	22	137	2	7	84
Future Vol, veh/h	1	22	137	2	7	84
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	5
Mvmt Flow	1	28	171	3	9	105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	296	174	0	0	174	0
Stage 1	173	-	-	-	-	-
Stage 2	123	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	699	875	-	-	1385	-
Stage 1	862	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	694	874	-	-	1384	-
Mov Cap-2 Maneuver	694	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.3	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	864	1384	-
HCM Lane V/C Ratio	-	-	0.033	0.006	-
HCM Control Delay (s)	-	-	9.3	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	0	5	2	2	20	2	161	0	7	88	45
Future Vol, veh/h	31	0	5	2	2	20	2	161	0	7	88	45
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	40	0	6	3	3	26	3	206	0	9	113	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	387	374	143	376	402	207	172	0	0	207	0	0
Stage 1	161	161	-	213	213	-	-	-	-	-	-	-
Stage 2	226	213	-	163	189	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	575	560	910	585	540	839	1411	-	-	1358	-	-
Stage 1	846	769	-	794	730	-	-	-	-	-	-	-
Stage 2	781	730	-	844	748	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	551	554	909	576	534	838	1411	-	-	1358	-	-
Mov Cap-2 Maneuver	551	554	-	576	534	-	-	-	-	-	-	-
Stage 1	844	763	-	792	728	-	-	-	-	-	-	-
Stage 2	753	728	-	832	742	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.7	9.9	0.1	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1411	-	-	772	583	1358	-	-
HCM Lane V/C Ratio	0.002	-	-	0.04	0.079	0.007	-	-
HCM Control Delay (s)	7.6	0	-	9.9	11.7	7.7	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	10	1	21	0	195	2	8	127	3
Future Vol, veh/h	5	0	1	10	1	21	0	195	2	8	127	3
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	3	3	1	1	1	5	5	5
Mvmt Flow	6	0	1	13	1	27	0	247	3	10	161	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	451	433	164	432	434	253	166	0	0	249	0	0
Stage 1	184	184	-	248	248	-	-	-	-	-	-	-
Stage 2	267	249	-	184	186	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.11	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.209	-	-	2.245	-	-
Pot Cap-1 Maneuver	522	519	886	532	514	783	1418	-	-	1299	-	-
Stage 1	822	751	-	754	699	-	-	-	-	-	-	-
Stage 2	743	704	-	815	744	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	497	514	885	528	509	779	1418	-	-	1293	-	-
Mov Cap-2 Maneuver	497	514	-	528	509	-	-	-	-	-	-	-
Stage 1	821	744	-	754	699	-	-	-	-	-	-	-
Stage 2	713	704	-	807	737	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.8	10.7	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1418	-	-	669	536	1293	-	-
HCM Lane V/C Ratio	-	-	-	0.061	0.014	0.008	-	-
HCM Control Delay (s)	0	-	-	10.7	11.8	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

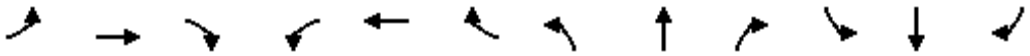
Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	361	10	120	199	45	298
Future Vol, veh/h	361	10	120	199	45	298
Conflicting Peds, #/hr	0	3	3	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	384	11	128	212	48	317

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	398	0	861	200
Stage 1	-	-	-	-	392	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	-	-	4.19	-	6.615	6.915
Critical Hdwy Stg 1	-	-	-	-	5.815	-
Critical Hdwy Stg 2	-	-	-	-	5.415	-
Follow-up Hdwy	-	-	2.257	-	3.5095	3.3095
Pot Cap-1 Maneuver	-	-	1134	-	312	811
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	631	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1134	-	275	809
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NE
HCM Control Delay, s	0	3.2	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	275	809	-	-	1134	-
HCM Lane V/C Ratio	0.174	0.392	-	-	0.113	-
HCM Control Delay (s)	20.8	12.3	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	1.9	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	394	54	35	190	79	76	330	88	115	118	58
Future Volume (vph)	152	394	54	35	190	79	76	330	88	115	118	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1671	3158		1736	1753		1703	1686	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1818		1671	3158		1736	1753		1703	1686	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	163	424	58	38	204	85	82	355	95	124	127	62
RTOR Reduction (vph)	0	6	0	0	60	0	0	11	0	0	20	0
Lane Group Flow (vph)	163	476	0	38	229	0	82	439	0	124	169	0
Confl. Peds. (#/hr)	9		14	14		9	16		10	10		16
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.1	23.2		2.9	16.0		6.8	26.1		7.6	26.9	
Effective Green, g (s)	10.1	23.2		2.9	16.0		6.8	26.1		7.6	26.9	
Actuated g/C Ratio	0.13	0.30		0.04	0.21		0.09	0.34		0.10	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	542		62	649		151	588		166	582	
v/s Ratio Prot	c0.09	c0.26		0.02	0.07		0.05	c0.25		c0.07	0.10	
v/s Ratio Perm												
v/c Ratio	0.71	0.88		0.61	0.35		0.54	0.75		0.75	0.29	
Uniform Delay, d1	32.5	26.0		36.9	26.5		34.0	22.9		34.2	18.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.0	14.9		16.6	0.3		3.9	8.4		16.6	1.3	
Delay (s)	42.4	40.8		53.5	26.8		38.0	31.3		50.8	19.8	
Level of Service	D	D		D	C		D	C		D	B	
Approach Delay (s)		41.2			29.9			32.3			32.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	77.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	7	107	1	20	150
Future Vol, veh/h	1	7	107	1	20	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	5	5	1	1
Mvmt Flow	1	9	134	1	25	188

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	372	134	0	0	135	0
Stage 1	134	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	633	920	-	-	1456	-
Stage 1	897	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	621	920	-	-	1456	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	868	1456	-
HCM Lane V/C Ratio	-	-	0.012	0.017	-
HCM Control Delay (s)	-	-	9.2	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	1	2	1	1	12	2	120	1	23	181	26
Future Vol, veh/h	18	1	2	1	1	12	2	120	1	23	181	26
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	22	1	2	1	1	15	2	146	1	28	221	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	454	446	238	447	462	147	253	0	0	148	0	0
Stage 1	294	294	-	152	152	-	-	-	-	-	-	-
Stage 2	160	152	-	295	310	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	520	510	806	525	500	905	1318	-	-	1427	-	-
Stage 1	719	673	-	855	775	-	-	-	-	-	-	-
Stage 2	847	775	-	718	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	500	497	805	512	487	905	1318	-	-	1427	-	-
Mov Cap-2 Maneuver	500	497	-	512	487	-	-	-	-	-	-	-
Stage 1	717	657	-	853	773	-	-	-	-	-	-	-
Stage 2	830	773	-	698	647	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.3	9.5	0.1	0.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1318	-	-	811	519	1427	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.049	0.02	-	-
HCM Control Delay (s)	7.7	0	-	9.5	12.3	7.6	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	3	1	9	0	134	3	25	205	9
Future Vol, veh/h	4	0	0	3	1	9	0	134	3	25	205	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	1	1	1
Mvmt Flow	5	0	0	4	1	11	0	158	4	29	241	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	470	467	246	465	471	160	252	0	0	162	0	0
Stage 1	305	305	-	160	160	-	-	-	-	-	-	-
Stage 2	165	162	-	305	311	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.14	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.236	-	-	2.209	-	-
Pot Cap-1 Maneuver	507	496	798	511	494	890	1302	-	-	1423	-	-
Stage 1	709	666	-	847	769	-	-	-	-	-	-	-
Stage 2	842	768	-	709	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	491	484	798	501	482	889	1302	-	-	1423	-	-
Mov Cap-2 Maneuver	491	484	-	501	482	-	-	-	-	-	-	-
Stage 1	709	650	-	846	768	-	-	-	-	-	-	-
Stage 2	831	767	-	692	646	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.4	10.1	0	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1302	-	-	715	491	1423	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.01	0.021	-	-
HCM Control Delay (s)	0	-	-	10.1	12.4	7.6	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	-	-

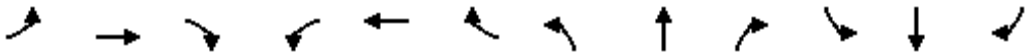
Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	356	32	410	440	19	215
Future Vol, veh/h	356	32	410	440	19	215
Conflicting Peds, #/hr	0	7	7	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	375	34	432	463	20	226

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	415	0	1727	211
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	1328	-
Critical Hdwy	-	-	4.115	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2095	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1148	-	87	792
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	245	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1148	-	54	787
Mov Cap-2 Maneuver	-	-	-	-	54	-
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	153	-

Approach	EB	WB	NE
HCM Control Delay, s	0	4.8	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	787	-	-	1148	-
HCM Lane V/C Ratio	0.37	0.288	-	-	0.376	-
HCM Control Delay (s)	106.6	11.4	-	-	10	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	1.3	1.2	-	-	1.8	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	401	90	130	689	173	76	162	86	153	299	106
Future Volume (vph)	80	401	90	130	689	173	76	162	86	153	299	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1795		1787	3449		1787	1767		1770	1776	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1795		1787	3449		1787	1767		1770	1776	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	427	96	138	733	184	81	172	91	163	318	113
RTOR Reduction (vph)	0	9	0	0	24	0	0	21	0	0	13	0
Lane Group Flow (vph)	85	514	0	138	893	0	81	242	0	163	418	0
Confl. Peds. (#/hr)	2		12	12		2	10		3	3		10
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.7	28.1		9.2	31.6		5.1	23.3		11.1	29.3	
Effective Green, g (s)	5.7	28.1		9.2	31.6		5.1	23.3		11.1	29.3	
Actuated g/C Ratio	0.06	0.31		0.10	0.35		0.06	0.26		0.12	0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	112	562		183	1215		101	458		219	580	
v/s Ratio Prot	0.05	c0.29		c0.08	c0.26		0.05	0.14		c0.09	c0.24	
v/s Ratio Perm												
v/c Ratio	0.76	0.91		0.75	0.74		0.80	0.53		0.74	0.72	
Uniform Delay, d1	41.3	29.6		39.1	25.4		41.8	28.5		37.9	26.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.1	19.5		16.1	2.3		35.2	4.3		12.8	7.5	
Delay (s)	66.4	49.1		55.2	27.7		77.0	32.8		50.8	34.1	
Level of Service	E	D		E	C		E	C		D	C	
Approach Delay (s)		51.6			31.3			43.2			38.7	
Approach LOS		D			C			D			D	

Intersection Summary					
HCM 2000 Control Delay	39.3	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.82				
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	18.0		
Intersection Capacity Utilization	75.7%	ICU Level of Service	D		
Analysis Period (min)	15				
c Critical Lane Group					

Intersection	
Int Delay, s/veh	1.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	23	137	2	9	84
Future Vol, veh/h	1	23	137	2	9	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	25	149	2	10	91

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	261	150	0	0	151	0
Stage 1	150	-	-	-	-	-
Stage 2	111	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	728	896	-	-	1430	-
Stage 1	878	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	723	896	-	-	1430	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	908	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	887	1430	-
HCM Lane V/C Ratio	-	-	0.029	0.007	-
HCM Control Delay (s)	-	-	9.2	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	3	5	2	4	40	2	162	0	11	95	45
Future Vol, veh/h	31	3	5	2	4	40	2	162	0	11	95	45
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	40	4	6	3	5	51	3	208	0	14	122	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	421	394	152	398	423	209	180	0	0	209	0	0
Stage 1	180	180	-	214	214	-	-	-	-	-	-	-
Stage 2	241	214	-	184	209	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	546	546	900	566	526	836	1402	-	-	1356	-	-
Stage 1	826	754	-	793	729	-	-	-	-	-	-	-
Stage 2	767	729	-	822	733	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	503	537	899	552	518	835	1402	-	-	1356	-	-
Mov Cap-2 Maneuver	503	537	-	552	518	-	-	-	-	-	-	-
Stage 1	824	744	-	791	727	-	-	-	-	-	-	-
Stage 2	713	727	-	802	724	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.4	10	0.1	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1402	-	-	776	536	1356	-	-
HCM Lane V/C Ratio	0.002	-	-	0.076	0.093	0.01	-	-
HCM Control Delay (s)	7.6	0	-	10	12.4	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	10	1	39	0	216	2	13	136	3
Future Vol, veh/h	5	0	1	10	1	39	0	216	2	13	136	3
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	3	3	1	1	1	5	5	5
Mvmt Flow	6	0	1	13	1	49	0	273	3	16	172	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	513	484	175	483	485	280	177	0	0	276	0	0
Stage 1	208	208	-	275	275	-	-	-	-	-	-	-
Stage 2	305	276	-	208	210	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.11	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.209	-	-	2.245	-	-
Pot Cap-1 Maneuver	475	486	874	492	481	756	1405	-	-	1270	-	-
Stage 1	799	734	-	729	681	-	-	-	-	-	-	-
Stage 2	709	685	-	792	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	436	479	873	486	474	752	1405	-	-	1264	-	-
Mov Cap-2 Maneuver	436	479	-	486	474	-	-	-	-	-	-	-
Stage 1	798	723	-	729	681	-	-	-	-	-	-	-
Stage 2	658	685	-	780	716	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.7	10.9	0	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1405	-	-	671	476	1264	-	-
HCM Lane V/C Ratio	-	-	-	0.094	0.016	0.013	-	-
HCM Control Delay (s)	0	-	-	10.9	12.7	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

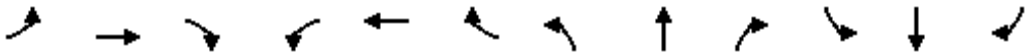
Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	361	11	127	199	47	316
Future Vol, veh/h	361	11	127	199	47	316
Conflicting Peds, #/hr	0	3	3	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	384	12	135	212	50	336

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	399	0	877	201
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	484	-
Critical Hdwy	-	-	4.19	-	6.615	6.915
Critical Hdwy Stg 1	-	-	-	-	5.815	-
Critical Hdwy Stg 2	-	-	-	-	5.415	-
Follow-up Hdwy	-	-	2.257	-	3.5095	3.3095
Pot Cap-1 Maneuver	-	-	1133	-	305	810
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	621	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1133	-	267	808
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NE
HCM Control Delay, s	0	3.4	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	267	808	-	-	1133	-
HCM Lane V/C Ratio	0.187	0.416	-	-	0.119	-
HCM Control Delay (s)	21.6	12.6	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.7	2.1	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	404	54	35	194	79	76	330	88	115	118	61
Future Volume (vph)	160	404	54	35	194	79	76	330	88	115	118	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1819		1671	3161		1736	1753		1703	1681	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1819		1671	3161		1736	1753		1703	1681	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	172	434	58	38	209	85	82	355	95	124	127	66
RTOR Reduction (vph)	0	6	0	0	57	0	0	11	0	0	22	0
Lane Group Flow (vph)	172	486	0	38	237	0	82	439	0	124	171	0
Confl. Peds. (#/hr)	3		14	14		9	16		10	10		16
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.5	23.4		2.9	15.8		6.8	26.0		7.6	26.8	
Effective Green, g (s)	10.5	23.4		2.9	15.8		6.8	26.0		7.6	26.8	
Actuated g/C Ratio	0.13	0.30		0.04	0.20		0.09	0.33		0.10	0.34	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	546		62	641		151	585		166	578	
v/s Ratio Prot	c0.10	c0.27		0.02	0.08		0.05	c0.25		c0.07	0.10	
v/s Ratio Perm												
v/c Ratio	0.72	0.89		0.61	0.37		0.54	0.75		0.75	0.30	
Uniform Delay, d1	32.3	26.0		36.9	26.8		34.1	23.1		34.2	18.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.3	16.2		16.6	0.4		3.9	8.6		16.6	1.3	
Delay (s)	42.6	42.2		53.6	27.1		38.0	31.6		50.9	20.0	
Level of Service	D	D		D	C		D	C		D	B	
Approach Delay (s)		42.3			30.2			32.6			32.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	9	107	1	22	150
Future Vol, veh/h	1	9	107	1	22	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	5	5	1	1
Mvmt Flow	1	11	127	1	26	179

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	128	0	0	129	0
Stage 1	128	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	7.1	6.2	-	-	4.11	-
Critical Hdwy Stg 1	6.1	-	-	-	-	-
Critical Hdwy Stg 2	6.1	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	600	927	-	-	1463	-
Stage 1	881	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	591	927	-	-	1463	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	877	1463	-
HCM Lane V/C Ratio	-	-	0.014	0.018	-
HCM Control Delay (s)	-	-	9.2	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	2.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	4	2	1	2	30	2	122	1	49	183	26
Future Vol, veh/h	18	4	2	1	2	30	2	122	1	49	183	26
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	22	5	2	1	2	37	2	149	1	60	223	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	534	515	240	516	529	149	256	0	0	150	0	0
Stage 1	360	360	-	154	154	-	-	-	-	-	-	-
Stage 2	174	155	-	362	375	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	460	466	804	473	458	903	1315	-	-	1425	-	-
Stage 1	662	630	-	853	774	-	-	-	-	-	-	-
Stage 2	833	773	-	661	621	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	422	442	803	449	434	903	1315	-	-	1425	-	-
Mov Cap-2 Maneuver	422	442	-	449	434	-	-	-	-	-	-	-
Stage 1	660	599	-	851	772	-	-	-	-	-	-	-
Stage 2	795	771	-	622	590	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.7	9.6	0.1	1.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1315	-	-	824	443	1425	-	-
HCM Lane V/C Ratio	0.002	-	-	0.049	0.066	0.042	-	-
HCM Control Delay (s)	7.7	0	-	9.6	13.7	7.6	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	3	1	14	1	159	10	40	233	9
Future Vol, veh/h	4	0	0	3	1	14	1	159	10	40	233	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	1	1	1
Mvmt Flow	5	0	0	4	1	16	1	187	12	47	274	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	578	576	279	570	575	194	285	0	0	200	0	0
Stage 1	374	374	-	196	196	-	-	-	-	-	-	-
Stage 2	204	202	-	374	379	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.14	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.236	-	-	2.209	-	-
Pot Cap-1 Maneuver	430	431	765	435	431	853	1266	-	-	1378	-	-
Stage 1	651	621	-	810	742	-	-	-	-	-	-	-
Stage 2	803	738	-	651	618	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	407	413	765	421	413	852	1266	-	-	1378	-	-
Mov Cap-2 Maneuver	407	413	-	421	413	-	-	-	-	-	-	-
Stage 1	650	596	-	808	741	-	-	-	-	-	-	-
Stage 2	785	737	-	624	593	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.9	10.4	0	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1266	-	-	693	407	1378	-	-
HCM Lane V/C Ratio	0.001	-	-	0.031	0.012	0.034	-	-
HCM Control Delay (s)	7.8	0	-	10.4	13.9	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	-	-

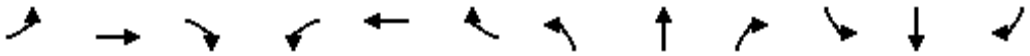
Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	356	35	430	440	21	226
Future Vol, veh/h	356	35	430	440	21	226
Conflicting Peds, #/hr	0	7	7	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	375	37	453	463	22	238

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	419	0	1770	213
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	1370	-
Critical Hdwy	-	-	4.115	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2095	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1145	-	82	790
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	233	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1145	-	49	785
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	141	-

Approach	EB	WB	NE
HCM Control Delay, s	0	5	21.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	49	785	-	-	1145	-
HCM Lane V/C Ratio	0.451	0.303	-	-	0.395	-
HCM Control Delay (s)	128.7	11.6	-	-	10.2	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	1.7	1.3	-	-	1.9	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	407	90	130	700	173	76	162	86	153	299	115
Future Volume (vph)	85	407	90	130	700	173	76	162	86	153	299	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1796		1787	3451		1787	1767		1770	1771	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1796		1787	3451		1787	1767		1770	1771	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	90	433	96	138	745	184	81	172	91	163	318	122
RTOR Reduction (vph)	0	9	0	0	23	0	0	21	0	0	15	0
Lane Group Flow (vph)	90	520	0	138	906	0	81	242	0	163	425	0
Confl. Peds. (#/hr)	2		12	12		2	10		3	3		10
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.9	27.9		8.5	30.5		4.3	25.0		11.2	31.9	
Effective Green, g (s)	5.9	27.9		8.5	30.5		4.3	25.0		11.2	31.9	
Actuated g/C Ratio	0.07	0.31		0.09	0.34		0.05	0.28		0.12	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	553		167	1161		84	487		218	623	
v/s Ratio Prot	0.05	c0.29		c0.08	c0.26		0.05	0.14		c0.09	c0.24	
v/s Ratio Perm												
v/c Ratio	0.78	0.94		0.83	0.78		0.96	0.50		0.75	0.68	
Uniform Delay, d1	41.7	30.5		40.3	27.0		43.1	27.5		38.3	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.5	24.3		27.1	3.5		85.6	3.6		13.1	6.0	
Delay (s)	70.2	54.9		67.4	30.5		128.7	31.1		51.4	31.0	
Level of Service	E	D		E	C		F	C		D	C	
Approach Delay (s)		57.1			35.3			54.1			36.5	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	30	189	3	10	116
Future Vol, veh/h	1	30	189	3	10	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	38	236	4	13	145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	408	238	0	0	240	0
Stage 1	238	-	-	-	-	-
Stage 2	170	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	599	801	-	-	1327	-
Stage 1	802	-	-	-	-	-
Stage 2	860	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	592	801	-	-	1327	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	851	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	792	1327	-
HCM Lane V/C Ratio	-	-	0.049	0.009	-
HCM Control Delay (s)	-	-	9.8	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	43	0	7	3	3	29	3	222	0	6	122	62
Future Vol, veh/h	43	0	7	3	3	29	3	222	0	6	122	62
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	55	0	9	4	4	37	4	285	0	8	156	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	526	506	197	509	545	286	237	0	0	286	0	0
Stage 1	213	213	-	293	293	-	-	-	-	-	-	-
Stage 2	313	293	-	216	252	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	466	472	849	478	449	758	1336	-	-	1270	-	-
Stage 1	794	730	-	719	674	-	-	-	-	-	-	-
Stage 2	702	674	-	791	702	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	436	466	848	469	443	757	1336	-	-	1270	-	-
Mov Cap-2 Maneuver	436	466	-	469	443	-	-	-	-	-	-	-
Stage 1	790	724	-	715	671	-	-	-	-	-	-	-
Stage 2	661	671	-	777	696	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.9	10.7	0.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1336	-	-	680	468	1270	-	-
HCM Lane V/C Ratio	0.003	-	-	0.066	0.137	0.006	-	-
HCM Control Delay (s)	7.7	0	-	10.7	13.9	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	1	14	1	29	0	268	3	11	175	4
Future Vol, veh/h	7	0	1	14	1	29	0	268	3	11	175	4
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	3	3	1	1	1	5	5	5
Mvmt Flow	9	0	1	18	1	37	0	339	4	14	222	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	618	596	225	594	596	346	228	0	0	343	0	0
Stage 1	253	253	-	341	341	-	-	-	-	-	-	-
Stage 2	365	343	-	253	255	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.11	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.209	-	-	2.245	-	-
Pot Cap-1 Maneuver	404	420	819	415	416	695	1346	-	-	1199	-	-
Stage 1	756	701	-	672	637	-	-	-	-	-	-	-
Stage 2	658	641	-	749	695	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	376	414	818	410	410	692	1346	-	-	1193	-	-
Mov Cap-2 Maneuver	376	414	-	410	410	-	-	-	-	-	-	-
Stage 1	755	691	-	672	637	-	-	-	-	-	-	-
Stage 2	619	641	-	738	685	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	14.2	12.1	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1346	-	-	561	403	1193	-	-
HCM Lane V/C Ratio	-	-	-	0.099	0.025	0.012	-	-
HCM Control Delay (s)	0	-	-	12.1	14.2	8.1	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

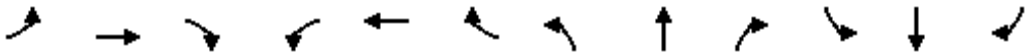
Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	497	9	129	274	62	410
Future Vol, veh/h	497	9	129	274	62	410
Conflicting Peds, #/hr	0	3	3	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	529	10	137	291	66	436

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	541	0	1105	272
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	568	-
Critical Hdwy	-	-	4.19	-	6.615	6.915
Critical Hdwy Stg 1	-	-	-	-	5.815	-
Critical Hdwy Stg 2	-	-	-	-	5.415	-
Follow-up Hdwy	-	-	2.257	-	3.5095	3.3095
Pot Cap-1 Maneuver	-	-	1002	-	220	729
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	568	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1002	-	189	727
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	489	-

Approach	EB	WB	NE
HCM Control Delay, s	0	2.9	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	189	727	-	-	1002	-
HCM Lane V/C Ratio	0.349	0.6	-	-	0.137	-
HCM Control Delay (s)	33.9	17.1	-	-	9.2	-
HCM Lane LOS	D	C	-	-	A	-
HCM 95th %tile Q(veh)	1.5	4	-	-	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	543	75	46	262	109	105	454	122	159	162	80
Future Volume (vph)	209	543	75	46	262	109	105	454	122	159	162	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1814		1671	3150		1736	1749		1703	1679	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1814		1671	3150		1736	1749		1703	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	225	584	81	49	282	117	113	488	131	171	174	86
RTOR Reduction (vph)	0	4	0	0	36	0	0	8	0	0	14	0
Lane Group Flow (vph)	225	661	0	49	363	0	113	611	0	171	246	0
Confl. Peds. (#/hr)	9		14	14		9	16		10	10		16
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.8	42.1		4.2	26.5		12.5	41.8		12.9	42.2	
Effective Green, g (s)	19.8	42.1		4.2	26.5		12.5	41.8		12.9	42.2	
Actuated g/C Ratio	0.17	0.35		0.04	0.22		0.11	0.35		0.11	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	641		58	701		182	614		184	595	
v/s Ratio Prot	c0.13	c0.36		0.03	0.12		0.07	c0.35		c0.10	0.15	
v/s Ratio Perm												
v/c Ratio	0.77	1.03		0.84	0.52		0.62	1.00		0.93	0.41	
Uniform Delay, d1	47.4	38.5		57.1	40.6		51.0	38.5		52.6	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.3	43.8		65.1	0.6		6.4	35.2		45.9	2.1	
Delay (s)	58.6	82.3		122.1	41.3		57.4	73.7		98.5	31.1	
Level of Service	E	F		F	D		E	E		F	C	
Approach Delay (s)		76.3			50.1			71.2			57.9	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	10	148	1	27	206
Future Vol, veh/h	1	10	148	1	27	206
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	5	5	1	1
Mvmt Flow	1	12	176	1	32	245

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	487	177	0	0	177	0
Stage 1	177	-	-	-	-	-
Stage 2	310	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	543	871	-	-	1405	-
Stage 1	859	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	529	871	-	-	1405	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	729	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.4	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	823	1405	-
HCM Lane V/C Ratio	-	-	0.016	0.023	-
HCM Control Delay (s)	-	-	9.4	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	0	3	0	1	0	3	165	0	0	249	36
Future Vol, veh/h	24	0	3	0	1	0	3	165	0	0	249	36
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	29	0	4	0	1	0	4	201	0	0	304	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	536	536	327	536	558	201	349	0	0	201	0	0
Stage 1	327	327	-	209	209	-	-	-	-	-	-	-
Stage 2	209	209	-	327	349	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	459	454	719	459	441	845	1215	-	-	1365	-	-
Stage 1	690	651	-	798	733	-	-	-	-	-	-	-
Stage 2	798	733	-	690	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	456	452	718	455	439	845	1215	-	-	1365	-	-
Mov Cap-2 Maneuver	456	452	-	455	439	-	-	-	-	-	-	-
Stage 1	687	650	-	795	730	-	-	-	-	-	-	-
Stage 2	793	730	-	686	636	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.1	13.2	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1215	-	-	439	475	1365	-	-
HCM Lane V/C Ratio	0.003	-	-	0.003	0.069	-	-	-
HCM Control Delay (s)	8	0	-	13.2	13.1	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	4	1	13	0	185	4	34	282	13
Future Vol, veh/h	6	0	0	4	1	13	0	185	4	34	282	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	1	1	1
Mvmt Flow	7	0	0	5	1	15	0	218	5	40	332	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	647	642	339	640	648	221	347	0	0	223	0	0
Stage 1	419	419	-	221	221	-	-	-	-	-	-	-
Stage 2	228	223	-	419	427	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.14	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.236	-	-	2.209	-	-
Pot Cap-1 Maneuver	387	395	708	391	392	824	1201	-	-	1352	-	-
Stage 1	616	593	-	786	724	-	-	-	-	-	-	-
Stage 2	779	723	-	616	589	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	368	380	708	380	377	823	1201	-	-	1352	-	-
Mov Cap-2 Maneuver	368	380	-	380	377	-	-	-	-	-	-	-
Stage 1	616	571	-	785	723	-	-	-	-	-	-	-
Stage 2	763	722	-	593	567	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	15	11	0	0.8
HCM LOS	C	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1201	-	-	621	368	1352	-	-
HCM Lane V/C Ratio	-	-	-	0.034	0.019	0.03	-	-
HCM Control Delay (s)	0	-	-	11	15	7.7	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	18.7

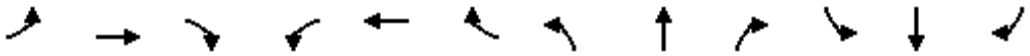
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	490	37	565	606	26	290
Future Vol, veh/h	490	37	565	606	26	290
Conflicting Peds, #/hr	0	7	7	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	516	39	595	638	27	305

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	562	0	2371	284
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	1829	-
Critical Hdwy	-	-	4.115	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2095	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1013	-	33	711
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	138	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1013	-	~ 14	706
Mov Cap-2 Maneuver	-	-	-	-	~ 14	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	57	-

Approach	EB	WB	NE
HCM Control Delay, s	0	6.5	94.9
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	14	706	-	-	1013	-
HCM Lane V/C Ratio	1.955	0.432	-	-	0.587	-
HCM Control Delay (s)	$ 998.9	13.9	-	-	13.5	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	4.1	2.2	-	-	4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	552	120	179	949	238	96	224	113	211	411	146
Future Volume (vph)	110	552	120	179	949	238	96	224	113	211	411	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1794		1787	3448		1787	1769		1770	1774	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1794		1787	3448		1787	1769		1770	1774	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	112	563	122	183	968	243	98	229	115	215	419	149
RTOR Reduction (vph)	0	6	0	0	18	0	0	15	0	0	11	0
Lane Group Flow (vph)	112	679	0	183	1193	0	98	329	0	215	557	0
Confl. Peds. (#/hr)	2		12	12		2	10		3	3		10
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.3	43.5		13.0	47.2		7.5	29.2		16.3	38.0	
Effective Green, g (s)	9.3	43.5		13.0	47.2		7.5	29.2		16.3	38.0	
Actuated g/C Ratio	0.08	0.36		0.11	0.39		0.06	0.24		0.14	0.32	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	650		193	1356		111	430		240	561	
v/s Ratio Prot	0.06	c0.38		c0.10	c0.35		0.05	0.19		c0.12	c0.31	
v/s Ratio Perm												
v/c Ratio	0.82	1.04		0.95	0.88		0.88	0.76		0.90	0.99	
Uniform Delay, d1	54.5	38.2		53.2	33.8		55.8	42.2		51.0	40.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	30.0	47.3		49.4	6.8		50.5	12.2		31.7	36.3	
Delay (s)	84.5	85.6		102.6	40.6		106.3	54.4		82.7	77.2	
Level of Service	F	F		F	D		F	D		F	E	
Approach Delay (s)		85.4			48.7			65.9			78.7	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	66.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	30	189	3	10	116
Future Vol, veh/h	1	30	189	3	10	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	33	205	3	11	126

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	355	207	0	0	209	0
Stage 1	207	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	643	833	-	-	1362	-
Stage 1	828	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	637	833	-	-	1362	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.5	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	825	1362	-
HCM Lane V/C Ratio	-	-	0.041	0.008	-
HCM Control Delay (s)	-	-	9.5	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	43	0	7	3	4	34	3	222	0	8	122	62
Future Vol, veh/h	43	0	7	3	4	34	3	222	0	8	122	62
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	55	0	9	4	5	44	4	285	0	10	156	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	535	511	197	514	550	286	237	0	0	286	0	0
Stage 1	218	218	-	293	293	-	-	-	-	-	-	-
Stage 2	317	293	-	221	257	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	459	469	849	474	446	758	1336	-	-	1270	-	-
Stage 1	789	726	-	719	674	-	-	-	-	-	-	-
Stage 2	698	674	-	786	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	424	462	848	464	439	757	1336	-	-	1270	-	-
Mov Cap-2 Maneuver	424	462	-	464	439	-	-	-	-	-	-	-
Stage 1	785	719	-	715	671	-	-	-	-	-	-	-
Stage 2	650	671	-	771	692	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	14.2	10.8	0.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1336	-	-	678	456	1270	-	-
HCM Lane V/C Ratio	0.003	-	-	0.078	0.141	0.008	-	-
HCM Control Delay (s)	7.7	0	-	10.8	14.2	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.5	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	1	14	1	31	0	273	3	11	177	4
Future Vol, veh/h	7	0	1	14	1	31	0	273	3	11	177	4
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	3	3	1	1	1	5	5	5
Mvmt Flow	9	0	1	18	1	39	0	346	4	14	224	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	628	604	228	602	605	352	230	0	0	349	0	0
Stage 1	255	255	-	347	347	-	-	-	-	-	-	-
Stage 2	373	349	-	255	258	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.11	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.209	-	-	2.245	-	-
Pot Cap-1 Maneuver	398	415	816	410	411	689	1344	-	-	1193	-	-
Stage 1	754	700	-	667	633	-	-	-	-	-	-	-
Stage 2	652	637	-	747	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	368	409	815	405	405	686	1344	-	-	1187	-	-
Mov Cap-2 Maneuver	368	409	-	405	405	-	-	-	-	-	-	-
Stage 1	753	690	-	667	633	-	-	-	-	-	-	-
Stage 2	611	637	-	735	682	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	14.4	12.2	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1344	-	-	559	395	1187	-	-
HCM Lane V/C Ratio	-	-	-	0.104	0.026	0.012	-	-
HCM Control Delay (s)	0	-	-	12.2	14.4	8.1	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

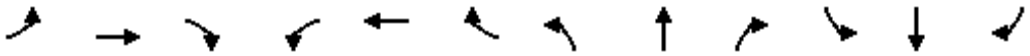
Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	497	9	130	274	62	414
Future Vol, veh/h	497	9	130	274	62	414
Conflicting Peds, #/hr	0	3	3	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	529	10	138	291	66	440

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	541	0	1107	272
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	-	-	4.19	-	6.615	6.915
Critical Hdwy Stg 1	-	-	-	-	5.815	-
Critical Hdwy Stg 2	-	-	-	-	5.415	-
Follow-up Hdwy	-	-	2.257	-	3.5095	3.3095
Pot Cap-1 Maneuver	-	-	1002	-	219	729
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	567	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1002	-	188	727
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	488	-

Approach	EB	WB	NE
HCM Control Delay, s	0	2.9	19.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	727	-	-	1002	-
HCM Lane V/C Ratio	0.351	0.606	-	-	0.138	-
HCM Control Delay (s)	34.2	17.3	-	-	9.2	-
HCM Lane LOS	D	C	-	-	A	-
HCM 95th %tile Q(veh)	1.5	4.1	-	-	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	545	75	46	263	109	105	454	122	159	162	80
Future Volume (vph)	211	545	75	46	263	109	105	454	122	159	162	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1814		1671	3150		1736	1749		1703	1679	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1814		1671	3150		1736	1749		1703	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	227	586	81	49	283	117	113	488	131	171	174	86
RTOR Reduction (vph)	0	4	0	0	36	0	0	8	0	0	14	0
Lane Group Flow (vph)	227	663	0	49	364	0	113	611	0	171	246	0
Confl. Peds. (#/hr)	9		14	14		9	16		10	10		16
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.9	42.1		4.2	26.4		12.5	41.8		12.9	42.2	
Effective Green, g (s)	19.9	42.1		4.2	26.4		12.5	41.8		12.9	42.2	
Actuated g/C Ratio	0.17	0.35		0.04	0.22		0.11	0.35		0.11	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	295	641		58	698		182	614		184	595	
v/s Ratio Prot	c0.13	c0.37		0.03	0.12		0.07	c0.35		c0.10	0.15	
v/s Ratio Perm												
v/c Ratio	0.77	1.03		0.84	0.52		0.62	1.00		0.93	0.41	
Uniform Delay, d1	47.4	38.5		57.1	40.7		51.0	38.5		52.6	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.4	44.7		65.1	0.7		6.4	35.2		45.9	2.1	
Delay (s)	58.8	83.2		122.1	41.5		57.4	73.7		98.5	31.1	
Level of Service	E	F		F	D		E	E		F	C	
Approach Delay (s)		77.0			50.3			71.2			57.9	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	67.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	10	148	1	27	206
Future Vol, veh/h	1	10	148	1	27	206
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	5	5	1	1
Mvmt Flow	1	12	176	1	32	245

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	487	177	0	0	177	0
Stage 1	177	-	-	-	-	-
Stage 2	310	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	543	871	-	-	1405	-
Stage 1	859	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	529	871	-	-	1405	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	729	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.4	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	823	1405	-
HCM Lane V/C Ratio	-	-	0.016	0.023	-
HCM Control Delay (s)	-	-	9.4	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	1	3	0	1	3	3	165	0	4	249	36
Future Vol, veh/h	24	1	3	0	1	3	3	165	0	4	249	36
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	3	3	3
Mvmt Flow	29	1	4	0	1	4	4	201	0	5	304	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	547	545	327	547	567	201	349	0	0	201	0	0
Stage 1	336	336	-	209	209	-	-	-	-	-	-	-
Stage 2	211	209	-	338	358	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.227	-	-
Pot Cap-1 Maneuver	451	449	719	451	436	845	1215	-	-	1365	-	-
Stage 1	682	645	-	798	733	-	-	-	-	-	-	-
Stage 2	796	733	-	681	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	445	445	718	445	432	845	1215	-	-	1365	-	-
Mov Cap-2 Maneuver	445	445	-	445	432	-	-	-	-	-	-	-
Stage 1	679	641	-	795	730	-	-	-	-	-	-	-
Stage 2	788	730	-	673	627	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.4	10.3	0.1	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1215	-	-	682	464	1365	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007	0.074	0.004	-	-
HCM Control Delay (s)	8	0	-	10.3	13.4	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	4	1	14	1	188	4	38	286	13
Future Vol, veh/h	6	0	0	4	1	14	1	188	4	38	286	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	1	1	1
Mvmt Flow	7	0	0	5	1	16	1	221	5	45	336	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	669	663	344	661	668	225	352	0	0	227	0	0
Stage 1	434	434	-	227	227	-	-	-	-	-	-	-
Stage 2	235	229	-	434	441	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.14	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.236	-	-	2.209	-	-
Pot Cap-1 Maneuver	374	384	703	379	382	819	1196	-	-	1347	-	-
Stage 1	604	585	-	780	720	-	-	-	-	-	-	-
Stage 2	773	718	-	604	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	354	367	703	366	365	818	1196	-	-	1347	-	-
Mov Cap-2 Maneuver	354	367	-	366	365	-	-	-	-	-	-	-
Stage 1	603	560	-	778	719	-	-	-	-	-	-	-
Stage 2	755	717	-	579	556	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	15.4	11.1	0	0.9
HCM LOS	C	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1196	-	-	617	354	1347	-	-
HCM Lane V/C Ratio	0.001	-	-	0.036	0.02	0.033	-	-
HCM Control Delay (s)	8	0	-	11.1	15.4	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	20

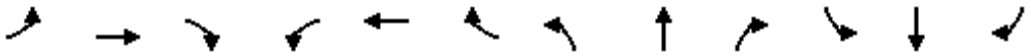
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	490	37	568	606	26	292
Future Vol, veh/h	490	37	568	606	26	292
Conflicting Peds, #/hr	0	7	7	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	140	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	516	39	598	638	27	307

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	562	0	2378	284
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	1836	-
Critical Hdwy	-	-	4.115	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2095	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1013	-	33	711
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	137	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1013	-	~ 13	706
Mov Cap-2 Maneuver	-	-	-	-	~ 13	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	56	-

Approach	EB	WB	NE
HCM Control Delay, s	0	6.5	102.8
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	13	706	-	-	1013	-
HCM Lane V/C Ratio	2.105	0.435	-	-	0.59	-
HCM Control Delay (s)	$ 1100	14	-	-	13.5	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	4.2	2.2	-	-	4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	554	120	190	951	238	96	224	113	211	411	148
Future Volume (vph)	112	554	120	190	951	238	96	224	113	211	411	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1794		1787	3448		1787	1769		1770	1773	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1794		1787	3448		1787	1769		1770	1773	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	114	565	122	194	970	243	98	229	115	215	419	151
RTOR Reduction (vph)	0	6	0	0	18	0	0	15	0	0	11	0
Lane Group Flow (vph)	114	681	0	194	1195	0	98	329	0	215	559	0
Confl. Peds. (#/hr)	2		12	12		2	10		3	3		10
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.6	43.5		12.5	46.4		6.5	29.7		16.3	39.5	
Effective Green, g (s)	9.6	43.5		12.5	46.4		6.5	29.7		16.3	39.5	
Actuated g/C Ratio	0.08	0.36		0.10	0.39		0.05	0.25		0.14	0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	650		186	1333		96	437		240	583	
v/s Ratio Prot	0.06	c0.38		c0.11	c0.35		0.05	0.19		c0.12	c0.32	
v/s Ratio Perm												
v/c Ratio	0.81	1.05		1.04	0.90		1.02	0.75		0.90	0.96	
Uniform Delay, d1	54.3	38.2		53.8	34.5		56.8	41.8		51.0	39.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.7	48.2		77.8	8.2		97.6	11.4		31.7	28.5	
Delay (s)	82.0	86.5		131.5	42.7		154.4	53.1		82.7	67.9	
Level of Service	F	F		F	D		F	D		F	E	
Approach Delay (s)		85.9			55.0			75.6			72.0	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	68.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

CENTRAL POINT RD at SKELLENGER WY, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

No Rows to Display

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

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

CENTRAL POINT RD at SKELLENGER WY, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

No Rows to Display

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

CITY OF OREGON CITY, CLACKAMAS COUNTY

CENTRAL POINT RD at WARNER-PARROTT RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

Total crash records: 7

SER# / INVEST	S P E D	A L C	R U G S	S C H L	W O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01895	N	N	N	N	N	05/17/2014	16	CENTRAL POINT RD	INTER	3-LEG	N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										040	03,32
CITY						SA	0	WARNER-PARROTT RD	NE		STOP SIGN	N	DRY	FIX		PRVTE	SW-NE									000	040	00
						3A			05	0		N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y OR<25		021,052,081	000		03,32
02233	N	N	N			06/11/2014	16	CENTRAL POINT RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NO RPT						WE	0	WARNER-PARROTT RD	SE		L-GRN-SIG	N	DRY	REAR		PRVTE	SE-NW									000		00
						4P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	53	M	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	SE-NW									012		00
																PSNGR CAR		01	DRVR	INJC	45	F	OR-Y OR<25		000	000		00
03639	N	N	N	N	N	10/01/2012	16	CENTRAL POINT RD	INTER	3-LEG	N	N	CLR	BIKE													110	02
CITY						MO	0	WARNER-PARROTT RD	SW		UNKNOWN	N	DRY	TURN			-											
						3P			05	0		N	DAY	INJ			STRGHT NW SE	01	BIKE	INJB	47	M		I XWK?	000	034		00
															01	NONE 0	TURN-L											
																PRVTE	SE-SW									000	110	00
																PSNGR CAR		01	DRVR	NONE	28	M	OR-Y OR<25		027,008	000		02
05468	N	N	N			12/18/2015	16	CENTRAL POINT RD	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE						FR	0	WARNER-PARROTT RD	SW		STOP SIGN	N	WET	REAR		PRVTE	SW-NE									000		00
						4P			06	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	SW-NE									011		00
																PSNGR CAR		01	DRVR	NONE	00	F	UNK OR<25		000	000		00
00149	N	N	N			01/12/2015	16	CENTRAL POINT RD	INTER	3-LEG	N	N	CLR	O-1STOP	01	NONE 0	BACK											10
NO RPT						MO	0	WARNER-PARROTT RD	NW		UNKNOWN	N	DRY	BACK		PRVTE	SE-NW									000		00
						11A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR<25		011	000		10
															02	NONE 0	STOP											
																PRVTE	NW-SE									011		00
																PSNGR CAR		01	DRVR	NONE	38	M	OR-Y OR<25		000	000		00
03616	N	N	N			09/25/2013	16	CENTRAL POINT RD	INTER	3-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	TURN-L											02
NONE						WE	0	WARNER-PARROTT RD	CN		STOP SIGN	N	DRY	TURN		PRVTE	SW-NW									015		00
						4P			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y UNK		028	000		02
															02	NONE 0	STRGHT											
																PRVTE	NW-SE									000		00
																PSNGR CAR		01	DRVR	NONE	58	F	OR-Y OR<25		000	000		00
00842	N	N	N			03/07/2015	16	CENTRAL POINT RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
NO RPT						SA	0	WARNER-PARROTT RD	CN		STOP SIGN	N	DRY	TURN		PRVTE	SW-NW									015		00
						11A			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	41	M	OR-Y OR<25		028	000		02
															02	NONE 0	STRGHT											
																PRVTE	NW-SE									000		00

CITY OF OREGON CITY, CLACKAMAS COUNTY

CENTRAL POINT RD at WARNER-PARROTT RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

Total crash records: 7

SER# / INVEST	S P E D	A L C	D R U G S	S C H L	W O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																PSNGR CAR		01	DRVR	INJC	21	M	OR-Y OR<25		000	000	00

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

CENTRAL POINT RD at WARNER-PARROTT 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
YEAR: 2015														
BACKING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
REAR-END	0	0	1	1	0	0	0	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2015 TOTAL	**0**	**1**	**2**	**3**	**0**	**1**	**0**	**2**	**1**	**2**	**1**	**3**	**0**	**0**
YEAR: 2014														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	0	1	1	0	1
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2014 TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**2**	**0**	**1**	**1**	**2**	**0**	**1**
YEAR: 2013														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2013 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**
YEAR: 2012														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2012 TOTAL	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**
FINAL TOTAL	**0**	**3**	**4**	**7**	**0**	**3**	**0**	**6**	**1**	**5**	**2**	**7**	**0**	**1**

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

LELAND RD at WARNER-PARROTT RD, City of Oregon City, Clackamas County, 01/01/2011 to 12/31/2015

Total crash records: 2

SER# / INVEST	S P E D	A L C	D R S G	S W U H	C O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00720	N	N	N			03/02/2013	16	LELAND RD	INTER	CROSS	N	N	RAIN	PED	01	NONE 0	TURN-R											02
CITY						SA	0	WARNER-PARROTT RD	SW		TRF SIGNAL	N	WET	PED		PRVTE	W -S									000		00
						8P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	42	M	OR-Y OR<25		029	000		02
																	- STRGHT W E	01	PED	INJB	14	M		I XWLK	000	035		00
04120	N	N	N			10/26/2013	16	LELAND RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
NONE						SA	0	WARNER-PARROTT RD	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	S -N									000		00
						5P			02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y OR<25		000	000		00
															02	NONE 0	STRGHT											
																PRVTE	E -W									000		00
																PSNGR CAR		01	DRVR	NONE	16	F	OR-Y OR<25		020	000		04

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LELAND RD at WARNER-PARROTT 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
YEAR: 2013														
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
YEAR 2013 TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**2**	**0**	**0**
FINAL TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**2**	**0**	**0**

Exhibit F: Public Facilities Memorandum

TUALATIN · VANCOUVER · SALEM-KEIZER
12965 SW HERMAN RD., SUITE 100 · TUALATIN, OR 97062
AKS ENGINEERING & FORESTRY
WWW.AKS-ENG.COM
P: (503) 563-6151 F: (503) 563-6152

April 3, 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 a Zone Change on Properties located along Central Point Road (identified as Clackamas County 3 2E 07C 1001, 1100, 1180, and 1291 and 3 1E 12D 1700, and 1790)

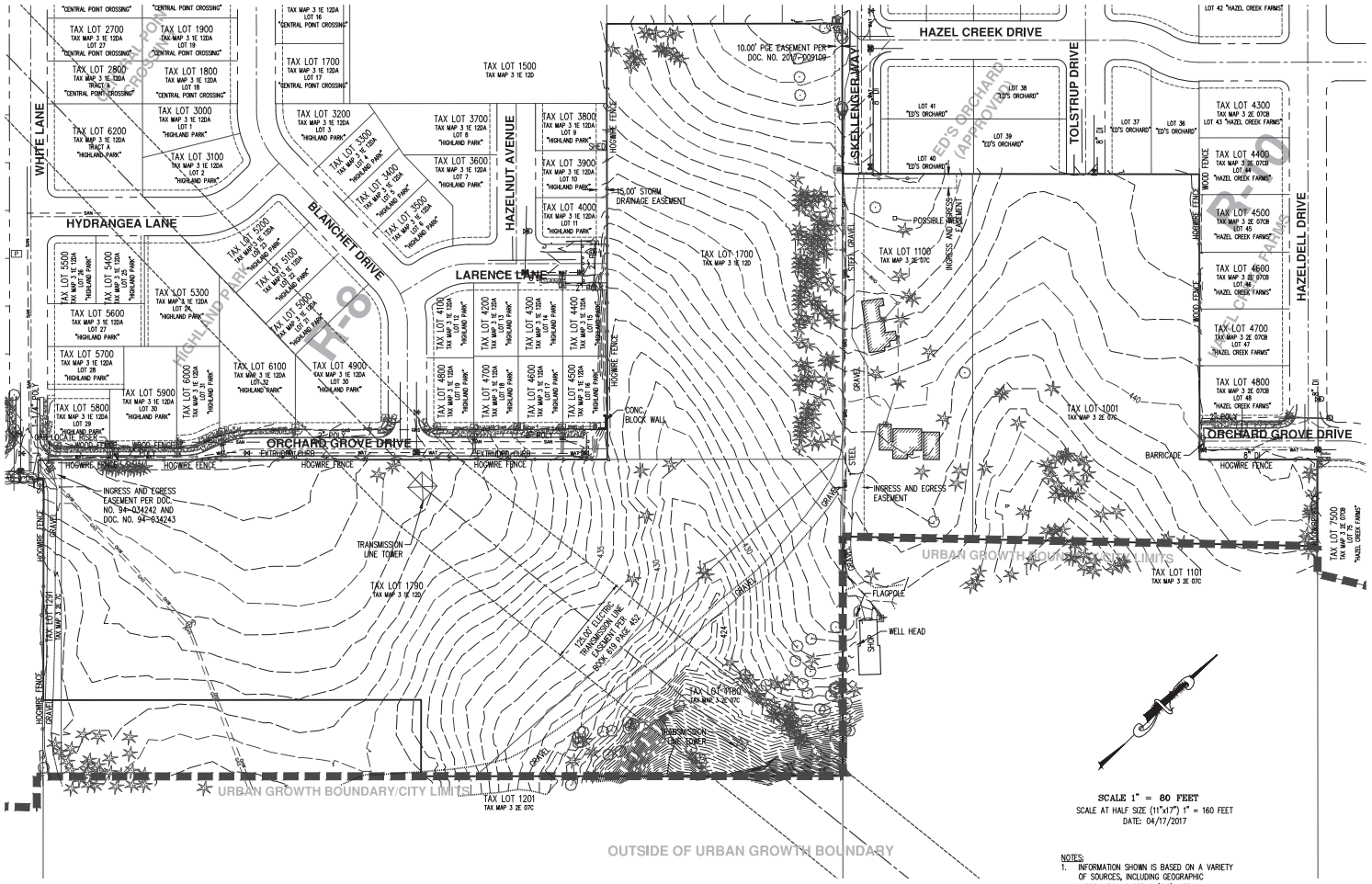
City Planning Department Staff:

AKS has performed significant engineering due diligence for the subject properties 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 zone change of these properties.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC

Montgomery B. Hurley – PE, PLS
Principal

Exhibit G: Neighborhood Meeting Documentation



SCALE 1" = 80 FEET
SCALE AT HALF SIZE (11"x17") 1" = 160 FEET
DATE: 04/17/2017

NOTES:
1. INFORMATION SHOWN IS BASED ON A VARIETY OF SOURCES, INCLUDING GEOGRAPHIC INFORMATION SYSTEMS (GIS), AERIAL PHOTOGRAPHS, AS-BUILT INFORMATION, AND TAX ASSESSOR MAP INFORMATION.
2. DIMENSIONS SHOWN ARE APPROXIMATE.

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD STE 100
TUALATIN, OR 97062
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aks-eng.com

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WHEELER FARMS

OREGON CITY — OREGON

TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 — CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

PRELIMINARY EXISTING CONDITION PLAN

DESIGNED BY:
DRAWN BY:
CHECKED BY: MBH
SCALE: AS NOTED
DATE: 05/16/2017

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

JOB NUMBER 5621

SHEET 1

AKS DRAWING FILE: 5621 NEIGHBOR PLANS.DWG | LAYOUT: 1

SCALE 1" = 80 FEET
SCALE AT HALF SIZE (11"x17") 1" = 160 FEET
DATE: 04/17/2017

NOTES:
1. INFORMATION SHOWN IS BASED ON A VARIETY OF SOURCES, INCLUDING GEOGRAPHIC INFORMATION SYSTEMS (GIS), AERIAL PHOTOGRAPHS, AS-BUILT INFORMATION, AND TAX ASSESSOR MAP INFORMATION.
2. DIMENSIONS SHOWN ARE APPROXIMATE.

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WHEELER FARMS

OREGON CITY OREGON

TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

PRELIMINARY SUBDIVISION LAYOUT

DESIGNED BY:
DRAWN BY:
CHECKED BY: MBH
SCALE: AS NOTED
DATE: 05/16/2017

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

JOB NUMBER 5621

SHEET 2

AKS DRAWING FILE: 5621 NEIGHBOR PLANS.DWG | LAYOUT: 2

AKS DRAWING FILE: 5621 NEIGHBOOR PLANS.DWG | LAYOUT: 3

WHEELER FARMS

OREGON CITY TAX LOTS 1700, 1100, 1291, 1001, 1790, 1180 **OREGON** CLACKAMAS CO. TAX MAPS 3S2E07C, 3S1E12D

AERIAL PHOTO PLAN

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED BY:
DRAWN BY: MRH
CHECKED BY:
SCALE: AS NOTED
DATE: 05/16/2017

REVISIONS

JOB NUMBER 5621

SHEET 3

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Date: 5-18-17		South End Neighborhood Association Meeting			
#	Name:	Address:		Phone #:50	
1	Harryette Shuell	Street:	19067 Maywood St	Home:	503-722-8467
		Email:	shuell8055@comcastnet	Cell:	
2	LEE + SUE MULLER	Street:	11952 HAZEL FARM RD	Home:	
		Email:	harleylee@juno.com	Cell:	
3	CHRIS GOODELL	Street:	12965 SW HERMAN ROAD TUALATIN	Home:	
		Email:	chris g@aks-eng.com	Cell:	
4	Tom O'Brien	Street:	19364 HAZELGROVE DR	Home:	503-723-3334
		Email:	HAVE IT	Cell:	
5	JOHN WILLIAMS	Street:	1176 SUNNY LANE	Home:	
		Email:		Cell:	
6	Brenda Wheeler	Street:	19725 Orchard Grove Drive	Home:	need email
		Email:	brendaspidelwheeler@gmail.com	Cell:	
7	Joe Wheeler	Street:	19725 Orchard Grove Dr.	Home:	
		Email:	joe.e.wheeler@comcast.net	Cell:	503.260.6104
8	Renee Buell	Street:	11835 Partlow R	Home:	208-870-1443
		Email:	reneebuell@gmail.com	Cell:	
9	Mike Day	Street:		Home:	
		Email:	Mday@orcity.org	Cell:	(503) 793-2202

Date: 5-18-17		South End Neighborhood Association Meeting			
#	Name:	Address:		Phone #:	
1	TONY KONKOL	Street:	OREGON CITY - CITY HALL	Home:	503 657.0891
		Email:		Cell:	
2	Charity Smith	Street:	19310 Tower Hill Drive	Home:	503-735-5741
		Email:		Cell:	
3	Judy Peitz	Street:	19380 Hazel Grove Dr.	Home:	503-655-7977
		Email:		Cell:	
4	Jim Peitz	Street:	" " " "	Home:	"
		Email:	jimpeitz@gmail.com.	Cell:	
5	Gary Johnson	Street:	18813 PAULSON DR	Home:	
		Email:		Cell:	
6	Don Wheeler	Street:	19898 S. White Lane	Home:	
		Email:		Cell:	
7	Joyce Clark	Street:	18649 Joyce Ct	Home:	
		Email:	ella2luv2@q.com	Cell:	503-313-7338
8	Gary Fergus	Street:		Home:	
		Email:		Cell:	
9	Kevin Ertel	Street:	888 South End Rd	Home:	
		Email:	kpertel@hotmail.com	Cell:	

Date: 5-18-17		South End Neighborhood Association Meeting			
#	Name:	Address:		Phone #:	
1	KEITH/CHERYL STRICKLAND	Street:	18967 PAULSEN DR., O.C	Home:	
		Email:		Cell:	
2	MJ Militante	Street:	PO Box 601 OC	Home:	
		Email:	militante@att.net	Cell:	
3		Street:		Home:	
		Email:		Cell:	
4		Street:		Home:	
		Email:		Cell:	
5		Street:		Home:	
		Email:		Cell:	
6		Street:		Home:	
		Email:		Cell:	
7		Street:		Home:	
		Email:		Cell:	
8		Street:		Home:	
		Email:		Cell:	
9		Street:		Home:	
		Email:		Cell:	

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May 30, 2017

Neighborhood Meeting Minutes: Wheeler Farms Subdivision
19566 Central Point Road, Oregon City, OR

Meeting Date: May 19, 2017
Time: 7:00 PM
Location: Oregon City United Methodist Church, 18955 South End Road, Oregon City, OR

The Applicant attended a South End Neighborhood Association meeting to present details to neighbors and community members in preparation for the submission of land use applications for a zone change and subdivision. Chris Goodell, with AKS Engineering & Forestry, was present. An overview of the project location, current and future zoning, lot sizes, lot configuration, public utilities, public streets, open space tracts, and recent surrounding developments was provided. The planned applications and a general process and timeframe for the land use reviews and construction permitting process were described. Sign-in sheets and business cards were provided.

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

- Other projects in the area
- Traffic/ construction traffic on S. Central Point Road
- Estimated price of future homes
- Growth in area over time
- Off-site intersections
- Wheeler family history (provided by Don Wheeler)

The meeting concluded at approximately 8:00 p.m.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC

Chris Goodell, AICP, LEED[AP]

Exhibit H: City Pre-Application Conference Summary

OREGON CITY

Pre-Application Conference Notes

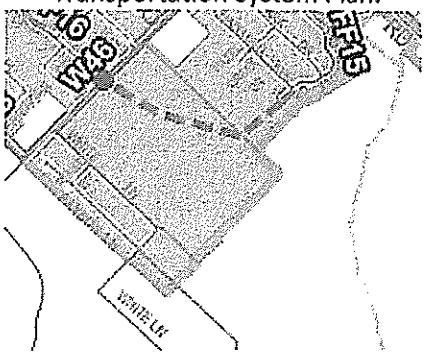
(PA 16-54, December 6, 2016)

These are preliminary notes based on the application submitted.

Proposed Project: Approximately 83± lot subdivision and rezone

General Information:

- Location: Located in the vicinity southeast of Orchard Grove Dr.
  Clackamas County Map 3-2E-07C, tax lots: 101, 1291, 1100, 1180
  Clackamas County Map 3-1E-12D, tax lots: 1700 and 1790
- Zoning: R-10 Single-Family Dwelling District
- Overlay Districts: Geologic Hazards, Natural Resource Overlay District
- Street Designations: Central Point RD: Collector
- Transportation System Plan:



Planning Review and Application Fees:
The Planning Division fees for this application are anticipated to increase on January 1st. The 2017 Planning applications and fees include-

- Subdivision: $4,136 plus $344 per lot
- Mailing Labels: $15 – or provided by applicant
- Transportation Study: $1,365 + $682 for Large Study Area/Near Key Corridor + $2,046 for Zone Change
- Zone Change: $2,798
- Natural Resource Overlay District: $1,959
- Property Line Adjustment: $1,159
- Geologic Hazards Review: See Public Works Notes

Review Process:

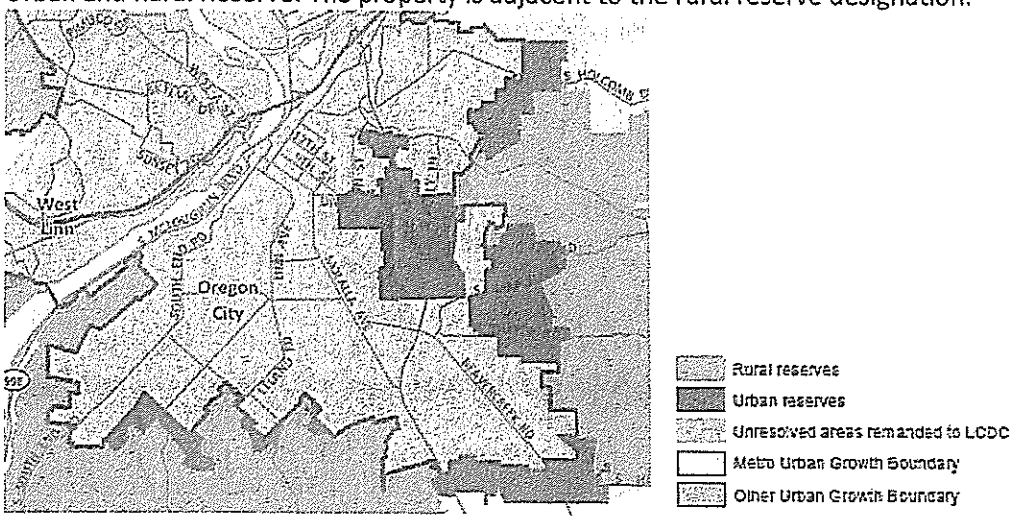
Though the Subdivision itself is a **Type II** application the Zone Change is a **Type IV** application, and thus the combined applications are subject to a Type IV process. Type IV decisions include only quasi-judicial plan amendments and zone changes. These applications involve the greatest amount of discretion and evaluation of subjective approval standards and must be heard by the city commission for final action. The process for these land use decisions is controlled by ORS 197.763. At the evidentiary hearing held

before the planning commission, all issues are addressed. If the planning commission denies the application, any party with standing (i.e., anyone who appeared before the planning commission either in person or in writing within the comment period) may appeal the planning commission denial to the city commission. If the planning commission denies the application and no appeal has been received within fourteen days of the issuance of the final decision then the action of the planning commission becomes the final decision of the city. If the planning commission votes to approve the application, that decision is forwarded as a recommendation to the city commission for final consideration. In either case, any review by the city commission is on the record and only issues raised before the planning commission may be raised before the city commission. The city commission decision is the city's final decision and is subject to review by the land use board of appeals (LUBA) within twenty-one days of when it becomes final.

Subdivision Layout

- The proposed layout generally complies with the Planning requirements within the Oregon City Municipal Code.
- The right-of-way adjacent to lot 62 and 72 is awkward and should be contain a wider width.
- Submit documentation identifying the lot averages the minimum square footage of the zoning designation and that no lot is less than 20% of that size.. The lot widths, depths, and frontage appear to comply with minimums.
- A tree removal and mitigation plan is required which must include the lot setbacks and the caliper of the trees to be removed as well as the species, caliper and location of the mitigation trees. The tree mitigation plan report shall be prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arborculture. Provide sufficient documentation if utilizing the following exemption in 17.41.040:

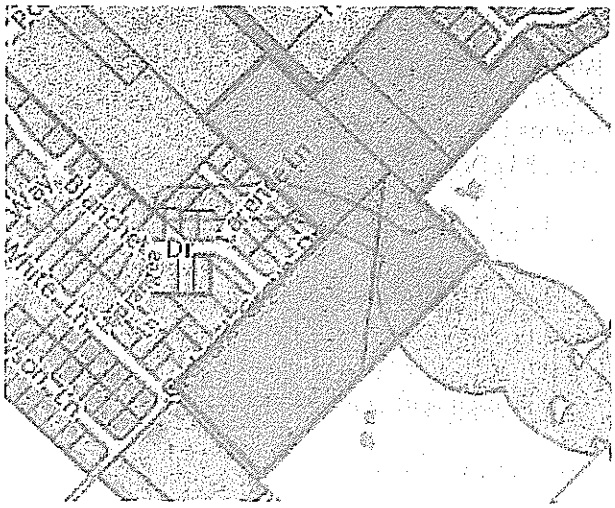
  These standards are not intended to regulate farm and forest practices as those practices are defined under ORS 30.930. Farm or forest resources. An applicant for development may claim exemption from compliance with these standards if the development site containing the regulated grove or trees was a designated farm or forest use, tree farm, Christmas tree plantation, or other approved timber use within one year prior to development application. "Forest practices" and "forestlands" as used in this subsection shall have the meaning as set out in ORS 30.930.
- Provide additional details about Tract B. Will this include a heritage tree site?
- A street tree plan including one for every 35' of frontage is required in accordance with OCMC 12.08. Please provide total frontage length in the application to demonstrate the number of street trees is correct.
- Identify all existing structures to remain and demonstrate compliance with required setbacks, lot coverage, etc.
- Urban and Rural Reserve: The property is adjacent to the rural reserve designation.



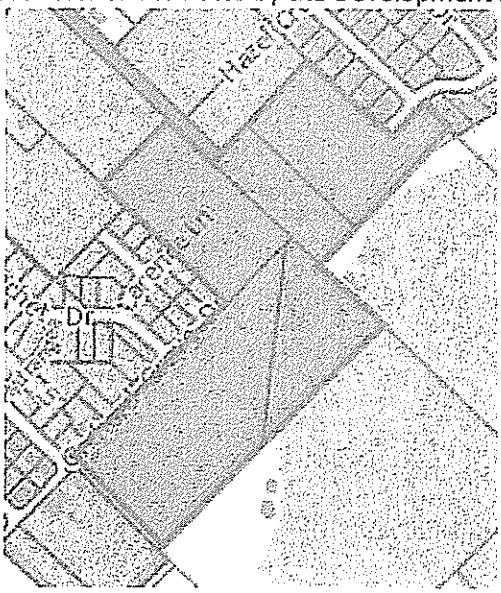
Zone Change:
Identify compliance with the Zone Change criteria in OCMC 17.68.020, which includes findings for compliance with state land use goals and the Oregon City Comprehensive Plan.

Property Line Adjustment
The proposed Property Line Adjustment is unclear, please provide additional specificity. Please provide a clear depiction of the site before and after and indicate property ownership for tax lot 1180 and 1291. If under the same ownership in the site, they are considered part of the development.

Natural Resource Overlay District (NROD)
A portion of the site is within the Natural Resource Overlay District. An application prepared by a qualified professional and in compliance with OCMC 17.49 is required.



Geologic Hazards Overlay District:
Please refer to the notes by the Development Services Department.

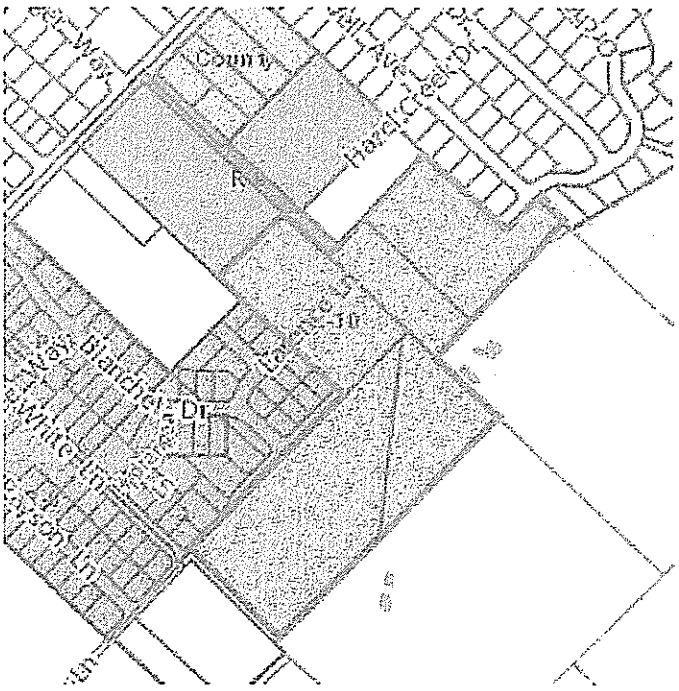


Questions from the Applicant

1. Please discuss the zone change process and confirm if the R-8 is an acceptable zone for this site.

Response: Please see the above description of the Type IV process. This may be further defined in OCMC 17.50.030.D. Criteria for the Zone Change is identified in OCMC 17.68.020.

2. Please confirm that a Comprehensive Plan Map Amendment would not be necessary with a zone change to R-8, as all tax lots are within the Low Density Residential Comprehensive Plan designation.
   Response: The Low Density Residential Comprehensive Plan designation includes the R-10, R-8 and R-6 Single-Family Dwelling Districts.
3. Please confirm the minimum and maximum residential densities in the R-8 and R-10 districts, and please confirm that the densities shown in the layouts provided are acceptable to the City.
   Response: Minimum and maximum densities are described in Title 16 as well as the zoning designation proposed. Minimum density is 80% of the maximum allowed. Lot sizes may be up to 20% smaller than the minimum, provided the subdivision averages to the minimum.
4. Please confirm if the preliminary layouts/lot configurations are acceptable to the City.
   Response: Please see the notes within this report.
5. Please confirm the required setbacks, lot dimensions, and lot areas.
   Response: Please refer to the dimensional standards of the zoning designation in 17.08 or 17.10.
6. Are there any overlay designations that will apply to this property?
   Response: Yes, please see the first section of this report.
7. Please let us know of any tree removal requirements or concerns.
   Response: Tree removal requirements are identified in OCMC 17.49 for those within the NROD and 17.41
8. Please confirm the City review procedure type and the required land use application(s).
   Response: Please see notes above.
9. Please let us know if any additional studies or analyses (natural resources, geotechnical, soils, etc.) are necessary.
   Response: Please see notes above.
10. Please discuss any pending/future Municipal Code changes and what impact those Code changes may have on this application/project.
    Response: None yet, but we will be working on code changes in 2017.



Transportation Review:

City of Oregon City | PO Box 3040 | 221 Molalla Avenue, Suite 200 | Oregon City, OR 97045
Ph (503) 722-3789 www.orcity.org

Your application was reviewed by John Replinger of Replinger and Associates, a city consultant for transportation engineering. You may contact John Replinger, at Replinger-Associates@comcast.net or at 503.719.3383.

Based on your submittal, a traffic engineer shall 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.
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 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.

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.

Planning Division
Laura Terway, Planning Manager with the Oregon City Planning Division reviewed your pre-application. You may contact Laura Terway at 503.496.1553 or lterway@orcity.org.

Development Services Division
Wendy Marshall, Development Project Manager with the Oregon City Development Services Division reviewed your pre-application. You may contact Wendy Marshall at 503.496.1548 or wmarshall@orcity.org.

Building Division:
Your application was transmitted to our Building Official whom provided comments. You may contact Mike Roberts, Building Official, at 503.496.1517 or mroberts@orcity.org if you have any building related questions.

Clackamas County Fire:
Your application was transmitted to Mike Boumann, Lieutenant Deputy Fire Marshal of Clackamas County Fire District #1. No comments were returned regarding your application. You may contact Mr. Boumann at 503.742.2660 or at michaelbou@ccfd1.com.

Other notes:

- A neighborhood meeting is required. You are in the Hazel Grove-Westling Farms (Non-active Neighborhood Association). Contact the South End Neighborhood Association to setup a meeting.
  Chair: Bill McConnel, sena97045@gmail.com
  Vice Chair: Gary Fergus, Interim Vice Chair fergusfamily@gmail.com
  Secretary/Treasurer: vacant
- Per Annexation AN 06-02, each new home is required to pay a Police fee of $3,500 if submitted prior to July 1, 2018. Copies of the recorded agreements are attached.
- The questions regarding the park space were forwarded to Phil Lewis, Community Services Director.

- Notice of your proposed development has been provided to the State Historic Preservation Office (SHPO) and all affected tribes per OCMC chapter 17.62.040.H.
- The existing dwellings and all accessory structures shall be removed prior to final plat unless they comply with all new standards.
- Fence height limitations provided in OCMC 17.54.100.
- If you would like to build a sign for the subdivision, the sign code can be found in OCMC 15.28.
- Residential Design Standards are provided in OCMC chapter 17.20 and 17.21.
- All applicable System Development Charges (SDC) shall be due and payable upon building permit issuance.
- No proposed changes to the Oregon City Municipal Code are proposed which would affect your proposal.

Oregon City Municipal Code Criteria:
The following chapters of the Oregon City Municipal Code (OCMC) may be applicable to this proposal:
OCMC 12.04 - Streets, Sidewalks and Public Places
OCMC 12.08 - Public and Street Trees
OCMC 13.12 – Stormwater Management
OCMC 16.08 – Subdivisions – Processes and Standards
OCMC 16.12 – Minimum Improvements and Design Standards for Land Divisions
OCMC 16.20 – Property Line Adjustments and Abandonments
OCMC 17.08 – "R-10" Single-Family Dwelling District
OCMC 17.10 – "R-8" Single-Family Dwelling District
OCMC 17.20 – Residential Design Standards
OCMC 17.41- Tree Protection Standards
OCMC 17.44 – Geologic Hazards
OCMC 17.49 – Natural Resources Overlay District
OCMC 17.50 – Administrative Processes
OCMC 17.68 – Zone Changes and Amendments

Pre-application conferences are required by Section 17.50.050 of the City Code, as follows:
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.

NOTICE TO APPLICANT: A property owner may apply for any permit they wish for their property. HOWEVER, THERE ARE NO GUARANTEES THAT ANY APPLICATION WILL BE APPROVED. No decisions are made until all reports and testimony have been submitted. This form will be kept by the Community Development Department. A copy will be given to the applicant. IF the applicant does not submit an application within six (6) months from the Pre-application Conference meeting date, a NEW Pre-Application Conference will be required.

OREGON CITY

Public Works – Development Services

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

DEVELOPMENT SERVICES

PRE-APPLICATION MEETING NOTES

Date: 12-6-2016

Planning Project Number:	PA 16-54
Address:	19566 Central Point Road, Oregon City, OR 97045
Map Number(s):	3-2E-07C; 3-1E-12D
Tax Lot(s):	1001, 1291, 1100, 1180; 1700, 1790
Project Name:	Wheeler Farms
Meeting Date:	December 6, 2016 (Notes updated December 28, 2016)
Reviewer(s):	Hunter Bennett-Daggett, PE

GENERAL COMMENTS

1. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements.

2. A performance bond and agreement shall be provided to the City prior to issuance of construction plans.

3. The Applicant may be required to sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties.

4. All applicable System Development Charges (SDC) shall be due and payable upon building permit issuance. Applicant will need to complete a SDC request form, found on the City's website, for an estimate of fees.

ENGINEERING - UTILITIES

Streets

1. The proposed development includes several new streets and extensions of existing streets. All new streets within the proposed development will be functionally classified as a Local (Residential). For a residential local, the Oregon City Municipal Code (OCMC) requires a 54-foot-wide right-of-way (ROW), two (2) 16-foot-wide shared travel lanes, two (2) 5-foot-wide planter strips, two (2) 5-foot-wide sidewalks, and two (2) 0.5-foot-wide public access strips. Additional requirements include curb, gutter, street trees, and street lights.

2. The southwestern edge of the proposed development includes a narrow strip of land that will eventually be part of an extension of White Lane. This strip of land is not wide enough to create a functional half street that aligns with the existing street; however, the aligned portion will need to be dedicated as right-of-way. Fee-in-lieu payment will be required for

street improvements that cannot be constructed due to space constraints. Fee-in-lieu shall be paid to the centerline of the future street.

3. Block length standards, as outlined in OCMC 12.04.195, must be met even for proposed developments adjacent to the Urban Growth Boundary (UGB). The proposed development meets block length requirements, with the exception of the "island" created at the center, which exceeds the 530-foot max block length when considered with the relevant portion of the Ed's Orchard subdivision. As a result, a mid-block pedestrian path is required. The applicant may request that this pedestrian path requirement be waived by providing appropriate justifications, addressing such items as: location of pedestrian generators within the subdivision, number of pedestrians served, most likely routes for pedestrians through the subdivision, the availability of pedestrian routes and circulation, and the available route to Central Point Road (a Collector road).

4. With the exception of White Lane, streets in the proposed development will not be required to extend to the UGB.

5. A 10-foot-wide Public Utility Easement (PUE) will be required along the frontage of all lots.

6. Reduction to the standard improvements and right-of-way dedication may be requested through the modification process outlined in OCMC 12.04.007.

7. The proposed development includes a section of Shared-Use Path, connecting Larence Lane to Orchard Grove Drive. The standard residential local street section shall be considered acceptable for the Shared-Use Path.

8. The portion of Orchard Grove Drive that was not previously built during construction of the Highland Park subdivision shall be constructed to meet residential local street requirements. Fee-in-lieu previously paid for this unconstructed street portion shall be available for construction of the full street improvements as part of the proposed development.

9. Two large trees (54-inch and 43-inch diameter) are located within the proposed Orchard Grove Drive ROW. The applicant has requested consideration of modifications to the required street section to allow preservation of the trees. Due to the location of the trees with respect to the proposed ROW and 10-foot PUE, it does not appear feasible to protect the trees. The root systems of the trees are unknown but are likely to be negatively impacted by grading and utility construction, thereby reducing the long-term health of the trees. In addition, proximity of the root systems to the ROW and PUE causes concern for future root growth effects on utilities in the area, including curb/gutter, sidewalk, pavement, and underground pipe systems. A constrained ROW does not appear to provide adequate space for the ROW, PUE, and grading and utility construction without negative impacts to the trees. If the applicant wishes to preserve the trees, an arborist's report shall be provided addressing the City's concerns and showing that there would be no adverse impacts to the trees from the construction of the grading and underground improvements proposed in the ROW and 10-foot PUE, no long-term adverse impacts to the trees as the root system grows, and no adverse impacts to the public and private improvements as the root system grows.

OREGON CITY

Public Works – Development Services

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

Stormwater

1. The proposed development shall adhere to the requirements of the current Stormwater and Grading Design Standards. The current Standards can be found online here:

   http://www.orcity.org/sites/default/files/final_manual_0.pdf

2. The General Threshold(s) for Applicability of the Stormwater and Grading Design Standards:

   a. *Development activities that result in **5,000 square feet of new or replaced impervious surface**, cumulative over a 5-year period, are subject to the requirements of these standards.*

3. If the above threshold is met, the Applicant must submit a completed *Site Assessment and Planning Checklist* (and other attachments as described in **Section 9.1.1**) as part of the land use application process. This submittal shall constitute a preliminary drainage report and form the basis for developing the Stormwater Management Plan described in **Section 9.1.2**. Submittal of the final Stormwater Management Plan will be required prior to issuance of Public Works permits.

4. It does not appear possible to convey stormwater from the proposed development to any existing City stormwater system by gravity. The applicant proposes to construct a new stormwater facility within the proposed development. The proposed facility shall meet the requirements of the City's Stormwater and Grading Design Standards.

5. The submitted materials for some layouts show an access easement to the proposed stormwater facility. An access road shall be provided within the easement, complying with the requirements of the Stormwater and Grading Design Standards. If the access road exceeds 300 feet in length, a truck turn-around shall be provided.

Water

1. There are existing 8-inch ductile iron water mains within Orchard Grove Drive and Larence Lane. New 8-inch ductile iron water mains shall be provided in all streets within the proposed development and shall connect to existing water mains wherever possible. Stubs shall be provided at the end of any streets with future connections.

2. The Highland Park subdivision installed a 4-inch ductile iron water main in the half-street portion of Orchard Grove Drive adjacent to White Lane. This street portion will be extended to full width by the proposed project, and the improvements shall include an 8-inch ductile iron water main that allows the 4-inch water main to be taken out of service.

3. The narrow portion of land at the southwestern edge of the proposed development that will eventually be part of an extension of White Lane is not wide enough to accommodate a water main extension along the frontage, as required. Temporary looping is required along the White Lane ROW until an 8-inch water main is extended when White Lane ROW is fully developed. Proposed water system improvements shall include an 8-inch waterline

extension to the southeast in the proposed intersection improvements of White Lane and Orchard Grove Drive with reduction to a temporary 4-inch waterline extension in an easement along proposed White Lane ROW and looped to the proposed water pipe at the street intersection of the southeasterly subdivision street.

4. Any new fire hydrants shall be located per the requirements and direction of Clackamas Fire District No. 1.

Sanitary Sewer

1. There are existing 8-inch PVC sanitary sewer pipes within Orchard Grove Drive and Larence Lane. The applicant proposes to connect to these existing sewer pipes via gravity. The City's Sanitary Sewer Master Plan calls for a new public sewer pump station in the area of the proposed development. In order to justify the deviation from the master plan, the applicant will need to demonstrate that the proposed gravity sewer can adequately serve all proposed lots and not negatively impact future development. Proposed gravity sewers shall comply with all applicable City design standards, including minimum sanitary sewer slope requirements.

2. Proposed sanitary sewer depths, slopes, and covers will need to be provided to the City to allow evaluation of shallow sewers. Where shallow sewer laterals are approved by the City, ductile iron pipe is typically required for any sewer with less than three feet of cover.

3. The narrow portion of land at the southwestern edge of the proposed development that will eventually be part of an extension of White Lane is not wide enough to accommodate a sanitary sewer extension along the frontage, as required. Fee-in-lieu will be required to allow for future extension of this sewer.

4. As part of this proposed development, any existing SFRs that are to be demolished must abandon their septic system per State, County, and City requirements. Contact the Building Department regarding abandonment requirements.

Other

1. A portion of the proposed development is within the Natural Resource Overlay District (NROD). Section 17.49 of the OCMC will need to be addressed in the application.

2. A portion of the proposed development is within the Geologic Hazard area. Section 17.44 of the OCMC will need to be addressed in the application. A geotechnical report will be required and shall provide recommendations as applicable for the proposed public and private subdivision improvements. There is a pass-through fee for the City's geotechnical peer review. Total peer review costs shall be paid by the applicant.

3. A portion of the proposed development is within the High Water Table area. The geotechnical report addressing the Geologic Hazard area shall also address high groundwater impacts on construction.

OREGON CITY

Public Works – Development Services

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

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Exhibit I: Clackamas County Assessor's Maps

This map was prepared for assessment purpose only.

SW 1/4 SEC. 7 T.3S. R.2E. W.M.
CLACKAMAS COUNTY
1" = 200'

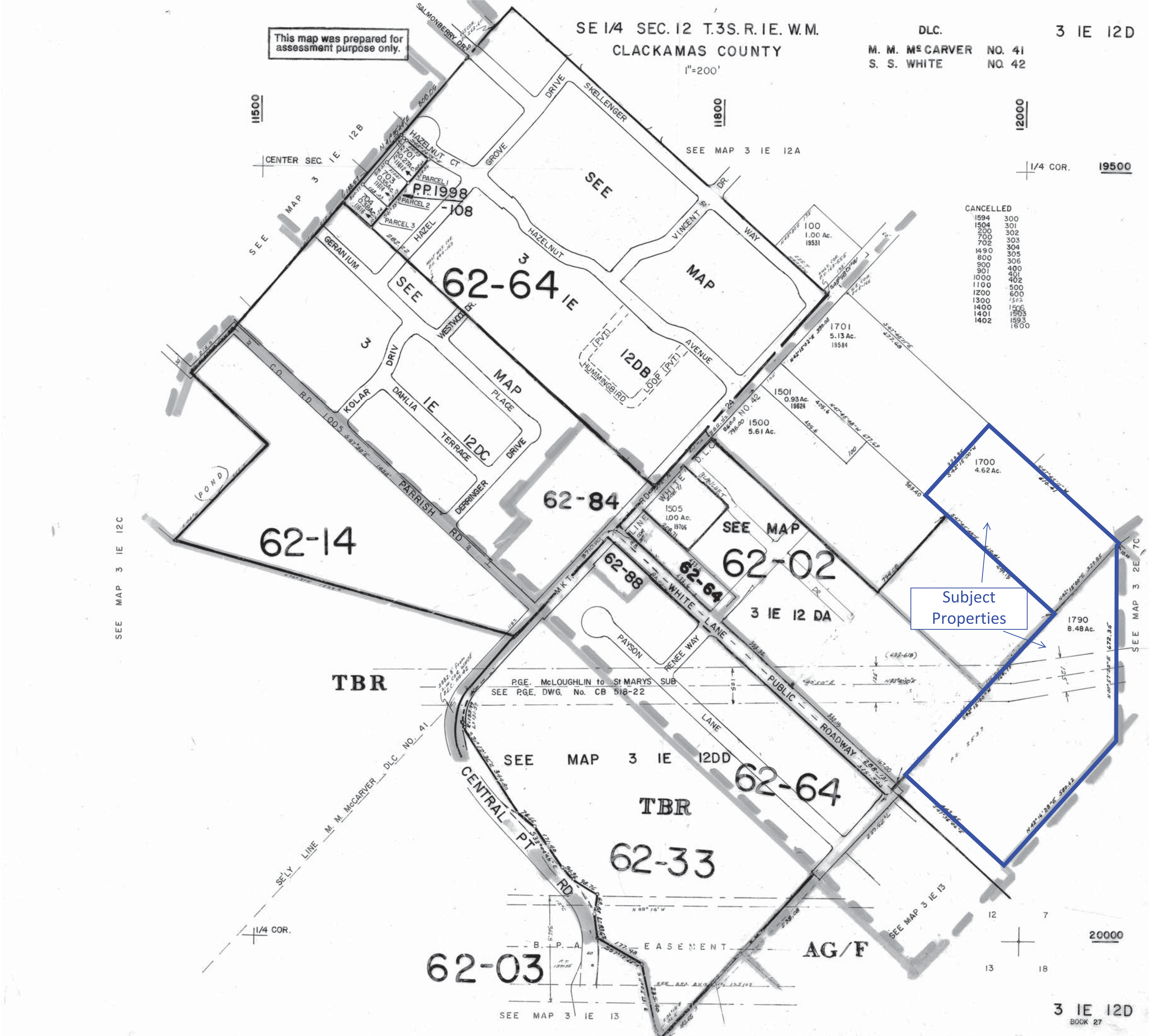
D.L.C.
JOHN HOWLAND NO. 45
S.S. WHITE NO. 41 & 42

3 2E 7C

Subject Properties

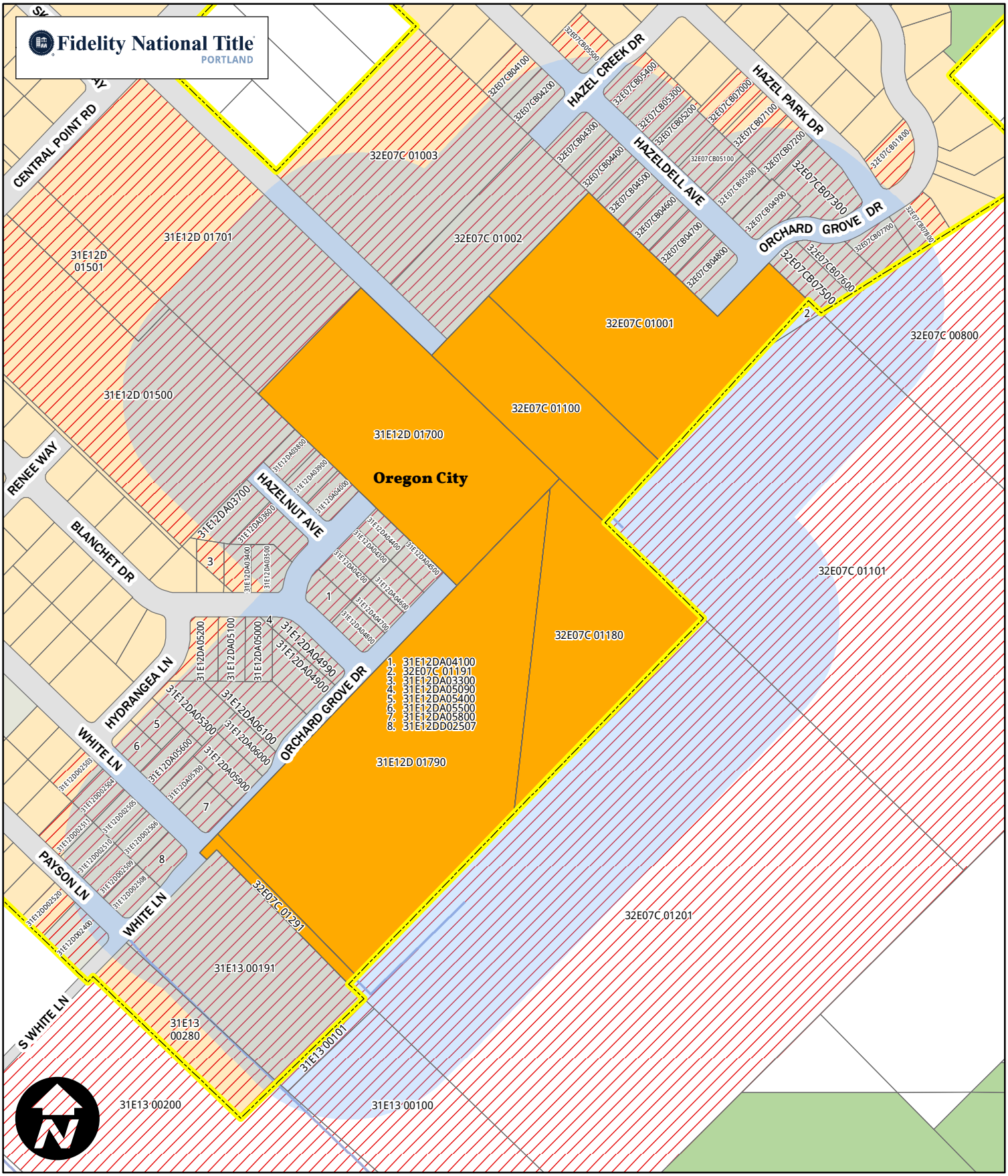
Subject Property

62-64
62-84
62-88
62-02
62-31
62-03
62-14
62-33
TBR
FU-10
P. P. 1999-140
PARCEL 2
EASEMENT
B. P. A.
PGE McLOUGHLIN to St MARYS SUB.
SEE PGE DWG No. CB 518-23
See BPA DWG No. 125107
SEE MAP 3 2E 18
SEE MAP 3 2E 7BD
SEE MAP 3 2E 7B
SEE MAP 3 2E 7D
SEE MAP 3 2E 12D
SW COR DLC 40
SE. COR. DLC 41
NW. COR. DLC 41
NE. COR DLC 42
APPROX. 1/4 COR.
5362.50FT. Most Westerly Corner of S.S WHITE DLC
CENTRAL PT. RD.
MARKET ROAD NO. 24
HAZEL DELL
HAZEL DR.
SUNSET SPRINGS DR.
ORCHARD GROVE DRIVE
PARK AVENUE
CREEK DR.
McCORD ROAD
CO. RD. No. 321
MC CORD RD.
CO. RD. No. 516 LELAND RD.
PUBLIC
E. LINE DLC NO. 42
W. LINE DLC NO. 41
N Wly. Line of John Howland DLC No. 45
Sely Line of S.S. White DLC No. 41
WLY COR. JOHN HOWLAND DLC NO. 45
CANCELLED 1000 1004 1005 103 400 191 1290 702 111 1900 890 1280 801 900 110 1190 1200 1011
12000 12300 12500 19500 19800 20000
BOOK 29
3 2E 7C
RLR 2/12/69



This map was prepared for assessment purpose only.
SE 1/4 SEC. 12 T.3S. R.1E. W.M.
CLACKAMAS COUNTY
1"=200'
DLC.
M. M. McCARVER NO. 41
S. S. WHITE NO. 42
3 1E 12D
SEE MAP 3 1E 12A
1/4 COR.
19500
CANCELLED
1594 300
1504 301
200 302
700 303
702 304
1490 305
800 306
900 400
901 401
1000 402
1100 500
1200 600
1300 1502
1400 1506
1401 1503
1402 1593
1600
CENTER SEC. 3 1E 12B
SEE MAP 3 1E 12C
SEE MAP 3 1E 12DB
SEE MAP 3 1E 12DC
SEE MAP 3 1E 12DA
SEE MAP 3 1E 12DD
SEE MAP 3 1E 13
SEE MAP 3 2E 7C
62-64
62-84
62-14
62-02
62-88
62-33
62-03
TBR
AG/F
1700
4.62 Ac.
1790
8.48 Ac.
1701
5.13 Ac.
1500
5.61 Ac.
1501
0.93 Ac.
1505
1.00 Ac.
100
1.00 Ac.
Subject Properties
P.G.E. McLOUGHLIN to St MARYS SUB
SEE P.G.E. DWG. No. CB 518-22
B.P.A. EASEMENT
SE'LY LINE M. M. McCARVER DLC NO. 41
1/4 COR.
20000
3 1E 12D
BOOK 27

Exhibit J: Mailing Labels



Public Notification Search

300 Feet

Subject
Notification
Incorporated city
Radius
Home Owners Association
City limits
Taxlots
Other

Prepared by: Fidelity National Title
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31E12D 01700
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31E13 00100
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31E13 00200
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32E07C 00800
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32E07CB04300
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32E07CB04400
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32E07CB04500
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32E07CB04600
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32E07CB04700
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12131 Hazeldell Ave
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32E07CB04800
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32E07CB04900
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32E07CB05000
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32E07CB05100
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12120 Hazeldell Ave
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32E07CB05200
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32E07CB05400
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32E07CB05500
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32E07CB07200
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32E07CB07600
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32E07CB07700
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31E12DA05400
Stone Bridge Homes Nw LLC
4230 Galewood St #100
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31E12DA05500
Stone Bridge Homes Nw LLC
4230 Galewood St #100
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31E12DA05600
Stone Bridge Homes Nw LLC
4230 Galewood St #100
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31E12DA05700
Stone Bridge Homes Nw LLC
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31E12DA03400
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31E12DA03500
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31E12DA04100
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