



City of Tualatin

www.tualatinoregon.gov

"NECESSARY PARTIES"
MARKED BELOW

NOTICE OF APPLICATION SUBMITTAL

- ANNEXATION CONDITIONAL USE PERMIT PLAN TEXT AMENDMENT
 ARCHITECTURAL REVIEW PLAN MAP AMENDMENT OTHER:

CASE/FILE: ANN15-0002 (Community Development Dept.: Planning Division)

PROPOSAL	To annex 2.05 acres of land designated General Commercial (CG) and located at 18600 SW Pacific Hwy to the City of Tualatin. The applicant plans to develop a gas station, convenience store and card lock fueling facility on the property.
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PROPERTY	Name of Application	STEIN OIL COMPANY				
	<input type="checkbox"/> n/a	Street Address	18600 SW Pacific Hwy			
		Tax Map and Lot No(s).	2S1 21A 001100			
		Planning District	General Commercial (CG)	Overlays <input type="checkbox"/>	NRPO <input type="checkbox"/>	Flood Plain <input type="checkbox"/>
		Previous Applications		Additional Applications:	CIO CCIO; RIVERPK	

DATES	Receipt of application	09/21/2015	Deemed Complete	12/16/15	CONTACT	Name: Clare Fuchs
	Notice of application submittal			12/16/2015		Title: Senior Planner
	Project Status / Development Review meeting			02/04/2016		E-mail: cfuchs@ci.tualatin.or.us
	Comments due for staff report			1/29/2016		Phone: 503-691-3027
	Public meeting: <input type="checkbox"/> ARB <input type="checkbox"/> TPC <input checked="" type="checkbox"/> n/a					Notes: You may view the application materials through this City web page: www.tualatinoregon.gov/projects
	City Council (CC)		<input type="checkbox"/> n/a	3/14/2016		

- | | | |
|---|---|--|
| <p>City Staff</p> <input checked="" type="checkbox"/> City Manager
<input checked="" type="checkbox"/> Building Official
<input checked="" type="checkbox"/> Chief of Police
<input checked="" type="checkbox"/> City Attorney
<input checked="" type="checkbox"/> City Engineer
<input checked="" type="checkbox"/> Community Dev. Director
<input checked="" type="checkbox"/> Community Services Director
<input checked="" type="checkbox"/> Economic Dev. liaison
<input checked="" type="checkbox"/> Engineering Associate*
<input checked="" type="checkbox"/> Finance Director
<input checked="" type="checkbox"/> GIS technician(s)
<input checked="" type="checkbox"/> IS Manager
<input checked="" type="checkbox"/> Operations Director*
<input checked="" type="checkbox"/> Parks and Recreation Coordinator
<input checked="" type="checkbox"/> Planning Manager
<input checked="" type="checkbox"/> Street/Sewer Supervisor
<input checked="" type="checkbox"/> Water Supervisor
<p>Neighboring Cities</p> <input type="checkbox"/> Durham
<input type="checkbox"/> King City Planning Commission
<input type="checkbox"/> Lake Oswego
<input type="checkbox"/> Rivergrove PC
<input checked="" type="checkbox"/> Sherwood Planning Dept. | <p><input type="checkbox"/> Tigard Community Dev. Dept.
 <input type="checkbox"/> Wilsonville Planning Div.</p> <p>*Paper Copies</p> <p>Counties</p> <input type="checkbox"/> Clackamas County Dept. of Transportation and Dev.
<input checked="" type="checkbox"/> Washington County Dept. of Land Use and Transportation (AR's)
<input checked="" type="checkbox"/> Washington County LRP (Annexations) <p>Regional Government</p> <input checked="" type="checkbox"/> Metro <p>School Districts</p> <input type="checkbox"/> Lake Oswego School Dist. 7J
<input checked="" type="checkbox"/> Sherwood SD 88J
<input checked="" type="checkbox"/> Tigard-Tualatin SD 23J (TTSD)
<input type="checkbox"/> West Linn-Wilsonville SD 3J <p>State Agencies</p> <input type="checkbox"/> Oregon Dept. of Aviation
<input type="checkbox"/> Oregon Dept. of Land Conservation and Development (DLCD) (via proprietary notice)
<input type="checkbox"/> Oregon Dept. of State Lands: | <p><input type="checkbox"/> Wetlands Program
 <input checked="" type="checkbox"/> Oregon Dept. of Transportation (ODOT) Region 1
 <input checked="" type="checkbox"/> ODOT Maintenance Dist. 2A
 <input type="checkbox"/> ODOT Rail Div.
 <input checked="" type="checkbox"/> OR Dept. of Revenue</p> <p>Utilities</p> <input checked="" type="checkbox"/> Republic Services
<input checked="" type="checkbox"/> Clean Water Services (CWS)
<input checked="" type="checkbox"/> Comcast [cable]*
<input checked="" type="checkbox"/> Frontier Communications [phone]
<input checked="" type="checkbox"/> Northwest Natural [gas]
<input checked="" type="checkbox"/> Portland General Electric (PGE)
<input checked="" type="checkbox"/> TriMet
<input checked="" type="checkbox"/> Tualatin Valley Fire & Rescue (TVF&R)
<input checked="" type="checkbox"/> United States Postal Service (USPS) (Washington; 18850 SW Teton Ave)
<input type="checkbox"/> USPS (Clackamas)
<input checked="" type="checkbox"/> Washington County Consolidated Communications Agency (WCCCA) |
|---|---|--|

Additional Parties

- Tualatin Citizen Involvement Organization (CIO)
- Commercial CIO
- Riverpark CIO

1.032: Burden of Proof

31.071 Architectural Review Procedure

31.074 Architectural Review Application Review Process

31.077 Quasi-Judicial Evidentiary Hearing Procedures

Metro Code 3.09.045 Annexation Review Criteria

32.030 Criteria for Review of Conditional Uses

33.020 Conditions for Granting a Variance that is not a Sign or a Wireless Communication Facility

33.022 Criteria for Granting a Sign Variance

33.024 Criteria for Granting a Minor Variance

33.025 Criteria for Granting a Variance

34.200 Tree Cutting on Private Property without Architectural Review, Subdivision or Partition Approval, or Tree Removal Permit Prohibited

34.210 Application for Architectural Review, Subdivision or Partition Review, or Permit

34.230 Criteria (tree removal)

35.060 Conditions for Granting Reinstatement of Nonconforming Use

36.160 Subdivision Plan Approval

36.230 Review Process (partitioning)

36.330 Review Process (property line adjustment)

37.030 Criteria for Review (IMP)

40.030 Conditional Uses Permitted (RL)

40.060 Lot Size for Conditional Uses (RL)

40.080 Setback Requirements for Conditional Uses (RL)

41.030 Conditional Uses Permitted (RML)

41.050 Lot Size for Conditional Uses (RML)

41.070 Setback Requirements for Conditional Uses (RML)

42.030 Conditional Uses Permitted (RMH)

42.050 Lot Size for Conditional Uses (RMH)

42.070 Setback Requirements for Conditional Uses (RMH)

43.030 Conditional Uses Permitted (RH)

43.060 Lot Size for Conditional Uses (RH)

43.090 Setback Requirements for Conditional Uses (RH)

44.030 Conditional Uses Permitted (RH-HR)

44.050 Lot Size for Conditional Uses (RH-HR)

44.070 Setback Requirements for Conditional Uses (RH-HR)

49.030 Conditional Uses (IN)

49.040 Lot Size for Permitted and Conditional Uses (IN)

49.060 Setback Requirements for Conditional Uses (IN)

50.020 Permitted Uses (CO)

50.030 Central Urban Renewal Plan – Additional Permitted Uses and Conditional Uses (CO)

50.040 Conditional Uses (CO)

52.030 Conditional Uses (CR)

53.050 Conditional Uses (CC)

53.055 Central Urban Renewal Area – Conditional Uses (CC)

54.030 Conditional Uses (CG)

56.030 Conditional Uses (MC)

56.045 Lot Size for Conditional Uses (MC)

57.030 Conditional Uses (MUCOD)

60.040 Conditional Uses (ML)

60.041 Restrictions on Conditional Uses (ML)

61.030 Conditional Uses (MG)

61.031 Restrictions on Conditional Uses (MG)

62.030 Conditional Uses (MP)

62.031 Restrictions on Conditional Uses (MP)

64.030 Conditional Uses (MBP)

64.050 Lot Size for Permitted and Conditional Uses (MBP)

64.065 Setback Requirements for Conditional Uses (MBP)

68.030 Criteria for Designation of a Landmark

68.060 Demolition Criteria

68.070 Relocation Criteria

68.100 Alteration and New Construction Criteria

68.110 Alteration and New Construction Approval Process

73.130 Standards

73.160 Standards

73.190 Standards – Single-Family and Multi-Family Uses

73.220 Standards

73.227 Standards

73.230 Landscaping Standards

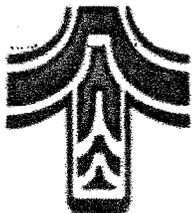
73.300 Landscape Standards – Multi-Family Uses

73.310 Landscape Standards – Commercial, Industrial, Public and Semi-Public Uses

73.320 Off-Street Parking Lot
Landscaping Standards

73.470 Standards

73.500 Standards



City of Tualatin

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CITY OF TUALATIN
RECEIVED

SEP 21 2015

COMMUNITY DEVELOPMENT
PLANNING DIVISION

APPLICATION FOR ANNEXATION

Applicant			
Name: <u>DAVE Kimmel</u>	Company Name: <u>PDG</u>		
Address: <u>1335 SW 66TH Ave, 201</u>			
City: <u>Portland</u>	State: <u>OR</u>	ZIP Code: <u>97225</u>	
Phone: <u>503-329-5399</u>	Fax:	Email: <u>pdgplanning@comcast.net</u>	
Applicant is: Owner <input type="checkbox"/> Contract Purchaser <input type="checkbox"/> Developer <input type="checkbox"/>		Agent <input checked="" type="checkbox"/> Other <input type="checkbox"/>	
Applicant's Signature: <u>Dave Kimmel</u>		Date: <u>9-18-15</u>	

Property Owner			
Name: <u>Stein Woodburn LLC</u>			
Address: <u>13001 Clackamas River Dr</u>			
City: <u>Oregon City</u>	State: <u>OR</u>	ZIP Code: <u>97045</u>	
Phone: <u>503-656-0375</u>	Fax: <u>503-655-5707</u>	Email: <u>INFO@STEINOIL.COM</u>	
Property Owner's Signature: <u>Stein Woodburn LLC member</u>		Date: <u>9/21/15</u>	
(Note: Letter of authorization is required if not signed by owner) <u>John Stein</u>			

Assessor Information	
Assessor's Map #: <u>2S121A</u>	Tax Lot #: <u>001100</u>
Assessor's Map #:	Tax Lot #:
Assessor's Map #:	Tax Lot #:
Address of property: <u>18600 SW Pacific</u>	Lot area (acres): <u>2.05</u>
Current County Zone: <u>FD-10</u>	Proposed City Planning District: <u>CG</u>
Current Use: <u>Vacant</u>	Proposed Use: <u>GAS Station, C-Store, Card Lock</u>
Right-of-Way to be included:	

AS THE PERSON RESPONSIBLE FOR THIS APPLICATION, I HEREBY ACKNOWLEDGE THAT I HAVE READ THE ABOVE APPLICATION AND ITS ATTACHMENTS, UNDERSTAND THE REQUIREMENTS DESCRIBED HEREIN, AND STATE THAT THE INFORMATION SUPPLIED IS AS COMPLETE AND DETAILED AS IS CURRENTLY POSSIBLE, TO THE BEST OF MY KNOWLEDGE.

Applicant's Signature: <u>Dave Kimmel</u>	Date: <u>9-18-15</u>

Office Use		
Case No: <u>ANN-15-0002</u>	Date Received: <u>9/21/15</u>	Received by: <u>Lofu</u>
Fee: Complete Review: <u>\$1530.00</u>	Receipt No:	
City Filing Fee:	Date complete:	

Received 5/14/15

PDG Planning Design Group
1335 SW 66th Ave. #201
Portland, Oregon 97225
PH: 503-329-5399
Fax: 503-327-8456
Email: pdgplanning@comcast.net

**Annexation:
18600 Pacific Dr.**

II. CRITERIA FOR APPROVAL OF BOUNDARY CHANGES

The following are the criteria used in making a decision to annex property to the City of Tualatin. Please address each of these in narrative form. Be as thorough and complete with your answers as possible. Please see the attached "Criteria Guidelines" sheet for further clarification of the criteria. If you have any questions or need assistance, please contact the City of Tualatin, Planning Division at 503-691-3026.

A. Metro Code 3.09.050(d) states that a boundary change proposal shall address the following minimum criteria:

1. Consistency with directly applicable provisions in an urban service provider agreement or annexation plan adopted pursuant to ORS 195.065;

Response: At this time, there are no agreements, pursuant to ORS 195.065, in place between Tualatin and any service provider. This provision is not applicable.

2. Consistency with directly applicable provisions in an urban planning or other agreements, other than agreements adopted pursuant to ORS 195.065, between the affected entity and a necessary party;

Response: The subject property is within the portion of Washington County that is inside the acknowledged Tualatin Urban Boundary. Annexations within the established Urban Boundary are consistent with Tualatin's Urban Planning Area Agreement with Washington County.

3. Consistency with specific directly applicable standards or criteria for boundary changes contained in comprehensive land use plans and public facility plans;

Response: Because the area to be annexed is within the City's Planning Area Boundary and the Metro Urban Growth Boundary, services can be provided at the property owner's expense. This is consistent with Tualatin's Community Plan (Comprehensive Plan).

4. Consistency with specific directly applicable standards or criteria for boundary changes contained in the Regional Framework Plan or any functional plan;

Response: The Regional Framework Plan and Functional Plan have no provisions directly related to annexation. Because services and transportation facilities are available in the area and all property within the Urban Growth Boundary and Urban Planning Area Boundary were included in calculations for facility capacity, housing and employment, annexation is consistent with the Framework and Functional Plans.

5. Whether the proposed change will promote or not interfere with the timely, orderly and economic provisions of public facilities and services;

Response: All needed urban services are available as a result of previous development surrounding the subject property.

6. If the proposed boundary change is for annexation of territory to Metro, a determination by the Metro Council that the territory should be included in the Urban Growth Boundary shall be the primary criterion for approval;

Response: Not applicable because the subject property is already within the Metro jurisdictional boundary.

7. Consistency with other applicable criteria for the boundary change in question under state and local law.

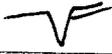
Response: No other criteria have been determined to be applicable

Legal Description for annexation to the City of Tualatin

A parcel of land located in in the Northeast quarter of Section 21, Township 2 South, Range 1 West, Willamette Meridian described as follows:

Beginning at the Northwest corner of that land described in Washington County document 2011-81668, Thence North $60^{\circ} 11'$ East 368.7' m/l to the Northeast corner of said document, thence South $11^{\circ} 35'$ East 255.4' m/l to the North Right of way line of SW Pacific Highway, thence along the North line of SW Pacific Highway South $67^{\circ} 30'$ West 368.6' 207' m/l to a point, thence North $8^{\circ} 31'$ West 208.1' m/l to the point of beginning.

ANNEXATION CERTIFIED

BY 

AUG 06 2015

WASHINGTON COUNTY A & T
CARTOGRAPHY



City of Tualatin

www.ci.tualatin.or.us

CERTIFICATION OF LEGAL DESCRIPTION AND MAP

I certify that the description of the property included within the attached petition (located on Assessor's Map 25121A) has been checked by me and it is a true and exact description of the property under consideration, and the description corresponds to the attached map indicating the property under consideration.

NAME TED FOSTER

TITLE GIS TECH

DEPARTMENT CARTOGRAPHY

COUNTY OF WASHINGTON

DATE 8/6/15

ANNEXATION CERTIFIED

BY TF

AUG 06 2015

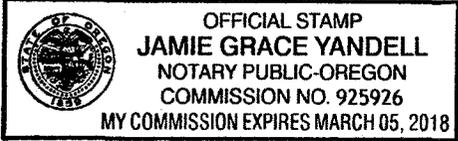
WASHINGTON COUNTY A & T
CARTOGRAPHY

State of Oregon)
County of Clackamas)

On this 21st day of September, 2015, before me the undersigned Notary Public,
personally appeared Susan L Stein,

- personally known to me
- proved to me on the basis of satisfactory evidence

To be the person who executed the within instrument as City Manager or on behalf of the entity therein named, pursuant to authority, and acknowledged to me the execution hereof.

WITNESS my hand and official seal Do not write outside of the box	Place Notary Seal Below (Do not place seal over any portion of text or signature)
Notary Signature <u>Jamie Yandell</u> Notary name (legible): <u>Jamie Yandell</u>	

Name of Document For Recording: Waiver Of Rights And Remedies Grantor: (Petitioner(s)) Grantee: City of Tualatin Consideration: None. Tax Statement to be mailed to: No change. <u>After Recording, Return To:</u> City of Tualatin, Attn: City Recorder, 18880 SW Martinazzi, Tualatin, OR 97062	(For County Recording Use Only)
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Measure 37 Waiver Of Rights And Remedies

S.L. Stein
Whereas, *Stein Woodburn LLC* (“Petitioner”, including collectively all petitioners) has petitioned to the City of Tualatin (“City”) to commence certain proceedings, i.e., annexation, planning district change, and/or plan text amendment for the following described real property,

See attached legal description

Whereas, under Ballot Measure 37 (effective December 2, 2004), a property owner may seek just compensation or waiver of certain land use regulations if a public entity enacts or enforces the land use regulations after the property owner acquired the property; and

Whereas, Oregon electors or the Oregon Legislature may, in the future, enact further statutory or constitutional amendments relating to compensation for the impact of local regulations upon real property, under certain circumstances; and

Whereas, City does not wish to approve the Petitioner’s requested proceedings if such approval could result in the owner or the owner’s successors or assigns filing a claim for compensation for the land use regulations in effect upon the effective date of the proceedings or a claim seeking to require the City to waive its land use regulations, which are being newly imposed upon the property as a result of the Petitioner’s requested proceedings; and

Whereas, Petitioner wishes to obtain the City’s approval of Petitioner’s requested proceedings and therefore agrees to eliminate the potential of claim for compensation or the right to seek waiver from the City’s land use regulations existing as of the effective date of the proceedings.

Now, therefore, Petitioner warrants that the Petitioner executing this Waiver Agreement holds the full and complete present ownership or any interest therein in the property, and agrees as follows:

1. As inducement to the City to proceed with the following proceeding(s) affecting the subject real property: Annexation, planning district change, and/or plan text amendment which may include designation of the property as subject to additional applicable overlay zones and districts, e.g., Mixed Use Commercial

Overlay District, Industrial Business Park Overlay District, Flood Plain District, Wetlands Protection District, Greenway Protection Overlay District and Natural Areas, and/or design districts ("proceedings"), the undersigned Petitioner, on behalf of Petitioner, Petitioner's heirs, devisees, executors, administrators, successors and assigns, agrees and covenants to the City of Tualatin, its officers, agents, employees and assigns that the Petitioner hereby waives, releases and forever discharges, and agrees that Petitioner shall be estopped from asserting any rights and remedies, actions, causes of action, suits, claims, liabilities, demands, and rights to waivers arising under or granted by any statutory or constitutional regulatory compensation or waiver provisions, including but not limited to Ballot Measure 37 (2004) or otherwise enacted after the date of this proceeding which would create a right of claim for compensation or waiver from city land use regulations that exist upon the effective date of the proceeding and which, by the approval of the proceeding, are then applicable to the property.

2. This Waiver and release shall bind the undersigned's heirs, devisees, executors and administrators, successors in interests, and assigns. This waiver, release and discharge shall run with the land, and this instrument or a memorandum of it may be recorded in the official records of the County in which the subject real property is located. This instrument may be terminated upon the filing of a Notice of Termination of Waiver filed by the City of Tualatin.

3. If this instrument is given contemporaneous with a consent to future proceedings to be initiated by the City, Petitioner acknowledges that the proceedings may be initiated by the City of Tualatin at any time in the discretion of the City and that this waiver and release is applicable to any ordinances adopted prior to the effective date of the proceeding.

4. This document is executed of my own free will and without duress. I/we respectively acknowledge that I/we have been advised to obtain legal advice prior to the execution of this document, and that either I, or each of us respectively, have either obtained legal advice or have independently elected not to seek legal advice prior to the execution of this document, recognizing that this document may affect our legal rights and remedies.

DATED this 21 day of September, 2015

 <div style="text-align: center;"><i>member of Stem</i> (signature) <i>Woodburn LLC</i></div> <hr/> Petitioner Name: <i>Stem Woodburn LLC.</i> <hr/> Date Signed: <i>9/21/15</i> <hr/>	<div style="text-align: center;">(signature)</div> <hr/> Petitioner Name: <hr/> Date Signed: <hr/>
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City of Tualatin

www.ci.tualatin.or.us

CERTIFICATION OF PROPERTY OWNERSHIP

I certify that the attached petition for annexation of the described territory to the City of Tualatin contains the names of the owners* of a majority of the land area of the territory to be annexed, as shown on the last available complete assessment roll.

NAME TED FOSTER ANNEXATION CERTIFIED
TITLE GIS TECH BY TF
DEPARTMENT CARTOGRAPHY AUG 06 2015
COUNTY OF WASHINGTON WASHINGTON COUNTY A & T
DATE 8/6/15 CARTOGRAPHY

*Owner means the owner of the title to real property or the contract purchaser of the real property.

CERTIFICATION OF REGISTERED VOTERS

I certify that the attached petition for annexation of described territory to the City of Tualatin contains the names of at least a majority of the electors registered in the territory to be annexed.

NAME _____
TITLE _____
DEPARTMENT _____
COUNTY OF _____
DATE _____



City of Tualatin

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PROPERTY OWNER INFORMATION SHEET

(This form is NOT the petition)

ALL OWNERS OF PROPERTY AND/OR REGISTERED VOTERS INCLUDED IN BOUNDARY CHANGE PROPOSAL AREA SHOULD SIGN

To be completed IF the proposal contains 10 or fewer land owners and/or registered voters. Please indicate the name and address of all owners and/or voters regardless of whether they signed an annexation petition or not. This is not for notification purposes. A signature on this form does not indicate support or opposition to the request.

NAME OF OWNER/VOTER	ADDRESS	PROPERTY DESIGNATION <small>(Indicate tax lot, section number, Township & Range)</small>
<i>SL Stein member</i>		<i>25121A 001100</i>
(1) <i>Stein Woodburn LLC</i>	<i>13001 Clackamas River Dr Oregon City, OR 97045</i>	
(2)		
(3)		
(4)		
(5)		
(6)		

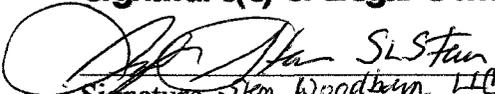
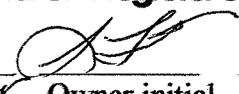
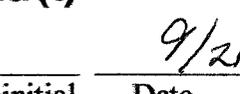
PETITION TO ANNEX TO THE CITY OF TUALATIN

To the Council of the City of Tualatin, Oregon

We, the undersigned owner(s) of the property described below and/or elector(s) residing at the location below described, hereby petition for and give consent to, annexation of said property to the City of Tualatin.

The consent for annexation is for the following described property:	
<u>18600 SW Pacific</u>	
Street Address of Property (If address has been assigned)	
Subdivision Name, Lot Number(s), Block Number(s)	
Map & Tax Lot Number(s) <u>25121A001100</u>	County <u>WA</u>

Signature(s) of Legal Owner(s) and/or Registered Voter(s)

			<u>9/21/15</u>
Signature <u>Simon Woodburn III member</u>	Owner initial	Voter initial	Date

Signature	Owner initial	Voter initial	Date
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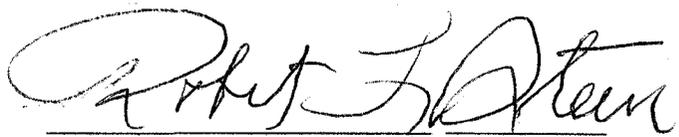
Owner Authorized Signature	Owner initial	Voter initial	Date
----------------------------	---------------	---------------	------

<u>13001 Clackamas River Dr. Oregon City, OR</u>	<u>503-656-0375</u>		
Street Address <u>97045</u>	Phone	Alt Phone	

<u>Same</u>			
Mailing Address	City, State, Zip		

We, the owner(s) of the property described above and/or elector(s) residing on said property understand the annexation process can take more than one year. Therefore, we agree to waive the one-year time limitation on this consent established by ORS 222.173, and further agree that this contract shall be effective indefinitely until _____.

Office Use Only	
Date Received	_____
Ownership Checked	_____
By	_____

	
Signature	Date <u>11/23/15</u>
Signature	Date

If you have questions, call 503-691-3026.



City of Tualatin

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ANNEXATION PROPERTY INFORMATION SHEET

I. EXISTING CONDITIONS IN AREA TO BE ANNEXED

A. Land Area: Acres 2.05 AC

B. General description of territory. (Include topographic features such as slopes, vegetation, drainage basins, floodplain areas, which are pertinent to this proposal).

Site is above grade of 99w & slopes from Pacific
Drive towards Pacific Hwy (99w)

C. Describe land uses on surrounding parcels. Use tax lots as reference points.

North: Funtime RV Sales

South: Vacant

East: Grimms Fuel

West: Residential

D. EXISTING LAND USE:

No. of single-family units 0 No. of multi-family units 0

No. of commercial structures 0 No. of industrial structures 0

Public facilities or other uses 0

What is the current use of the land proposed to be annexed: Vacant

E. Total current year Assessed Valuation – Land \$ 696,620 Structures \$ 0

F. Total existing population 0

G. Is the territory contiguous to the City Limits? yes

H. Is the subject territory inside or outside of the Metro Regional Urban Growth Boundary? Inside

II. CRITERIA FOR APPROVAL OF BOUNDARY CHANGES

The following are the criteria used in making a decision to annex property to the City of Tualatin. **Please address each of these in narrative form.** Be as thorough and complete with your answers as possible. Please see the attached "Criteria Guidelines" sheet for further clarification of the criteria. If you have any questions or need assistance, please contact the City of Tualatin, Planning Division at 503-691-3026.

A. Metro Code 3.09.050(d) states that a boundary change proposal shall address the following minimum criteria:

1. Consistency with directly applicable provisions in an urban service provider agreement or annexation plan adopted pursuant to ORS 195.065;
2. Consistency with directly applicable provisions in an urban planning or other agreements, other than agreements adopted pursuant to ORS 195.065, between the affected entity and a necessary party;
3. Consistency with specific directly applicable standards or criteria for boundary changes contained in comprehensive land use plans and public facility plans;

Annexation Application Instructions
City of Tualatin Community Development Dept - Planning Division

4. Consistency with specific directly applicable standards or criteria for boundary changes contained in the Regional Framework Plan or any functional plan;
 5. Whether the proposed change will promote or not interfere with the timely, orderly and economic provisions of public facilities and services;
 6. If the proposed boundary change is for annexation of territory to Metro, a determination by the Metro Council that the territory should be included in the Urban Growth Boundary shall be the primary criterion for approval;
 7. Consistency with other applicable criteria for the boundary change in question under state and local law.
- B. If the territory described in the proposal is presently included within the boundaries of any of the following types of governmental units, please so indicate by stating the name or names of the governmental units involved.

City NA

County Washington

Highway Lighting District _____

Rural Fire District TUFR

Sanitary District CWS

Water District City of Tualatin

Grade School District Sherwood

High School District Sherwood

Library District Washington County Cooperative

Drainage District CWS

Parks & Recreation District NA

Other _____

Annexation Application Instructions
City of Tualatin Community Development Dept - Planning Division

- C. If any of the above units are presently servicing the territory (for instance, are residents in the territory hooked up to a public sewer or water system), please describe.

APPLICANT'S NAME Bob Stein, Stein Oil Co., Inc.
MAILING ADDRESS 13001 Clackamas River Drive,
OREGON CITY, OR 97045 Suite 200
WORK TELEPHONE (503) 656-0375
HOME TELEPHONE _____
REPRESENTING Stein Oil Co., Inc.
* DATE 7/29/15



City of Tualatin

www.ci.tualatin.or.us

REQUEST FOR EXPEDITED PROCEDURE FOR ANNEXATION TO THE CITY OF TUALATIN

I (We), the undersigned Principle Petitioners, request this Annexation Proposal be approved in an expedited fashion. This request is made pursuant to ORS 222.125 and Metro Code 3.09.045.

This request is made in addition to and supplements all other requirements for filing an annexation petition.

Signature of Principal Petitioners	Address	Map and Tax Lot Number
1. <i>JL Stern</i> <i>member</i> <i>Stern Woodburn LLC</i>	<i>18600 Pacific Dr</i> <i>1300</i>	<i>251214 06100</i>
2.		
3.		
4.		
5.		
6.		
7.		

This form is NOT a petition for annexation. It is only a request to expedite the process. This form must be accompanied by a regular petition and the other forms normally submitted to initiate a proposal.

NE 1/4 SECTION 21 T2S R1W W.M.

2S | 21A

WASHINGTON COUNTY OREGON

SCALE 1"=200'

FOR ASSESSMENT PURPOSES ONLY
DO NOT RELY ON FOR ANY OTHER USE

SEE MAP
2S | 16D

CANCELLED TAX LOTS
5490, 5700, 2500, 2500,
100, 500, 700, 850, 900,
901, 900, 1800, 1800, 1500,
1600, 200, 2001, 2000, 2000,
2000, 2000, 2000, 11, 1000,
2000, 42,

23-80

23-78

88-9

NO. 99

88-15

SEE MAP
2S | 21AB

C.S. 9662
SEE MAP
2S | 22

SEE MAP
2S | 21B

N 60° 11' E
368.7' M/L

POB

N 8° 31' W
208.1' M/L

88-9

S.W. S 67° 30' W
368.6' M/L

S 11° 35' E
255.4' M/L

1200
2.93 Ac

(C.S. No. 12904)

1800
6.15 Ac

1900
5.27 Ac

88-9

PACIFIC

88-9

HIGHWAY

88-15

1801
201 Ac

2000
1.91 Ac

2150
3.85 Ac

2101
6.02 Ac

2200
5.49 Ac

2202
7.32 Ac

2600
2.94 Ac

2200
3.80 Ac

2201
4.35 Ac

2009
1.07 Ac

4500
1.95 Ac

4000
2.21 Ac

3700
1.82 AC

3600
2.04 AC

3800
1.84 AC

3400
2.04 AC

3900
1.95 AC

4200
1.96 AC

3200
1.88 AC

3500
2.04 AC

3300
2.04 AC

3200
1.88 AC

3500
2.04 AC

3200
1.88 AC

ANNEXATION CERTIFIED BY
WASHINGTON COUNTY
CARTOGRAPHY
8/06/15

SEE MAP
2S | 21D

SEE MAP
2S | 21DA

TUALATIN
2S | 21A

1/15/15

Stein Oil Annexation, Proposed new Chevron Station, convenience store and card lock facility at 18600 S.W. Pacific Drive and Cipole Road, Tualatin, OR

My concern is regarding the traffic situation on Pacific Drive. Currently on Pacific Drive beginning at the far east end of the street there are the following:

1. Riverwood Assisted Living, a 60 apartment community that employs 30 staff members, some drive and a few use public transportation. There are an average of 20 visitors and service providers that visit this facility daily. This is approx. **45** vehicle round trips per day using Pacific Drive.
2. Cedar Crest a 56 resident Alzheimer's Special Care Center which employs a staff of 50. Some of these drive and a few use public transportation. This is approx. **45** vehicle round trips per day using Pacific Drive
3. Angel Haven Mfg. Home Community, a 55+ senior community with 125 homes, 184 residents and approx. 163 vehicles. At least 1/3 of these vehicles drive in and out daily, and approx. 20 visitors and service vehicles drive in and out daily. This is **75** vehicle round trips per day using Pacific Drive.

*** Riverwood, Cedar Crest and Angel Haven all have an unusually high number of fire trucks, paramedic vehicles and ambulances arriving and leaving by way of Pacific Drive. Tri-met lift buses also use Pacific Drive to access these communities.****

4. Directly across the street from Angel Haven on Pacific Drive is Diamond Auto Sales and Tualatin Computer Repair. These businesses face Pacific Highway, but are also accessed on Pacific Drive. The traffic from these two businesses is minimal, probably **15** vehicles per day using Pacific Drive.
5. Also across the street from Angel Haven is Willamette Landscape Co. The Company has approx. 25 vehicles and there are approx. 30 employee vehicles. The employees arrive early in the morning and then they leave with the company vehicles. In the late afternoon the company vehicles return and the employees leave. This is approx. **55** vehicle round trips per day on Pacific Drive.
6. Next to Angel Haven going west is Pony Ridge Housing Development that has about 120 homes and each home has an average of two vehicles. This is a mixed neighborhood with families with children, single people and couples. The residents are very mobile and have a high number of working people. Approx. **140** vehicle round trips daily on Pacific Drive.
7. Directly across the street from Pony Ridge is Funtime RV which has a parts department and service department in addition to their large sales lot. This business has a traffic load of approx. **25** vehicles daily on Pacific Drive.

This totals potentially 455 vehicle round trips per day currently on Pacific Drive. Pacific Drive currently has a high traffic load and it is not in condition to handle a higher traffic load. If this facility were to be approved, Pacific Drive would have to be brought up to the standards of a Minor Collector street which it currently does not meet.

The City of Tualatin TSP, February 2013 has classified Pacific Drive as a “Minor Collector” street. They define Minor Collector as: “Primary function is to connect neighborhoods with major collector streets to facilitate movement of local traffic; serves as primary routes into residential neighborhoods; has slower speeds to ensure community livability and safety for pedestrians and bicyclists; on street pedestrian and bicycle facilities are required, bicycle facilities may be exclusive or where street parking is prevalent, shared roadways depending on traffic volumes, speeds and extent of bicycle travel; may be used by public transit.”

The Street Design Standards for Minor Collector indicates a minimum of 62 ft. from inside of sidewalk on the left to the inside of the sidewalk on the right. This 62 feet is broken up into two sidewalks, two planter strips, two bike lanes and two traffic lanes of eleven ft. each. Pacific drive currently has (where there are side walks) a seven foot sidewalk on the north side only of Pacific Drive, a “planter/parking strip” of 12 feet, 21 feet of street and 13 feet of grass on the south side of the street. I measured this at one location outside of Angel Haven and across to Williamette Landscape’s property fence. These figures definitely add up to 53 feet which is 9 feet short of the 62 ft. required as a minimum for a Minor Collector Street.

I would like to address the traffic problems that exist on Pacific Drive:

- (1) The east entrance to Pacific Drive from Pacific Hwy is a very strange difficult "fishhook" with a right hand turn into Riverwood and Cedar Crest. The stop sign from Pacific Drive at Pacific Highway is hidden behind a bank with trees on the top of it by Diamond Auto Sales. There is also a Tri-met bus stop at the same spot. If the planned facility is approved, this whole area should be reworked, the bus stop moved and a "stop ahead" sign installed before the curve on Pacific Drive.
- (2) The intersection of Cipole and Pacific Drive should be a three-way stop instead of the confusing and potentially dangerous current situation. Also the bushes and trees on the west side of Cipole Rd. need to be removed and that area kept clear so that traffic moving west to east on Pacific Drive can see the traffic on Cipole without having to pull into the middle of the intersection.
- (3) The west end of Pacific Drive in front of Loen's Nursery Garden Center needs to be reworked and repaired if there is to be an increase in traffic on Pacific Drive.
- (4) Pacific Drive is hardly wide enough to handle two cars as they pass one another. There is a sidewalk only on portions of Pacific Drive and the rest of the street has grass and weeds along the street. There are residents from Riverwood and Angel Haven who use electric scooters on Pacific Drive. This is a real hazard for them.
- (5) Even with the amount of traffic that currently uses Pacific Drive to access Pacific Highway at Cipole Rd., there have been some very bad accidents at the Cipole Rd./Pacific Hwy. traffic signal.

If this facility is approved, would the exit from the facility onto Pacific Drive be a "left hand only" exit in order that the traffic could be routed back to Cipole Rd. or the west end of Pacific Drive?

Currently there are usually 12 to 20 cars that park on Pacific Drive, if this facility is approved, would Pacific Drive be a "no parking" street?

What does Tualatin and/or Washington County plan to do to correct existing problems and bring Pacific Drive up to standards of safety and livability for the over 500 people who currently live on or adjacent to Pacific Drive?

Will the school bus stops be moved from their current locations?

Will there be "local traffic only" signs installed to keep traffic from the Chevron/convenience store from entering 133rd, 134th and 135th Terraces?

Barbara Ouellette
18485 S.W. Pacific Dr., #21
Tualatin, OR 97062
bcohome@gmail.com

Kristin Lanning
18404 SW 135th Terrace
Tualatin, OR 97062

September 10, 2015

Attention:
Stein Oil
Residents of Pony Ridge
City of Tualatin Planning Division
Citizen Advisory Committee: Tualatin Planning Commission

I am writing to express a list of concerns I have related to the proposal to annex and develop the property located at 18600 SW Pacific with a Chevron Gas Station, Red Barn Convenience Store, and a card lock facility.

My primary concerns involve the health and safety of the residents of my neighborhood, the environmental impact, and (to a much lesser degree) the aesthetic impact on our community.

The Pony Ridge neighborhood is a quiet group of about 100 houses and 250 residents. These homes are exclusively 2-3 bedrooms, and tend to attract young families and empty nesters in particular. The proposed development will have a significant impact on our small community and will pose a threat to the parts of our community that are unique and highly valued by the residents here.

Health Risks

According to the American Cancer Society, which reviewed a number of studies related to this issue, children living near gas stations have a quadrupled risk of developing leukemia. Adults also have an increased of two types of leukemia and other blood-related cancers. This risk is related to high levels of exposure to the chemical benzene, which is found in high concentrations near gas stations for a variety of reasons that are not manageable by gas station companies. The use of a card lock system, and consequently unmonitored refueling, increases this risk further.

The risks of benzene are well documented by other agencies as well, including The International Agency for Research on Cancer (IARC), which is part of the World Health Organization (WHO). Based on a review of the evidence, the IARC determined that benzene is linked to severe illnesses including three types of leukemia, multiple myeloma (a blood cancer) and non-Hodgkin lymphoma.

The National Toxicology Program (NTP), which is a joint venture with the National Institutes of Health, Centers for Disease Control, and the Food and Drug Administration,

classifies benzene as a carcinogen—that is, a chemical known to cause cancer, as does US Environmental Protection Agency.

Locating a gas station near a residential area exposes families to benzene on a daily, long-term basis, and the health risks of benzene are known to increase with the length of exposure. Due to these risks to human health, studies recommend that gas stations be located at least 100 meters from residential areas, particularly in areas with vulnerable people such as children and older adults. By my calculation, the location of the proposed development will be located within 100 meters of about 15 houses.

Leukemia is the most common form of childhood cancer, and occurs most often in children ages 2 to 4. For children in this age range, the cancer survival rate is only about 50%. As one of the eighteen families potentially affected by this risk, particularly as I am currently pregnant with our first child, these statistics are both alarming and heartbreaking.

It is precisely these statistics and risk factors that have led to many communities restricting gas stations from being located near residential areas. In fact, a preliminary search of Tualatin's gas stations shows this to be an unprecedented move in this city, as other gas stations are located in business and industrial parks over 500 feet from residences.

There is no shortage of available lots in our area for which developing a gas station would be a safe and responsible option. Next door to a neighborhood is a very poor choice for our community, and seriously jeopardizes the health and safety of both children and adults. I strongly believe that the business and commercial advantages are simply not worth the risk to our community and its most vulnerable residents.

Environmental Risks

Our community adjoins a small, beautiful walking trail that overlooks the Tualatin River. The Tualatin River National Wildlife Refuge is about 7/10 of a mile from the lot of the proposed development.

Research suggests that small amounts of spilled gasoline over long periods of time has a significant effect on the surrounding environment. According to an article published by Johns Hopkins in 2014, researchers estimate that, conservatively, about 1,500 liters of gasoline are spilled each decade at a typical gas station. Again, I imagine this amount to be even higher given an unmonitored card-lock system with 24-hour access.

The Johns Hopkins article states that the environmental impact of gas stations has been poorly studied and understood thus far. This is particularly concerning considering the proximity of this lot to both the Tualatin River and the Wildlife Refuge, as rain water and natural seepage into groundwater will undoubtedly expose these areas to benzene and other harmful chemicals.

In addition to the inevitable risks of daily, small spills, there is also a risk of leaking in the underground storage tank used by the gas station. According to a report from the Sierra Club on underground storage tanks (UST), "one gallon of petroleum can contaminate one million gallons of water. One pin-prick sized hole in an UST can leak 400 gallons of fuel a year."

These leaks are not uncommon and are both difficult and costly to address. According to a report from the United States Environmental Protection Agency from May of 2015, over 525,000 leaks have been confirmed since the program's creation, with 40 states spending 1 billion dollars annually to clean up leaking underground storage tanks. Although cleanup from an underground storage leak is undoubtedly always impactful to the environment, a leak in such close proximity to both a river and a wildlife preserve would undoubtedly have a profound impact on sensitive nature and wildlife.

Aesthetic risks

Although the health and environmental impact of a gas station are my primary concerns, I will also briefly mention how the proposed development affects the aesthetics of our little community.

One of the things that drew my husband and me to this neighborhood is the sense of peace and safety that was clear in our neighborhood. Despite the proximity of 99W, I am continually amazed at how removed our street feels from the bustle of even the small cities of Tigard and Sherwood. Our street is traveled exclusively by residents and visitors, and at night the streets are quiet and the stars are bright. Often my husband and I will go for walks on Pacific, enjoying the fresh air of the green belt and the field, and listening to crickets and frogs.

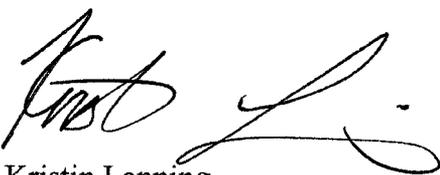
The proposed development will expose our neighborhood to light, smell, and sound pollution at all hours of the day and night, in addition to 24-hour traffic, and some of the invaluable aesthetic qualities of our community will be lost. This concern would be nonexistent if this development was located in a part of our city that is not primarily residential in nature.

Summary

The proposed development poses a threat to the health of my community and its surrounding environment. Locating this type of business in a residential area is a short-sighted and irresponsible choice that will have a significant impact on my family and the families around me. I cannot overstate that the health and environment of this development need to be researched and weighed by involved parties, as these impacts are irreversible once in place.

Thank you for your time and consideration.

Sincerely,



Kristin Lanning

References:

EPA website: Underground Storage Tank Program: <http://www.epa.gov/oust/aboutust.htm>

American Cancer Society: Benzene: www.cancer.org

Center for Disease Control and Prevention: Facts about Benzene:

<http://www.bt.cdc.gov/agent/benzene/basics/facts.asp>

Study published in Epidemiology Journal (2003): "Leukemia risk associated with low-level benzene exposure." <http://www.ncbi.nlm.nih.gov/pubmed/14501272>

Study published in Published by Occupational Environmental Medicine (2009): "Acute childhood leukaemia and residence next to petrol stations and automotive repair garages: the ESCALE study (SFCE)." <http://www.ncbi.nlm.nih.gov/pubmed/19213757>

Article published by Johns Hopkins University (2014): "Small Spills at Gas Stations Could Cause Significant Public Health Risks Over Time" <http://www.jhsph.edu/news/news-releases/2014/small-spills-at-gas-stations-could-cause-significant-public-health-risks-over-time.html>)

Sierra Club report (2004): "Leaking Underground Storage Tanks: A Threat to Public Health & Environment" <http://www.csu.edu/cerc/documents/LUSTThreattoPublicHealth.pdf>

Article published by Front Porch (2015): "Risks of Benzene Emissions from Gas Stations" <http://frontporchstapleton.com/article/risks-benzene-emissions-gas-stations/>

Article published by Scientific American (2009): "Is it safe to live near a gas station?" <http://www.scientificamerican.com/article/is-it-safe-to-live-near-gas-station/>

Article published by Discovery News (2011): "Gas stations are toxic neighbors" <http://news.discovery.com/earth/gas-stations-are-toxic-neighbors.htm>

Article published by ScienceDaily (2011): "Gas stations pollute their immediate surroundings, Spanish study finds" <http://www.sciencedaily.com/releases/2011/02/110204130315.htm>

I ask the city of Tualatin planning staff to personally come and visit the proposed location before more work is done on the proposed gas station development submitted by Stein Oil. You may contact me to arrange for this on-site visit.

Next, I would like to propose that the City planning staff, and at least two of the Pony Ridge and Angel Haven community members meet to discuss a "master plan" for the commercial area along 99w and Pacific Drive adjoining our communities. I suggest this meeting occur BEFORE any more work is done by staff on the Stein Oil development proposal. Two topics that we would like to discuss with the City Planning staff are:

- First, we would like to discuss that an "over lay" be added to this specific commercial area which allows general commercial, but the over-lay limits the commercial to lighter uses which are more compatible with the residential communities located along Pacific Drive. Such allowed uses in an over-lay might be low rise offices for medical, dental, small use retail for dog groomers, etc. An overlay such as this would provide a needed buffer between the residential areas and the commercial development. Tualatin, very often, provides a buffer between residential areas and commercial and industrial zones. Most recently, Councilor Beikman in the last City Council work session gave her concern that there needs to be more of a buffer between the residential areas and the proposed commercial and industrial areas in Basalt Creek planning area. The same consideration should be given this heavily residential area with its many children and aged populations.
- Second, we are concerned about the width of Pacific Drive and needed improvements to accommodate future commercial growth.

In summary, we would like to work with City planning staff to prepare an over-all design for this area which all can agree with and which gives proper consideration to the existing residential area and, also, allows for "light" commercial businesses to be successful.

And last, I am also asking the City Planning staff and our City Councilors to consider the negative impacts of the Stein Oil development proposal prior to annexation and approval of the plan.

In the interest of time, I will simply summarize some the adverse affects:

1. Traffic to and from a 24 hour/ 7 days a week gas station will create a large volume of traffic
2. Safety- the high population of elderly and children are unnecessarily put at risk with this type of commercial use
3. Property Value- the presence of a gas station will de-value our owner-occupied properties due to the 24/7 traffic, lights, etc. of a gas station in such close proximity to the residential areas.

Thank You,

Ata (Ted) Saedi

atasaedi@hotmail.com 503-925-9625

Sept 10, 20015

Letterhead (if available)

(Date)

(Name)

(Address)

(City, State Zip)

RE: (Project name, description, location)

Dear Property Owner:

You are cordially invited to attend a meeting on (this date) at (this time) and at (this location). This meeting shall be held to discuss a proposed project located at (address of property, cross streets). The proposal is to (describe proposal here).

The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet and discuss this proposal and identify any issues regarding this proposal.

Regards,

(Your name)

(Company name)

(Contact phone number and email)

As the applicant for the Stein Woodbar LLC

project, I hereby certify that on this day, August 28, 2015 notice of the

Neighborhood / Developer meeting was mailed in accordance with the requirements of the

Tualatin Development Code and the Community Development Department - Planning

Division.

Applicant's Name: DAVE KIMMEL
(PLEASE PRINT)

Applicant's Signature: Dave Kimmel

Date: 8-29-15

PDG Planning Design Group
1335 SW 66th Ave. #201
Portland, Oregon 97225
PH: 503-329-5399
Email: pdgplanning@comcast.net

August 26, 2015

RE: Stein Oil Annexation with Gas Station, Convenience Store and Card Lock

Dear Property Owner:

You are cordially invited to attend a meeting on September 10, 2015 at 6:00 PM and at 18878 SW Martinazzi (Tualatin Library Community Room). This meeting shall be held to discuss a proposed project located at 18600 Pacific at the intersection of Highway 99W and Cipole. The proposal is to annex the property and then develop a Gas Station, Convenience Store and Card Lock fueling facility.

The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet and discuss this proposal and identify any issues regarding this proposal.

Regards:

David P. Kimmel
PDG Planning Design Group
1335 SW 66th Ave., Suite 201
Portland, OR 97225
503-329-5399
pdgplanning@comcast.net

PDG Planning Design Group
1335 SW 66th Ave. #201
Portland, Oregon 97225
PH: 503-329-5399
Fax: 503-327-8456
Email: pdgplanning@comcast.net

September 14, 2015

Neighborhood Development/Annexation Meeting
Meeting Date: 9/10/15
Time: 6:00 PM
Location: Tualatin Public Library

Dave Kimmel, Planning Design Group, introduced himself, welcomed the attendees and began the presentation shortly after 6:00 PM. (See three attached Sign In sheets for list of attendees). He also introduced Bob Stein, Sue Stein and Ann Stein as the new property owners.

The following notes summarize his presentation to the group and responses from the group including letters submitted by neighbors.

The proposed project is to annex the existing parcel into the City of Tualatin and develop a Chevron Gas Station with a 4,000 square foot convenience store with coffee drive-thru and a card lock facility for commercial vehicles. Mr. Kimmel expressed that this plan is the concept and includes all the items that the developer would like to construct, but that not all would be constructed initially. The card lock facility would initially consist of a single island, with the possibility of future expansion to add a second fueling island.

Land use approval for the proposed project will involve two steps: first, annexation into the City of Tualatin; and second, architectural review and approval by the City of Tualatin. This meeting is intended to cover both aspects of the proposed development plan. Mr. Kimmel attempted to explain the annexation procedures, and was assisted by Cindy Hahn from the City who was also in attendance.

The property is in the City of Tualatin's General Commercial Plan District which allows the gas station, convenience store and the card lock facility. Access is proposed to be from both Highway 99W and also a single driveway on Pacific Drive. The developer will be providing additional property dedication along all three frontages as well as installing needed public improvements including sidewalks, bike lanes and landscape buffers as required by the City Engineering department.

**NEIGHBORHOOD/DEVELOPER MEETING
AFFIDAVIT OF MAILING**

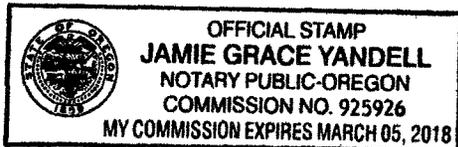
STATE OF OREGON)
) SS
COUNTY OF WASHINGTON)

I, Dave Kimmel, being first duly sworn, depose and say:

That on the 28th day of September, 2015, I served upon the persons shown on Exhibit "A," attached hereto and by this reference incorporated herein, a copy of the Notice of Neighborhood/Developer meeting marked Exhibit "B," attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses shown on said Exhibit "A" are their regular addresses as determined from the books and records of the Washington County and/or Clackamas County Departments of Assessment and Taxation Tax Rolls, and that said envelopes were placed in the United States Mail with postage fully prepared thereon.

Dave Kimmel
Signature

SUBSCRIBED AND SWORN to before me this 21st day of September, 2015.



Jamie Yandell
Notary Public for Oregon
My commission expires: March 05, 2018

RE: _____

ANNEXATION CERTIFICATION OF SIGN POSTING



The applicant shall provide and post a sign pursuant to Tualatin Development Code (TDC) 31.064(2). Additionally, the 18" x 24" sign must contain the application number, and the block around the word "NOTICE" must remain **medium purple** composed of the **RGB color values Red 112, Green 48, and Blue 160**. Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at <http://www.ci.tualatin.or.us/departments/communitydevelopment/planning>.

NOTE: For larger areas, the Community Development Department may require the posting of additional signs in conspicuous locations.

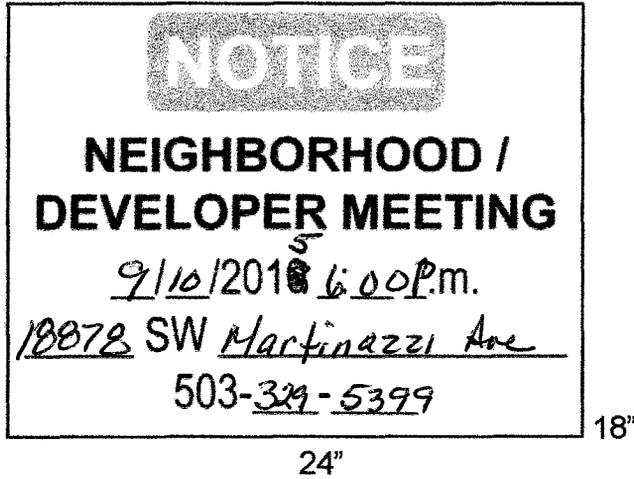
As the applicant for the Stem Woodburn LLC project, I hereby certify that on this day, 3 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Department - Planning Division.

Applicant's Name: DAVE Kimmel
(PLEASE PRINT)

Applicant's Signature: Dave Kimmel

Date: 9-25-15

**NEIGHBORHOOD / DEVELOPER MEETING
CERTIFICATION OF SIGN POSTING**



In addition to the requirements of TDC 31.064(2) quoted earlier in the packet, the 18" x 24" sign that the applicant provides must display the meeting date, time, and address and a contact phone number. The block around the word "NOTICE" must remain **orange** composed of the **RGB color values Red 254, Green 127, and Blue 0**. Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates >.

As the applicant for the

Stein Oil Annexation at 18600 SW Pacific project, I

hereby certify that on this day, August 27, 2015 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Department - Planning Division.

Applicant's Name: DAVID P. Kimmel
(PLEASE PRINT)

Applicant's Signature: David P. Kimmel

Date: 8/27/15

ANN-15-0002

To lessen the bulk of the notice of application and to address privacy concerns, this sheet substitutes for the photocopy of the mailing labels. A copy is available upon request.

Discussions / Questions and Answers

The majority of all questions were related to the gas station facility. Most neighbors had comments and concerns about this particular type of development within their neighborhood.

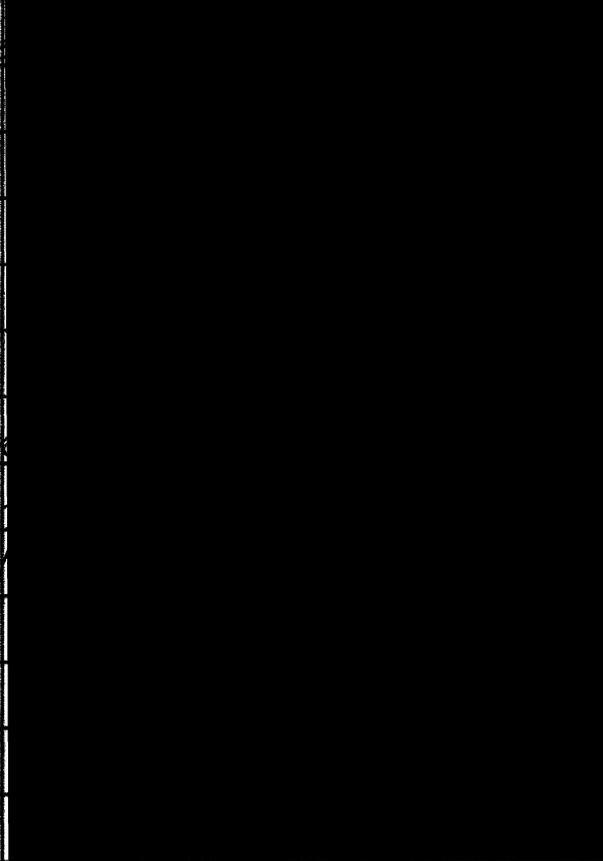
Many stated health concerns. Letters submitted by the attendees are included with the submittal.

Traffic was an additional question. Mr. Kimmel responded that the applicant has hired a traffic engineer to determine the required design for access from Highway 99W and that the applicant and their engineer would be working with ODOT, Washington County and the City to ensure a safe design. This could include a deceleration lane or other improvements that have not been studied at this point.

Pacific Drive is primarily used by local residents and the developer does not anticipate the customers would utilize this street for other than access back to Highway 99W as it does not connect to any other through streets. There could be some additional traffic on the street should residents choose to utilize the development.

Each participant that wanted to speak was provided an opportunity to express their opinions, concerns or ask questions. Once everyone had the opportunity to speak Mr. Kimmel thanked all for attending and concluded the meeting at approximately 7:45 p.m.

NAME	ADDRESS	PHONE #
Sue Steen		75
JENNIFER THOMAS		33
GERRY MCGUIRE		65
Kathie Core Donald + Sharon Wenne		
Clara Johnson		
Avery Klein		75
Bob Klein		
Kristy Moore		
Martha Acebo		
Jack Acebo		
John Maher		
Kathy Maher		
TED SAEDI		
Andy Stirling		
Randy Gilchrist		
KATHY GANNETT		
Patrick McGuire		
Kelly McDonald		
Ryan McDonald		
Janene Wilson		
Andy Wilson		

September 10, 2015	18600 Pacific Dr.	Neighbor Mt
NAME	ADDRESS	PHONE #
Barbara Ouellette		35
NORMAN SCHULTZ		
Virginia Green		
COKO		
Emily Gonzalez		
Kristine Koneck		0
BRIAN & ALISON CRAIG		
DEWY + LADAW L		8
ARTHUR DOUGHTY		4
Mike Drik		0
DAN HARDY		
Goeli Saedi		
Robin Stephenson		37

September 10, 2015	18600 Pacific Dr.	Neighbor Mt
NAME	ADDRESS	PHONE #
Jan G. [unclear]	[REDACTED]	[REDACTED]
Stephen Lanning		[REDACTED]
David Reed		[REDACTED]
	WA	

 **NOTICE**
ANNEXATION
ANN-15-0002
For more information call
503-891-9128 or visit
www.lualaba.gov

15-0002

NOTICE
NEIGHBORHOOD /
DEVELOPER MEETING
9/10/2015 6:00 p.m.
18878 SW Martinazzi Ave
503-329-5399



NOTICE

ANNEXATION ANN-15-0002

For more information call
503-691-3026 or visit
www.tualatinoregon.gov

NOTICE

**NEIGHBORHOOD /
DEVELOPER MEETING**

9/10/2015 6:00 p.m.
18878 SW Martinazzi Ave
503-329-5399



 **NOTICE**
ANNEXATION
ANN-15-0002
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NOTICE
NEIGHBORHOOD /
DEVELOPER MEETING
9/10/2015 6:00 p.m.
18878 SW Martinazzi Ave
503-329-5399

Pacific Drive Gas Station Annexation

Transportation Impact Study
Tualatin, Oregon

DATE:

November 17, 2015

PREPARED FOR:

Dave Kimmel
PDG Planning Design Group

PREPARED BY:

Daniel Stumpf, EI
Michael Ard, PE



EXPIRES: 12/31/15



LANCASTER
ENGINEERING



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Executive Summary

1. The proposed development will consist of a gas station with 20 vehicle fueling positions, a 4,005 square foot convenience store, and a coffee shop facility with a drive-through window as part of the convenience store. The project site is located directly north of SW Pacific Highway (OR-99W), directly south of SW Pacific Drive, and directly east of SW Cipole Road in Tualatin, Oregon.
2. The trip generation calculations show that the proposed development is projected to generate a net new total of 102 trips during the morning peak hour and 146 trips during the evening peak hour.
3. Based on the operational analysis, the study area intersections are projected to operate within ODOT, Washington County, and City of Tualatin performance standards through year 2017 with or without full build-out of the proposed development. At the year 2035 planning horizon, the unsignalized intersections are projected to continue to operate acceptably either with or without the addition of site trips from the proposed zone change. The signalized intersection of SW Pacific Highway at SW Cipole Road is projected to operate with volumes exceeding capacity during the peak hours.
4. Based on the queuing analysis, the projected 95th percentile queues at the study area intersections are provided adequate vehicle storage space and queues are not projected to back up to adjacent intersections. Therefore, no queuing-related mitigations are recommended.
5. Left-turn lane warrants are not projected to be met for any of the study area intersections along SW Pacific Drive under any of the year 2017 analysis scenarios. Right-turn lane warrants are projected to be met for the proposed right-in site access along SW Pacific Highway under 2017 build-out conditions. Due to insufficient main and side-street traffic volumes, traffic signal warrants will not be met for any of the unsignalized study area intersections under any of the year 2017 analysis scenarios.
6. Based on detailed analysis, adequate sight distance is projected to be available for the proposed site access along SW Pacific Drive. No sight distance mitigations are necessary or recommended.
7. Based on the most recent five years of crash data at the study area intersections crash rates are relatively low, crash severity was relatively low, and no significant crash patterns are evident. The crash data does not appear to be indicative of any significant safety hazards. Accordingly, no safety mitigations are recommended.
8. Based on the analysis, the proposed zone change is in conformance with the City of Tualatin's Comprehensive Plan, and the levels of development allowable under the proposed CG zoning were already included in the City's planning model and the Transportation System Plan. Accordingly, the City of Tualatin may find that the proposed zone change does not significantly affect an existing or planned transportation facility, and the Transportation Planning Rule is satisfied.



Project Description

Introduction

The proposed development will consist of a gas station with 20 vehicle fueling positions, a 4,005 square foot convenience store, and a coffee shop facility with a drive-through window as part of the convenience store. The project site is located directly north of SW Pacific Highway (OR-99W), directly south of SW Pacific Drive, and directly east of SW Cipole Road in Tualatin, Oregon.

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

1. SW Pacific Highway at SW Cipole Road
2. SW Pacific Drive at SW Cipole Road
3. SW Pacific Drive at SW 135th Terrace
4. SW Pacific Drive at SW 134th Terrace
5. SW Pacific Drive at SW 133rd Terrace

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 land uses, and to determine any mitigation that might be necessary to do so.

Location Description

The project site is located directly north of SW Pacific Highway (OR-99W), directly south of SW Pacific Drive, and directly east of SW Cipole Road in Tualatin, Oregon.

The subject site is located near the City of Tualatin's urban growth boundary, with predominately agricultural/vacant land to the west, single family residential homes to the north, general commercial uses to the east, and with general manufacturing and other industrial uses to the south.

Vicinity Streets

SW Pacific Highway (OR-99W) is classified as a Major Arterial by the City of Tualatin and as a Statewide Highway by the Oregon Department of Transportation (ODOT). In the vicinity of the subject site, the roadway has two through lanes in each direction separated by a grass median and has a posted speed of 55 mph. Bicycle lanes are provided along both sides of the roadway.

SW Pacific Drive is classified as a Minor Collector by the City of Tualatin. The roadway has a two-lane cross-section without centerline striping delineating directional travel lanes and has a posted speed of 25 mph. Curbs and sidewalks are provided along the north side of the roadway east of SW Cipole Road.



SW Cipole Road is classified as a Major Collector by the City of Tualatin. The roadway has a two-lane cross-section and has a posted speed of 45 mph. Some on-street parking is available on both sides of the roadway where sufficient shoulder width is provided. Curbs, sidewalks, and bicycle lanes are not provided along this roadway within the site vicinity.

SW 135th, 134th, and 133rd Terrace are classified as Local Streets by the City of Tualatin. These roadways have two-lane cross-sections without centerline striping delineating directional travel lanes and each has a posted speed of 25 mph. On-street parking is permitted along both sides of these roadways. Curbs and sidewalks are provided along both sides of these roadways.

Study Area Intersections

The intersection of SW Pacific Highway at SW Cipole Road is a four-legged intersection that is controlled by a traffic signal. The north- and southbound approaches of SW Cipole Road have one shared left-turn/through/right-turn lane. The eastbound approach has one left-turn lane served by protected phasing, two through lanes, and one shared right-turn/bicycle lane. The westbound approach has one left-turn lane served by protected phasing, one through lane, one shared through/right-turn lane, and one bicycle lane to the right of the outermost standard travel lane. Crosswalks are marked across the northern, southern, and western intersection legs. The crosswalk across the eastern intersection leg is closed.

The intersection of SW Pacific Drive at SW Cipole Road is a three-legged intersection that is stop-controlled for the eastbound SW Pacific Drive approach and the northbound approach of SW Cipole Road. Northbound right-turns are permitted without stopping. The northbound approach has one shared left-turn/right-turn lane. The eastbound approach has one shared through/right-turn lane. The westbound approach has one shared left-turn/through lane. All intersection crosswalks are unmarked.

The remaining three study intersections of SW 135th Terrace, SW 134th Terrace, and SW 133rd Terrace at SW Pacific Drive are three-legged intersections that are stop-controlled for their southbound approaches. The southbound approaches each have one shared left-turn/right-turn lane. The eastbound approaches each have one shared left-turn/through lane. The westbound approaches each have one shared through/right-turn lane. All intersection crosswalks are unmarked.

A vicinity map displaying the project site, vicinity streets, and the study area intersections with their associated lane configurations is shown in Figure 1 on page 7.

Traffic Volumes

Traffic counts were conducted at study area intersections on Thursday, September 17th, 2015 and Wednesday, September 16th, 2015 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM, respectively. Data used from the morning and evening peak hours reflect each intersection peak hour.



Figure 2 on page 8 shows the existing morning and evening peak hour traffic volumes for the study area intersections.

Transit

Two transit lines serve the immediate site vicinity, both of which operate along SW Pacific Highway. The nearest bus stops to the subject site are located at the intersection of SW Pacific Highway at SW Cipole Road where the westbound bus stop is located at the northwest corner of the intersection while the eastbound bus stop is located at the southwest corner. The westbound and eastbound bus stops are located within 300 feet walking distance from the subject site.

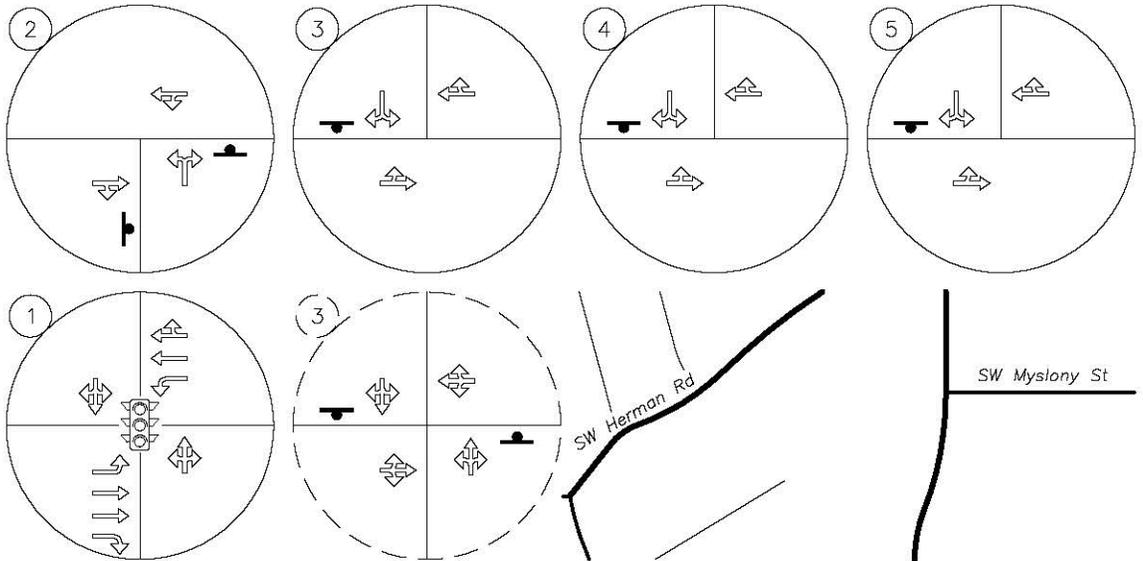
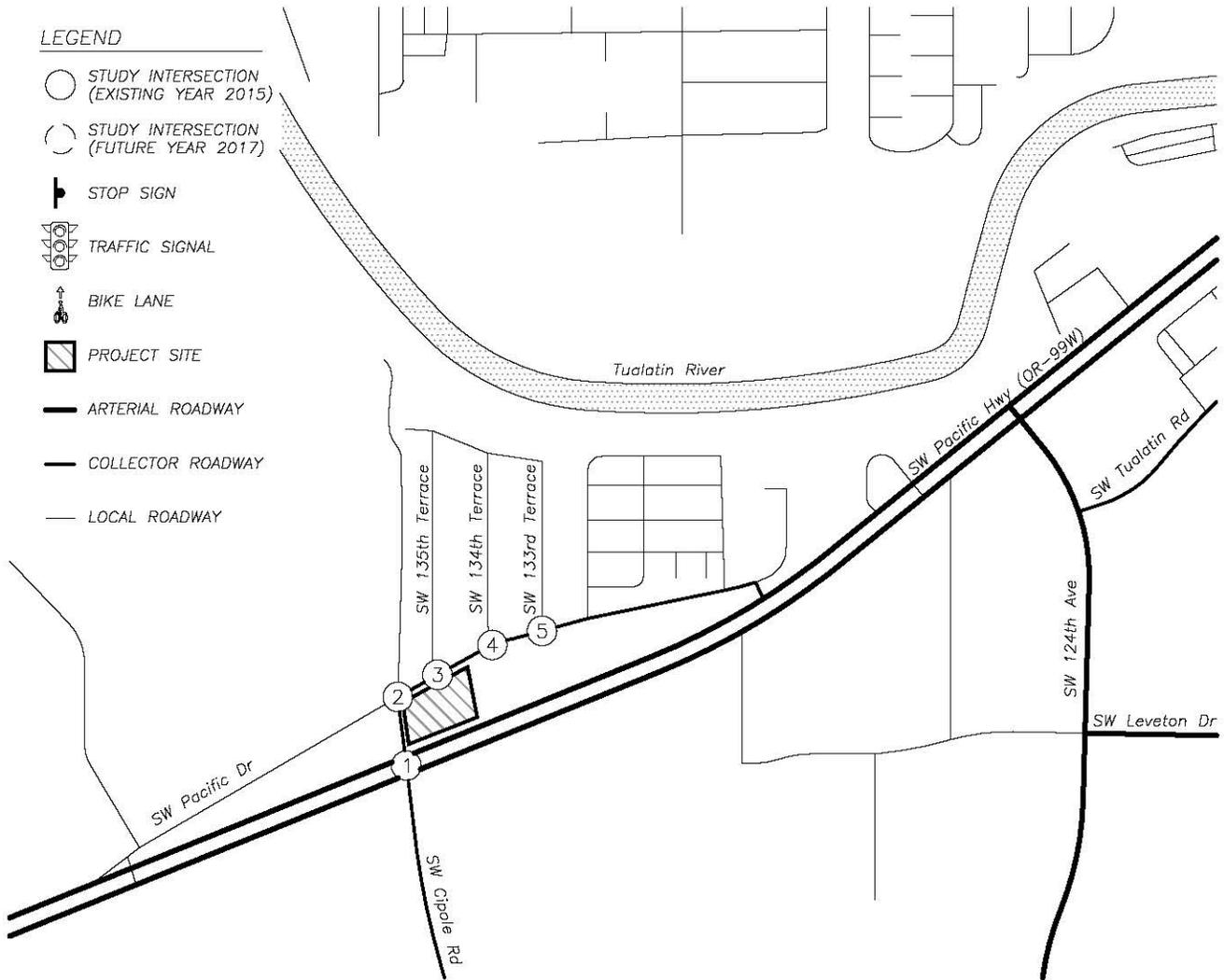
#93: TriMet bus line #93 – *Tigard/Sherwood* provides service between the Tigard Transit Center and Sherwood, specifically at the intersection of SW Washington Street at SW Railroad Street. Weekday service is scheduled from about 4:30 AM to 1:15 AM and has headways of approximately 30 to 45 minutes. Saturday service is scheduled from about 4:30 AM to 1:15 AM and has headways of approximately 30 to 40 minutes. Sunday service is scheduled from about 4:30 AM to 1:15 AM and has headways of approximately 20 to 60 minutes.

#94: TriMet bus line #37 – *Pacific Hwy/Sherwood* provides service between the Portland City Center, specifically at the intersection of SW 5th Avenue at SW Morrison Street, and Sherwood, specifically at the intersection of SW Washington Street at SW Railroad Street. Weekday service is scheduled from about 5:45 AM to 8:30 PM and has headways of approximately 10 to 50 minutes.

Detailed bus schedules are provided in the appendix.

LEGEND

-  STUDY INTERSECTION (EXISTING YEAR 2015)
-  STUDY INTERSECTION (FUTURE YEAR 2017)
-  STOP SIGN
-  TRAFFIC SIGNAL
-  BIKE LANE
-  PROJECT SITE
-  ARTERIAL ROADWAY
-  COLLECTOR ROADWAY
-  LOCAL ROADWAY

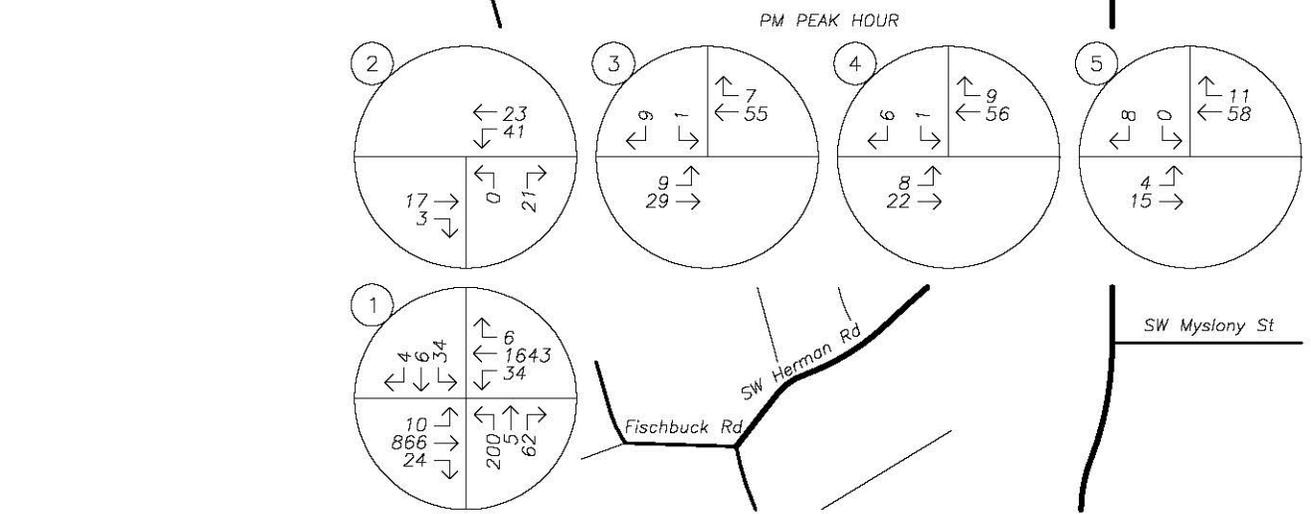
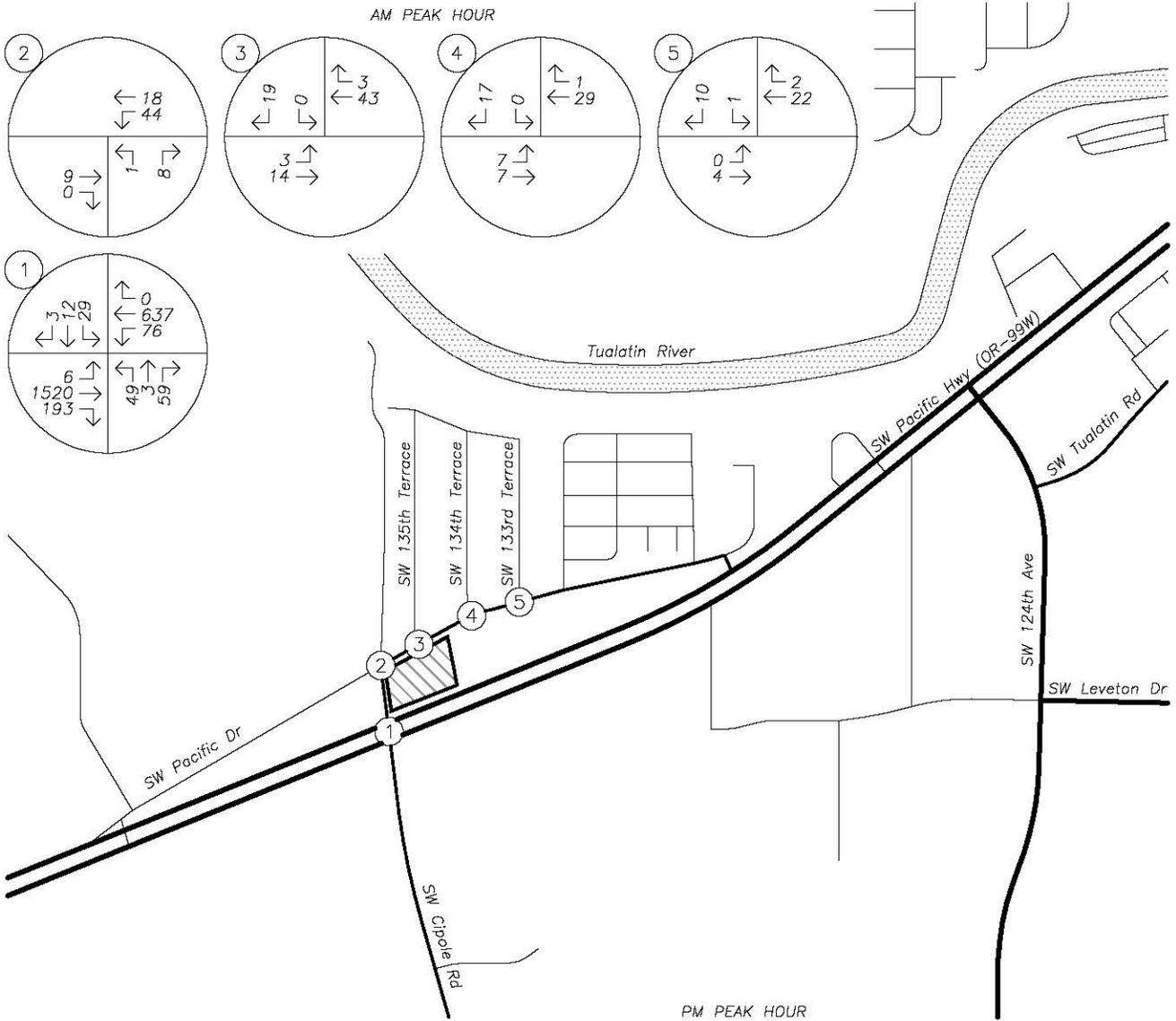


VICINITY MAP



FIGURE 1

PAGE 7



TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours





Site Trips

Trip Generation

The proposed development will construct 10 fuel pumps, for a total of 20 vehicle fueling positions, a 4,005 square foot convenience store, and a coffee facility with a drive-through window as part of the convenience store. Due to the unique nature of the facility the following trip generation methodology was reviewed by the Oregon Department of Transportation (ODOT) and the City of Tualatin and used to estimate trip generation of the proposed development.

To estimate the number of trips that will be generated by the proposed development, trip rates from the *TRIP GENERATION MANUAL*¹ were used. Data from land-use code 945, *Gasoline/Service Station with Convenience Market*, were used to estimate the proposed developments trip generation based on the number of vehicle fueling positions and square footage of gross floor area of the convenience store. Estimated trips generated between rates based on the number of vehicle fueling positions and square footage of gross floor area of the convenience store were averaged to determine the total trips generated by the gas station and convenience store. Data from land-use code 945 was used instead of data from land-use code 853, *Convenience Market with Gasoline Pumps*, since the proposed development is expected to utilize the convenience market as an ancillary use to the fuel pumps. In addition, by using the trip generation methodology stated above land-use code 945 estimates a higher trip generation than land-use code 853 and accordingly projects a worst case scenario.

In addition to the fueling facility and convenience market, the proposed development will include a coffee shop facility with a drive-through window. Because the coffee shop will occupy a portion of the convenience market, an assumed 100 square feet of the convenience market space will be allotted to the coffee shop facility. The assumed 100 square feet is the typical size of a coffee kiosk. Data from land-use code 938, *Coffee/Donut Shop with Drive-Through Window and No Indoor Seating*, were used to estimate the proposed coffee shop facility's trip generation based on the square footage of gross floor area. Data from land-use code 945, *Gasoline/Service Station with Convenience Market*, were used to estimate the reduction in square footage of gross floor area within the convenience market that will be allocated to the coffee shop facility.

The proposed development is expected to attract pass-by and diverted trips to the site. Pass-by trips are trips that leave an adjacent roadway to patronize a land use and then continue in their original direction of travel. Diverted trips are trips that divert from a nearby roadway not adjacent to the site to patronize a land use before continuing to their original destination. Pass-by trips do not add additional trips to the transportation system but do add additional turning movements at site access intersections. For this study, diverted trips were treated as primary trips while pass-by trips will be accounted for as 62 percent of trips generated during the morning peak hour and 56 percent of trips generated during the evening

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



peak hour for the *Gasoline/Service Station with Convenience Market* land-use. For the *Coffee/Donut Shop with Drive-Through Window and No Indoor Seating* pass-by trips will be accounted for as 89 percent of trips generated during both the morning and evening peak hours.

The trip generation calculations show that the proposed development is projected to generate a net new total of 102 trips during the morning peak hour and 146 trips during the evening peak hour. The trip generation estimates are summarized in Table 1 and detailed trip generation calculations are included in the technical appendix to this report.

Table 1 - Trip Generation Summary								
	ITE Code	Size	Morning Peak Hour			Evening Peak Hour		
			In	Out	Total	In	Out	Total
Gas/Service Station with Convenience Market								
Gas Pumps - Vehicle Fueling Positions	945	20 vfp	102	101	203	135	135	270
Convenience Market - Gross Floor Area		4,005 sq.ft.	164	165	329	195	195	390
Average Total Trip Generation			133	133	266	165	165	330
<i>Pass-by Trips (AM: 62%, PM: 56%)</i>	945		82	82	164	92	92	184
Net New Trips			51	51	102	73	73	146
Coffee Shop with Drive-Through Window and No Indoor Seating								
Coffee Facility Total Trips	938	100 sq.ft.	15	15	30	4	4	8
<i>Coffee Facility Pass-by Trips</i>			13	13	26	4	4	8
Convenience Market Total Trips	945	100 sq.ft.	4	4	8	5	5	10
<i>Convenience Market Pass-by Trips</i>			2	2	4	3	3	6
Net Total Trips			11	11	22	<u>0</u>	<u>0</u>	<u>0</u>
<i>Net Pass-by Trips</i>			11	11	22	<u>1</u>	<u>1</u>	<u>2</u>
Net New Trips			0	0	0	<u>0</u>	<u>0</u>	<u>0</u>
Total Site Trips			144	144	288	164	164	328
Net New Primary Trips			51	51	102	73	73	146

* Underlined values are negative trips generated rounded up.



Trip Distribution

The directional distribution of site trips to/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.

It is expected that trips to/from the site will utilize the following trip distribution:

- Approximately 55 percent of the site trips will travel to/from the east along SW Pacific Highway.
- Approximately 35 percent of the site trips will travel to/from the west along SW Pacific Highway.
- Approximately 10 percent of the site trips will travel to/from the south along SW Cipole Road.

Trips to and from the proposed development are anticipated to utilize two site accesses. Based on the site layout and traffic controls/lane configurations of the two accesses, site trips are anticipated to utilize site accesses accordingly.

- All exiting site trips will utilize the full-movement site access at SW Pacific Drive.
- Approximately 80 percent of entering site trips that travel westbound along SW Pacific Highway will utilize the right-in site access at SW Pacific Highway.
- All remaining entering site trips will utilize the full-movement site access at SW Pacific Drive.

The trip assignments for the site trips generated by the proposed development during the morning and evening peak hours are shown in Figure 3 on page 13, Figure 4 on page 14, and Figure 5 on page 15 for primary trips, pass-by trips, and total site trips, respectively.

Zone Change Trip Generation

The proposed development requires annexation of the subject property into the City of Tualatin. The property is currently zoned by Washington County as FD-10, Future Development, with a 10-acre minimum lot size. Under the existing FD-10 zoning, the reasonable worst case development scenario would include the construction of a 9,000 square foot day-care facility and a 13,300 square foot public library. To estimate the number of trips that could be generated under the existing zoning, trip rates from the *TRIP GENERATION MANUAL*¹ were used. Data from land-use code 565, *Day Care Center*, and land-use code 590, *Library*, were used to estimate the trip generation based on the square footage of gross floor area.

The trip generation calculations show that the subject property could generate up to 124 trips during the morning peak hour and 208 trips during the evening peak hour under the existing zoning. The trip generation estimates are summarized in Table 2 and detailed trip generation calculations are included in the technical appendix to this report.

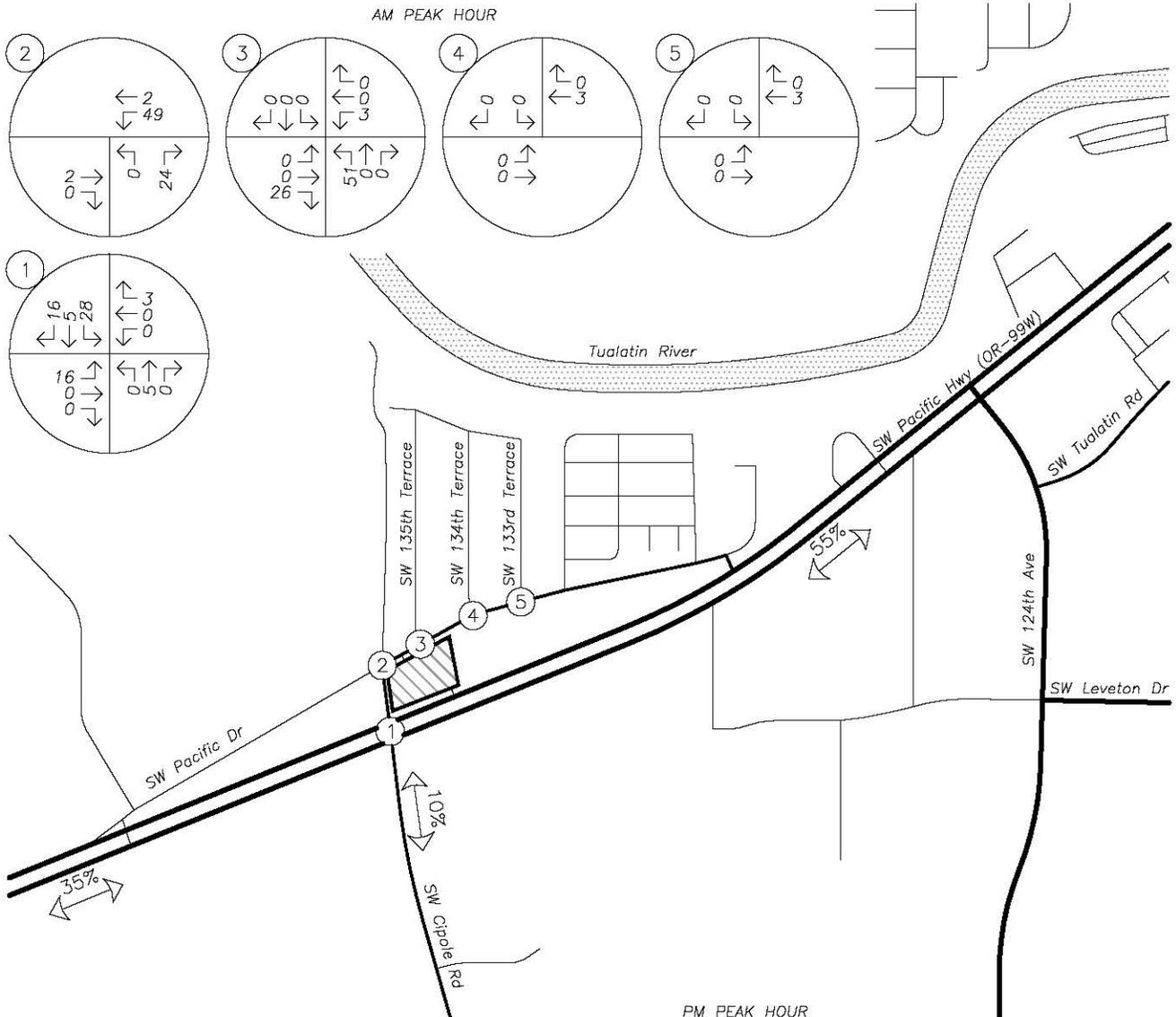
Under the proposed City of Tualatin CG zoning, the proposed development represents the reasonable worst case development scenario, since fuel stations and convenience markets have very high trip



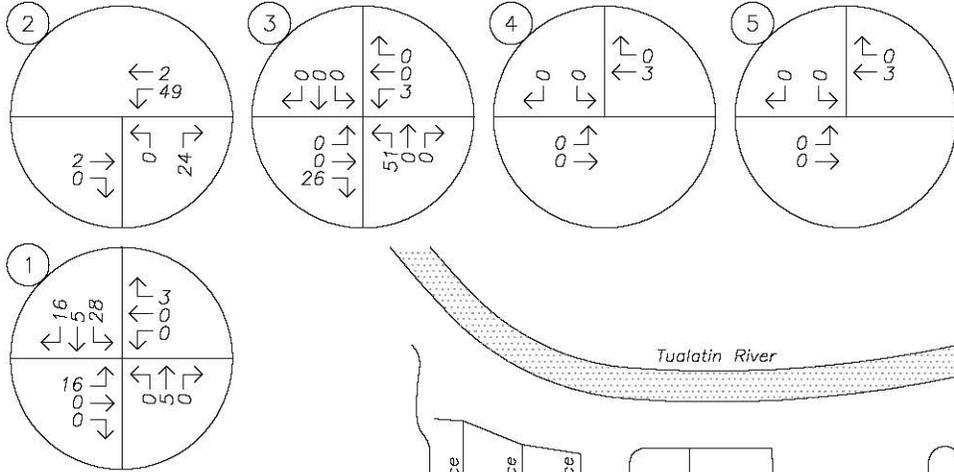
generation rates. Accordingly, the proposed development was used to analyze the potential change in trips associated with the annexation of the subject property into the City of Tualatin.

Table 2 - Zone Change Trip Generation Summary								
	ITE Code	Size	Morning Peak Hour			Evening Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Zoning (CG)			144	144	288	164	164	328
Existing Zoning (FD10)								
Day Care Center	565	9,000 sq.ft.	58	52	110	52	59	111
Library	590	13,300 sq.ft.	10	4	14	47	50	97
Total Trips			68	56	124	99	109	208
Net Change in Trips from Zone Change			76	88	164	65	55	120

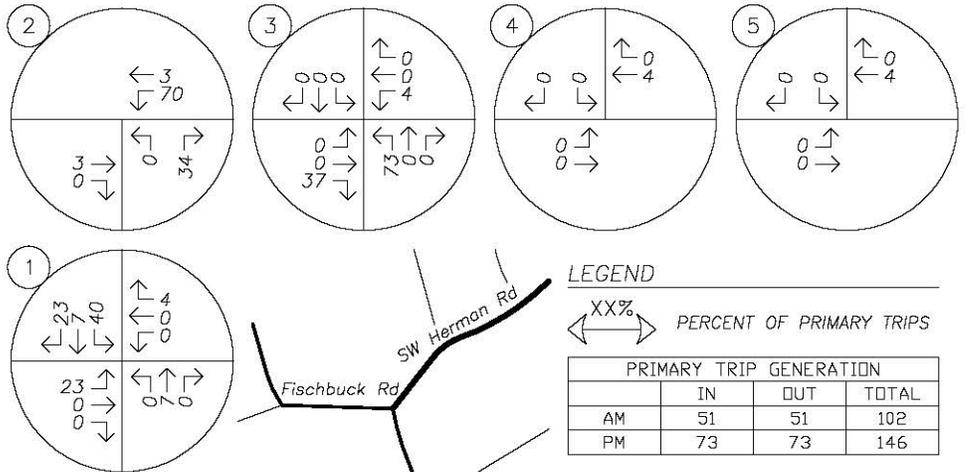
For consistency, the zone change analysis was prepared using the same trip distribution as the proposed development. The trip assignments for the site trips generated during the morning and evening peak hours under the existing zoning scenario are shown in Figure 10, which is included in the technical appendix to this report.



AM PEAK HOUR



PM PEAK HOUR



LEGEND

XX% PERCENT OF PRIMARY TRIPS

PRIMARY TRIP GENERATION			
	IN	OUT	TOTAL
AM	51	51	102
PM	73	73	146

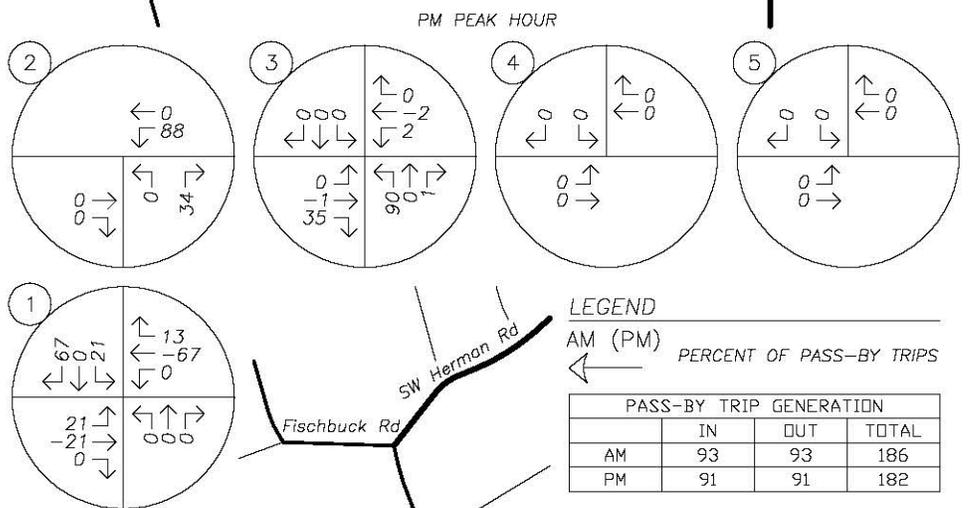
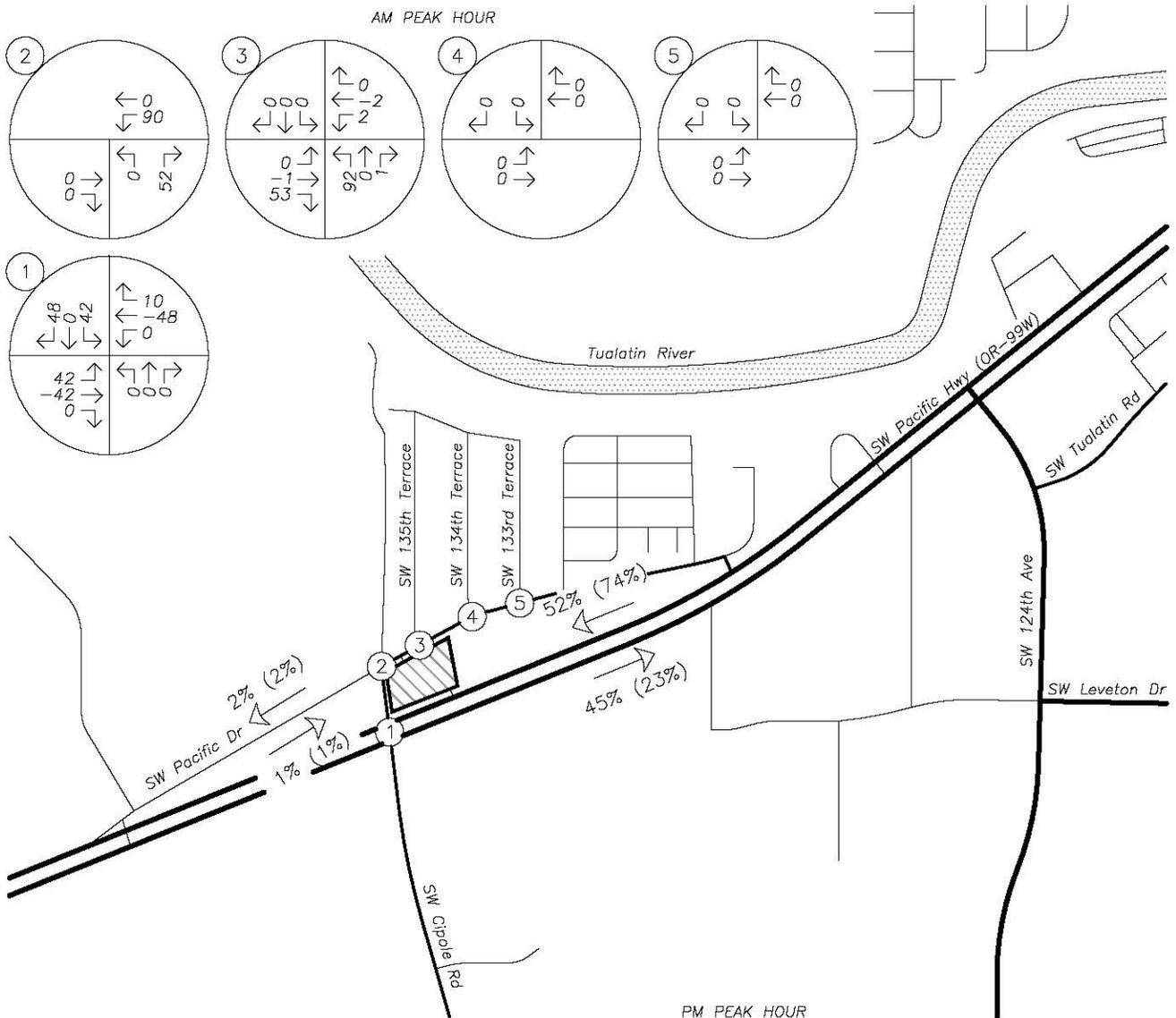


SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Primary Site Trips
AM & PM Peak Hours



FIGURE 3

PAGE 13

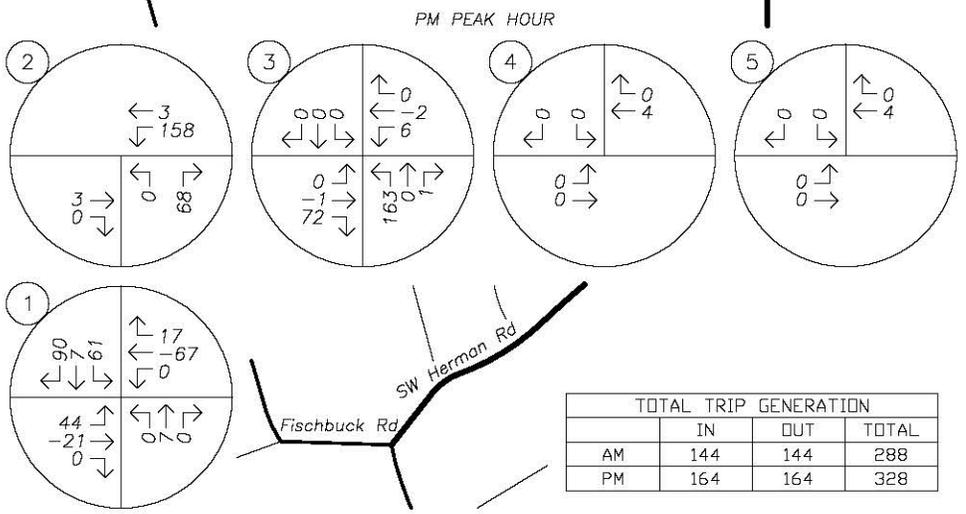
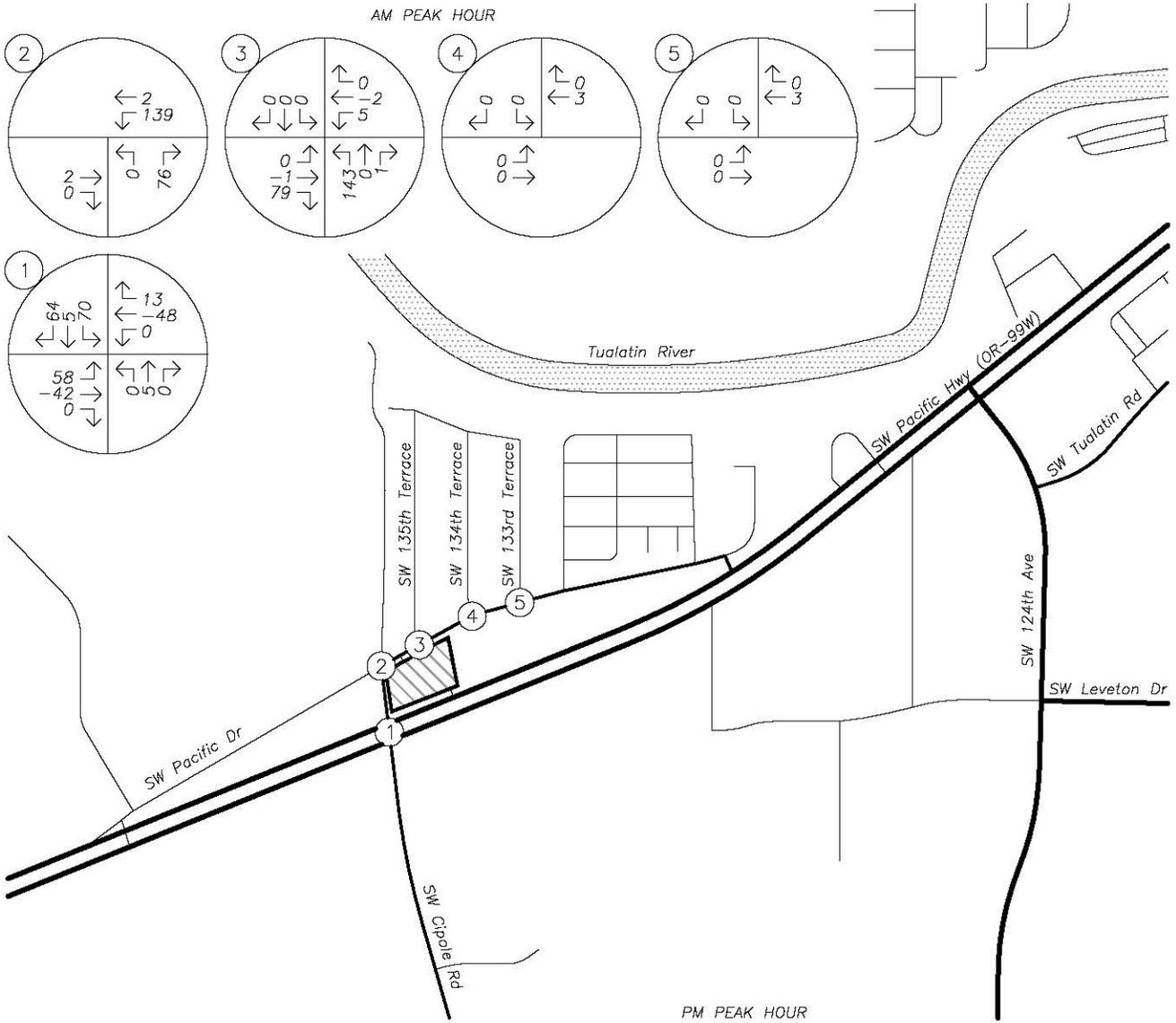


SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Pass-by Site Trips
AM & PM Peak Hours



FIGURE 4

PAGE 14



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





Operational Analysis

Background Volume

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to calculate the future traffic volumes for the intersection of SW Pacific Highway at SW Cipole Road, a linear growth rate of 2.1 percent per year was calculated using ODOT's 2033 Future Volume Tables. This growth rate was applied over a two-year period to determine year 2017 background traffic volumes for all through traffic volumes along SW Pacific Highway. For all other study area intersections and turning movements at the intersection of SW Pacific Highway at SW Cipole Road a compounded growth rate of two percent per year for an assumed build-out condition of two years was applied to the measured existing traffic volumes to approximate year 2017 background conditions.

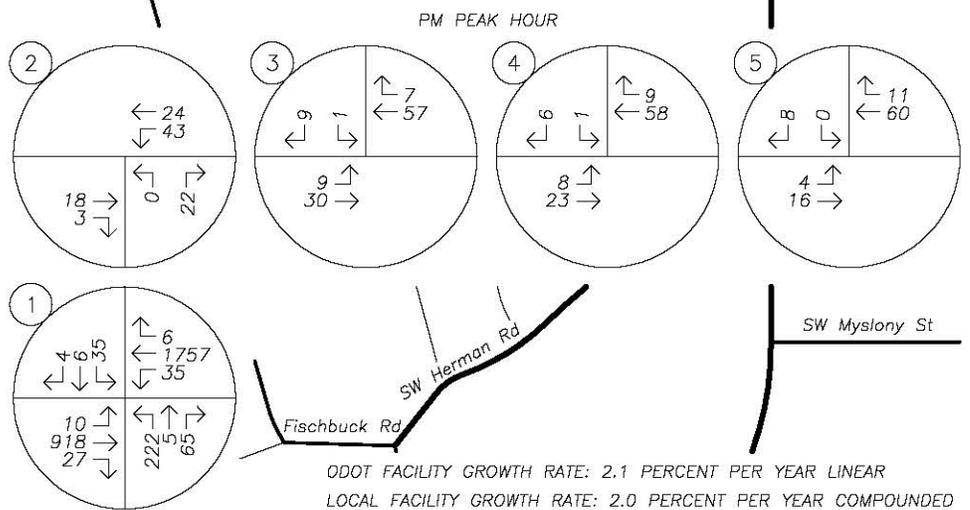
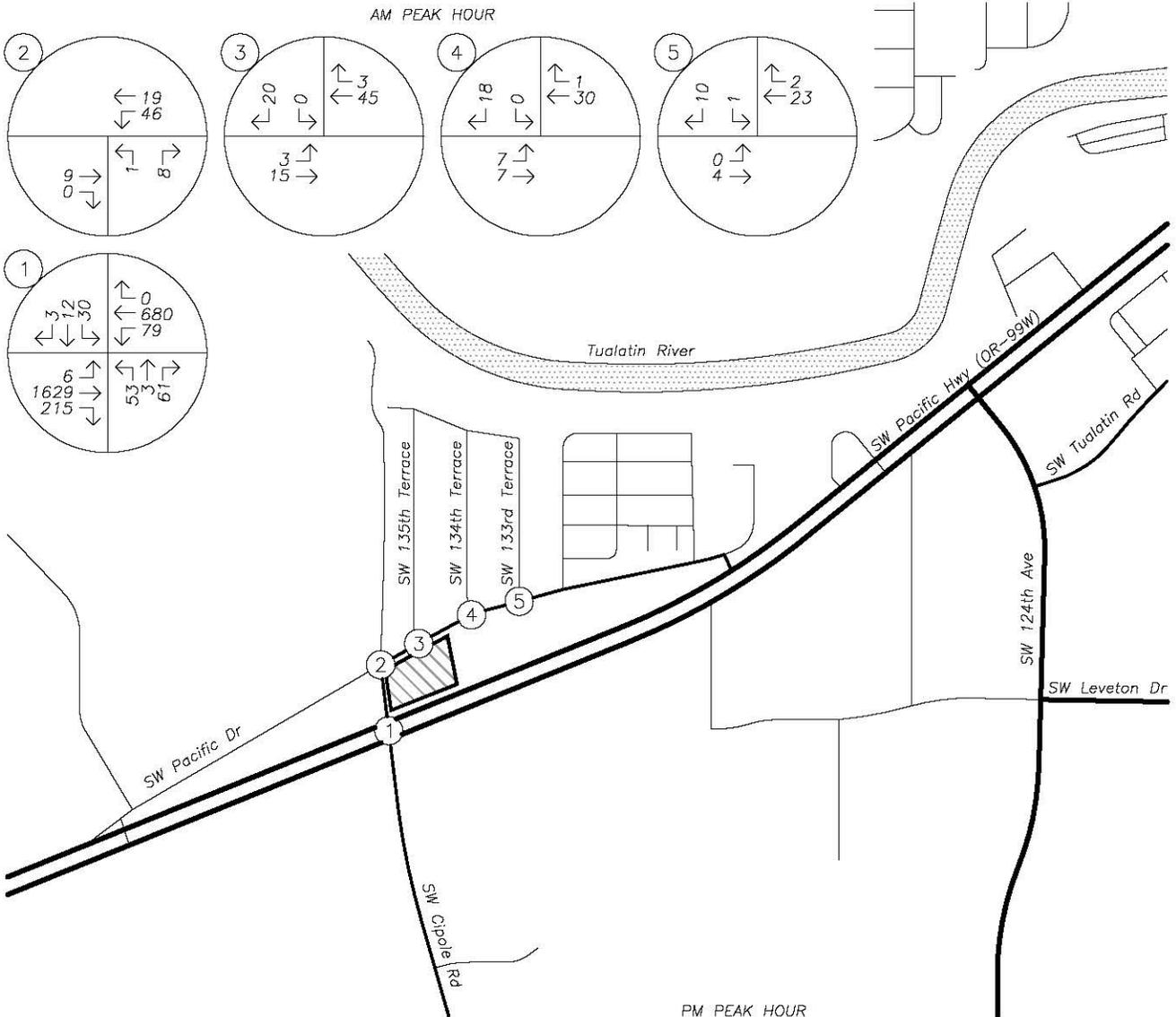
In addition to the traffic volume growth described above, there are two in-process developments near the proposed project vicinity that are currently not contributing trips to the transportation system but are anticipated to by the 2017 build-out year of the proposed development. The Southwest Industrial Park proposes the construction of four industrial buildings totaling 302,000 square feet, and the River Ridge Apartments which proposes the construction of 180 multi-family apartment units. Based on the transportation impact studies prepared for these developments, additional in-process trips are included at study area intersections.

Figure 6 on page 17 shows the projected year 2017 background traffic volumes for the morning and evening peak hour traffic volumes at the study area intersections.

Background Volume plus Site Trips

Peak hour trips calculated to be generated from the proposed development, as described earlier within the Trip Generation section, were added to the projected year 2017 background traffic volumes to obtain the expected 2017 background plus site trips.

Figure 7 on page 18 shows the projected year 2017 peak hour background traffic volumes plus proposed development site trips at the study area intersections. Figure 8 on page 19 shows the planning year 2035 peak hour background traffic volumes plus proposed development site trips at the study area intersections. Figure 9 on page 20 shows the planning year 2035 peak hour traffic volumes plus the existing zoning site trips at the study area intersections



ODOT FACILITY GROWTH RATE: 2.1 PERCENT PER YEAR LINEAR
 LOCAL FACILITY GROWTH RATE: 2.0 PERCENT PER YEAR COMPOUNDED

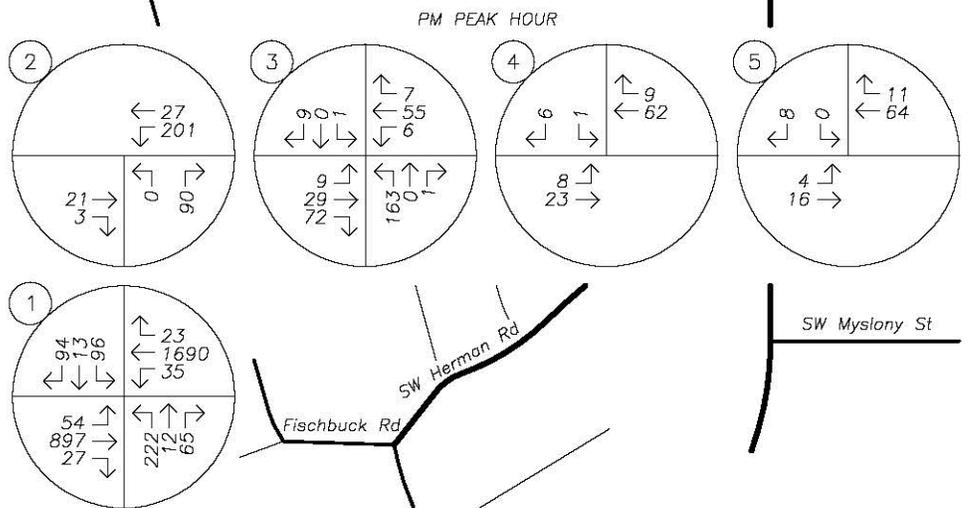
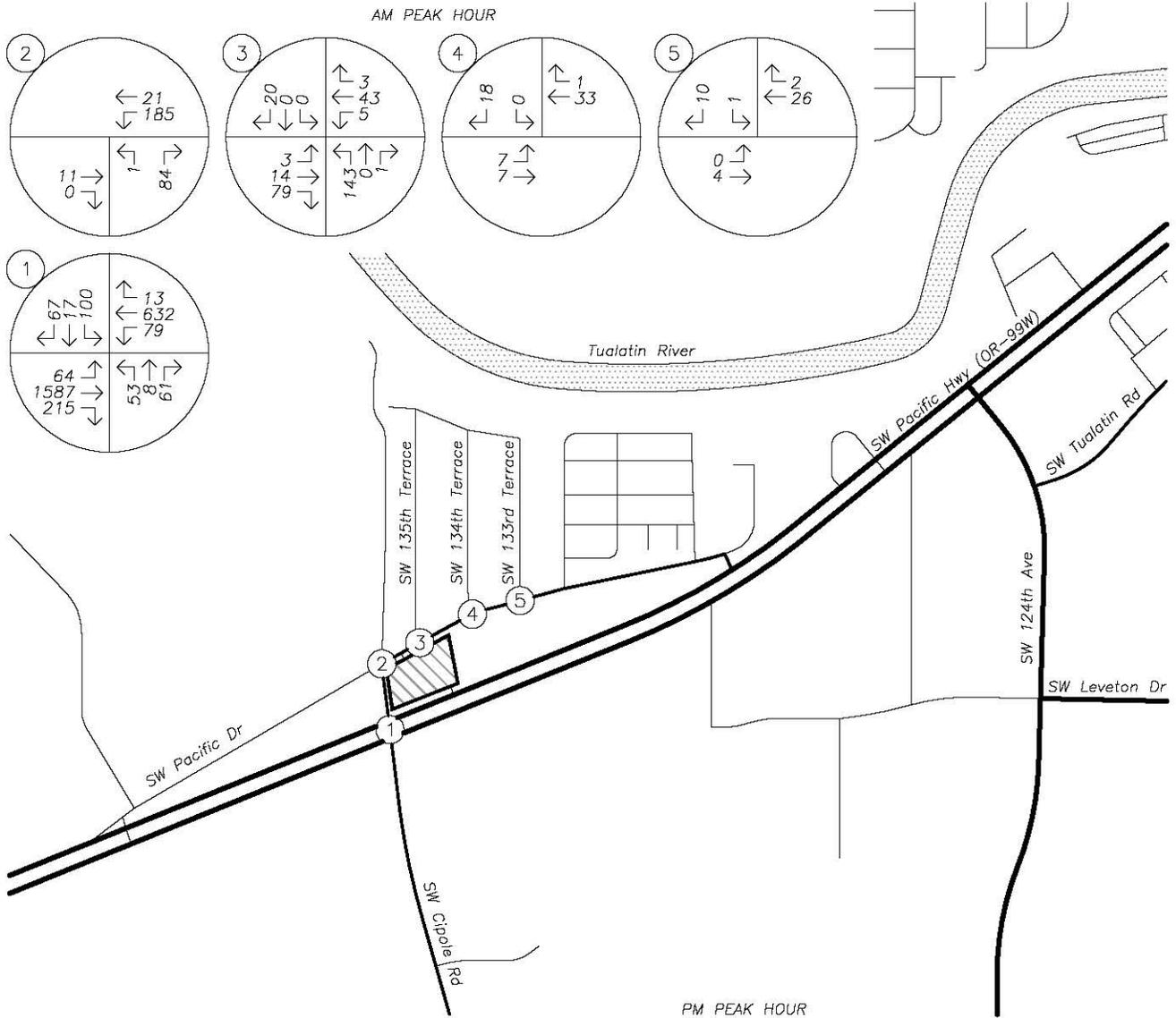


TRAFFIC VOLUMES
 Year 2017 Background Conditions
 AM & PM Peak Hours



FIGURE
6

PAGE
17

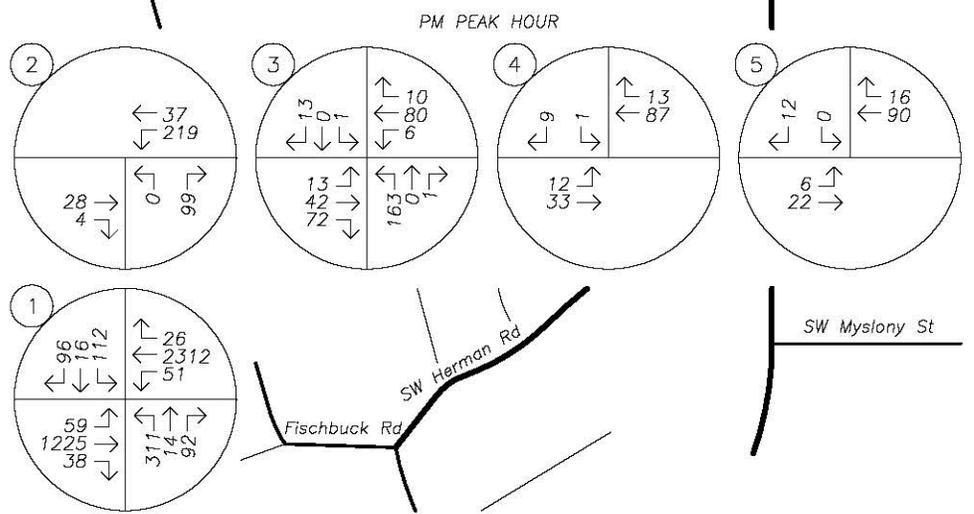
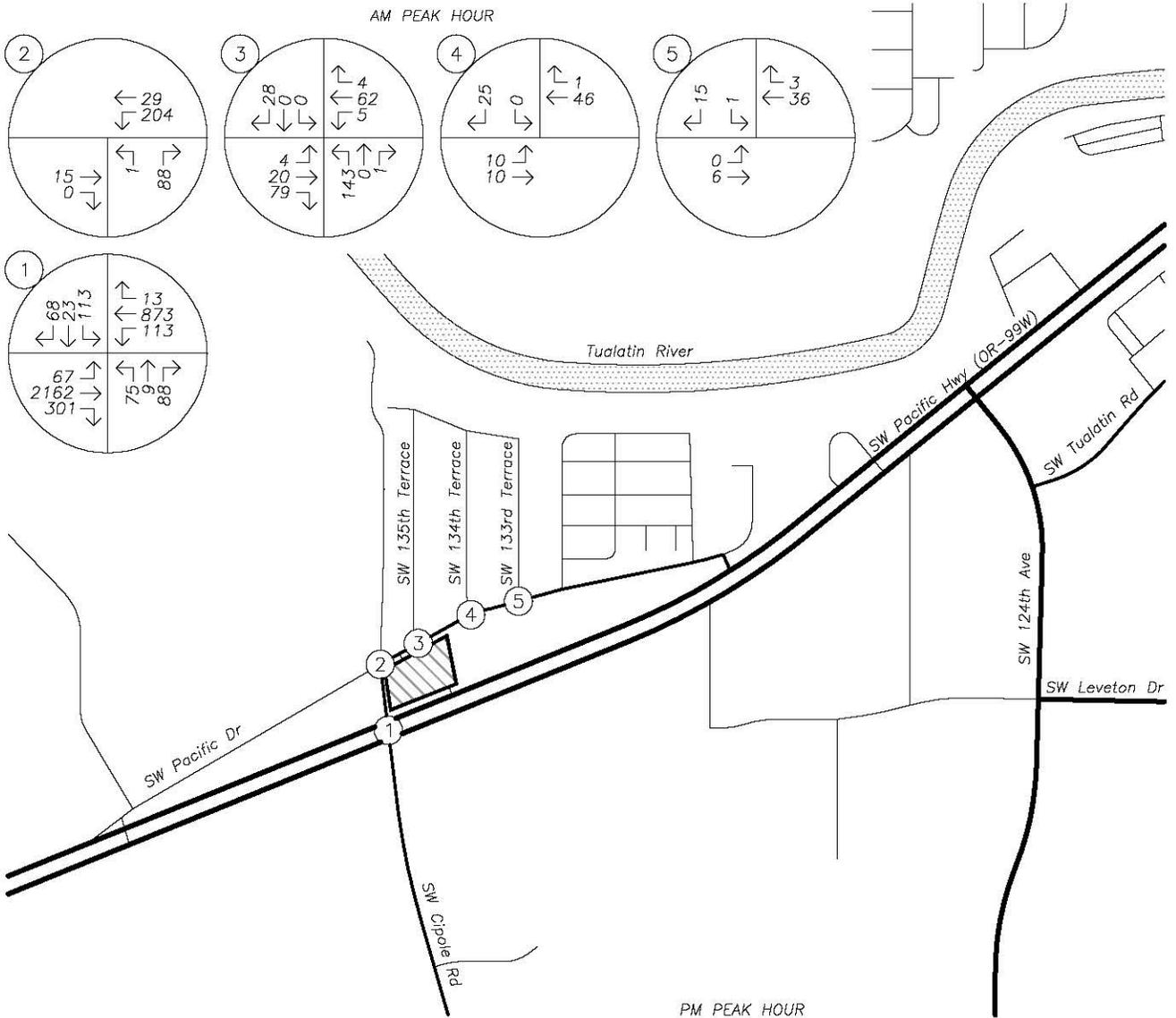


TRAFFIC VOLUMES
 Year 2017 Background plus Site Trips
 AM & PM Peak Hours



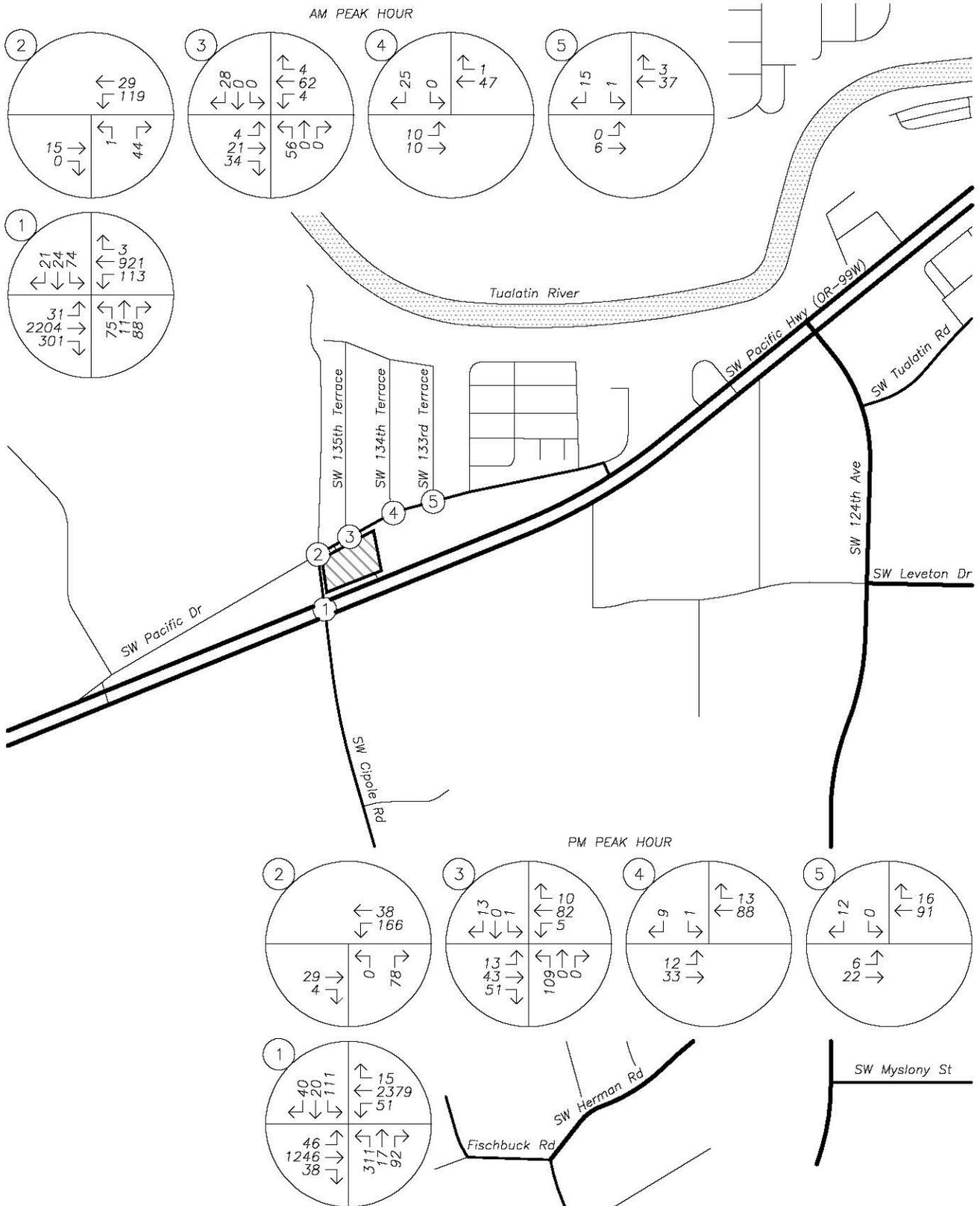
FIGURE 7

PAGE 18



TRAFFIC VOLUMES
 Year 2035 Background plus Site Trips
 AM & PM Peak Hour





TRAFFIC VOLUMES
 Year 2035 Background plus Site Trips
 AM & PM Peak Hour



FIGURE 9

PAGE 20



Intersection Capacity and Level-of-Service Analysis

To determine the capacity and level-of-service (LOS) at the study area intersections, a capacity analysis was conducted. The analysis was conducted using the signalized and unsignalized intersection analysis methodologies in the *HIGHWAY CAPACITY MANUAL (HCM)* published by the Transportation Research Board. The v/c ratio is a measure that compares the traffic volume (demand) against the available capacity of an intersection. Washington County and ODOT standards require a v/c ratio of 0.99 or less while the City of Tualatin standards require a minimum LOS E or better. For both LOS and delay related to the analysis of unsignalized intersections, the reported result applies to the worst movement.

The intersection of SW Pacific Highway at SW Cipole Road currently operates at LOS B with v/c ratios of 0.68 and 0.78 during the morning and evening peak hours, respectively. Under year 2017 background conditions, the intersection is projected to operate at LOS B with v/c ratios of 0.73 and 0.84 during the morning and evening peak hours, respectively. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with a v/c ratio of 0.79 during the morning peak hour and at LOS C with a v/c ratio of 0.95 during the evening peak hour. . Under year 2035 background conditions with the existing zoning, the intersection is projected to operate at LOS D with a v/c ratio of 0.96 during the morning peak hour and at LOS F with a v/c ratio of 1.19 during the evening peak hour. Under the year 2035 build-out conditions, the intersection is projected to operate at LOS D with a v/c ratio of 1.00 during the morning peak hour and at LOS F with a v/c ratio of 1.21 during the evening peak hour.

The intersection of SW Pacific Drive at SW Cipole Road currently operates at LOS A with v/c ratios of 0.05 and 0.04 during the morning and evening peak hours, respectively. Under year 2017 background conditions, the intersection is projected to operate at LOS A with a v/c ratio of 0.05 during both the morning and evening peak hours. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with v/c ratios of 0.15 and 0.16 during the morning and evening peak hours, respectively. . Under year 2035 background conditions with the existing zoning, the intersection is projected to operate at LOS A with v/c ratios of 0.11 and 0.14 during the morning and evening peak hours, respectively. Under the year 2035 build-out conditions, the intersection is projected to operate at LOS B with v/c ratios of 0.17 and 0.18 during the morning and evening peak hours, respectively.

The intersection of SW Pacific Drive at SW 135th Terrace currently operates at LOS A with v/c ratios of 0.02 and 0.01 during the morning and evening peak hours. Under year 2017 background conditions, the intersection is projected to operate at LOS A with v/c ratios of 0.03 and 0.01 during the morning and evening peak hours, respectively. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with v/c ratios of 0.24 and 0.27 during the morning and evening peak hours, respectively. Under year 2035 background conditions with the existing zoning, the intersection is projected to operate at LOS A with v/c ratios of 0.10 and 0.19 during the morning and evening peak hours, respectively. Under the year 2035 build-out conditions, the intersection is projected to operate at LOS B with v/c ratios of 0.26 and 0.30 during the morning and evening peak hours, respectively.



The intersections of SW Pacific Drive at SW 134th Terrace and at SW 133rd Terrace operate at LOS A with v/c ratios of 0.04 or less and 0.07 or less during the morning and evening peak hours, respectively, under all analysis scenarios.

The v/c, delay, and LOS results of the capacity analysis are shown in Table 2. Detailed calculations as well as tables showing the relationships between delay and level of service are included in the appendix to this report.



Table 3 - Capacity and LOS Analysis Summary						
	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v / c	LOS	Delay (s)	v / c
SW Pacific Highway at SW Cipole Road						
Existing Conditions	B	13	0.68	B	17	0.78
2017 Background Conditions	B	14	0.73	B	20	0.84
2017 Background + Site Conditions	B	17	0.79	C	27	0.95
2035 w/ Existing FD-10 Zoning	C	31	0.96	F	90	1.19
2035 w/ Proposed CG Zoning	D	39	1.00	F	98	1.21
SW Pacific Drive at SW Cipole Road						
Existing Conditions	A	9	0.05	A	9	0.04
2017 Background Conditions	A	9	0.05	A	9	0.05
2017 Background + Site Conditions	B	11	0.15	B	11	0.16
2035 w/ Existing FD-10 Zoning	A	10	0.11	B	11	0.14
2035 w/ Proposed CG Zoning	B	11	0.17	B	11	0.18
SW Pacific Drive at SW 135th Terrace						
Existing Conditions	A	9	0.02	A	9	0.01
2017 Background Conditions	A	9	0.03	A	9	0.01
2017 Background + Site Conditions	B	11	0.24	B	12	0.27
2035 w/ Existing FD-10 Zoning	B	10	0.10	B	12	0.19
2035 w/ Proposed CG Zoning	B	12	0.26	B	13	0.30
SW Pacific Drive at SW 134th Terrace						
Existing Conditions	A	9	0.02	A	9	0.05
2017 Background Conditions	A	9	0.02	A	9	0.05
2017 Background + Site Conditions	A	9	0.03	A	9	0.05
2035 w/ Existing FD-10 Zoning	A	9	0.04	A	9	0.07
2035 w/ Proposed CG Zoning	A	9	0.04	A	9	0.07
SW Pacific Drive at SW 133rd Terrace						
Existing Conditions	A	9	0.02	A	9	0.05
2017 Background Conditions	A	9	0.02	A	9	0.05
2017 Background + Site Conditions	A	9	0.02	A	9	0.05
2035 w/ Existing FD-10 Zoning	A	9	0.03	A	9	0.07
2035 w/ Proposed CG Zoning	A	9	0.02	A	9	0.07

Based on the operational analysis, the study area intersections are projected to operate within ODOT, Washington County, and City of Tualatin performance standards through year 2017 with or without full build-out of the proposed development.

At the year 2035 planning horizon, the unsignalized intersections are projected to continue to operate acceptably either with or without the addition of site trips from the proposed zone change. The signalized

intersection of SW Pacific Highway at SW Cipole Road is projected to operate with volumes exceeding capacity during the peak hours.



Queuing Analysis

An analysis of projected queuing was conducted for the study area intersections. The queue lengths for the intersections were projected based on the results of Synchro/SimTraffic simulation, with the reported values based on the 95th percentile of the queue lengths. This means that 95 percent of the time during the peak hour the queue length will be less than or equal to the reported value.

Synchro/SimTraffic simulation at the intersection of SW Pacific Highway at SW Cipole Road reported eastbound right-turn lane queues extend 5 feet beyond available storage under year 2017 background conditions. This extended queue length can be equated to approximately a quarter the length of a normally queued vehicle and can be accommodated either by the vehicle utilizing the shoulder of the roadway, which currently has ample length and width to store additional vehicles, or the queue can extend into the southernmost eastbound through lane without significantly impeding through traffic.

Table 3 presents the projected 95th percentile queue lengths reported by the Synchro/SimTraffic simulation. Available lane storage was measured and rounded to the nearest five feet. For each lane group, the longest projected queue is reported, regardless of whether the queue occurred during the morning or evening peak hour. Detailed queuing analysis worksheets for both the morning and evening peak hours are included in the technical appendix.



Table 4 - Queuing Analysis Summary				
	Available Storage	Existing Conditions	Background Conditions	Background + Site Conditions
SW Pacific Highway at SW Cipole Road				
EB LT Lane	145'	21'	25'	99'
EB RT Lane	140'	100'	145'	135'
WB LT Lane	190'	94'	88'	95'
SB LT/Th/RT Lane*	215'	64'	67'	150'
SW Pacific Drive at SW Cipole Road				
EB Th/RT Lane	-	45'	43'	46'
SW Pacific Drive at SW 135th Terrace				
NB LT/Th/RT Lane	-	-	-	67'
SB LT/Th/RT Lane	-	34'	33'	36'
SW Pacific Drive at SW 134th Terrace				
SB LT/RT Lane	-	45'	54'	46'
SW Pacific Drive at SW 133rd Terrace				
SB LT/RT Lane	-	29'	30'	25'

* Available Storage Extends to Adjacent Intersection

Based on the queuing analysis, the projected 95th percentile queues at the study area intersections are provided adequate vehicle storage space and queues are not projected to back up to adjacent intersections. Therefore, no queuing-related mitigations are recommended.



Safety Analysis

Warrant Analysis

Left-turn lane and traffic signal warrants were examined for the study area intersections along SW Pacific Drive while right-turn lane warrants were examined for the proposed right-in site access at SW Pacific Highway.

A left-turn and right-turn refuge are primarily a safety consideration for the major street, removing left-turning and right-turning vehicles from the through traffic stream. The left-turn lane warrants used were developed from the National Cooperative Highway Research Project's (NCHRP) Report 457. The right-turn lane warrants used for facilities under the jurisdiction of ODOT implement the design curves developed by the Texas Transportation Institute, as adopted by ODOT in its Analysis Procedures Manual. The turn lane warrants were evaluated based on the number of advancing and opposing vehicles as well as the number of turning vehicles, the travel speed, and the number of through travel lanes.

Left-turn lane warrants are not projected to be met for any of the study area intersections along SW Pacific Drive under any of the year 2017 analysis scenarios.

Right-turn lane warrants are projected to be met for the proposed right-in site access at SW Pacific Highway under 2017 build-out conditions.

Traffic signal warrants were also examined for the study area intersections along SW Pacific Drive to determine whether the installation of a new traffic signal will be warranted at the intersections upon completion of the proposed development. Due to insufficient main and side-street traffic volumes, traffic signal warrants will not be met for any of the unsignalized study area intersections under any of the year 2017 analysis scenarios.

Intersection Sight Distance

Intersection sight distance and stopping sight distance were examined for the proposed site access at the intersection of SW Pacific Drive at SW 135th Terrace and the proposed right-in site access at SW Pacific Highway. Intersection sight distance and stopping sight distance were measured and evaluated in accordance with the standards established in *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*, published in 2011 by the American Association of State Highway and Transportation Officials (AASHTO). According to AASHTO the driver's eye is assumed to be 15 feet from the near edge of the nearest lane of the intersecting street and at a height of 3.5 feet above the approach street pavement. Vehicle/object height is assumed to be 3.5 feet above the cross-street pavement.

Based on the posted regulatory speed of 25 mph on SW Pacific Drive, the minimum required intersection sight distance for the proposed site access at the intersection of SW Pacific Drive at SW 135th Terrace is 280 feet in each direction and sight distance required for left-turning vehicles from SW Pacific Drive onto



the site access is 205 feet. Intersection sight distance was measured to be 130 feet to the east and 1,205 feet to the west. Sight distance to the east is limited by on-site vegetation while sight distance to the west is limited by a crest in the vertical curvature of the roadway. Left-turning vehicles from SW Pacific Drive to the site access have a sight distance of 1,205 feet to the west, limited by a crest in the vertical curvature of the roadway.

Intersection sight distance to the east of the site access at SW Pacific Drive is less than the recommended 280 feet per AASHTO standards. Sight distance to the east is limited by on-site vegetation. However, upon development of the project site this vegetation is anticipated to be removed, whereby additional sight distance will be made available for stop vehicles at the access to the east.

Based on the design speed of 65 mph on SW Pacific Highway, the minimum required stopping sight distance for the proposed right-in site access at SW Pacific Highway is 645 feet to the northeast. Stopping sight distance was measured to be in excess of 800 feet.

Based on detailed analysis, adequate sight distance is projected to be available for the proposed site accesses along SW Pacific Drive and SW Pacific Highway. No sight distance mitigations are necessary or recommended.

Crash Data Analysis

Using data obtained from ODOT's Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (2009-2013) 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 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 travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak period represents 10% of annual average daily traffic (AADT) at the intersection. Crash rates in excess of one to two crashes per million entering vehicles (CMEV) may be indicative of safety hazards that should be further investigated or possible mitigation.

The intersection of SW Pacific Highway at SW Cipole Road had seven reported crashes during the analysis period. The crashes consisted of five rear-end collisions and two turning-movement collisions. Of the crashes reported three were classified as "Property Damage Only" (*PDO*), three were classified as "Possible Injury – Complaint of Pain" (*Injury C*), and one was classified "Non-Incapacitating Injury" (*Injury B*). The crash rate at the intersection was calculated to be 0.13 CMEV.

The intersection of SW Pacific Drive at SW 135th Terrace had one reported crash during the analysis period. The crash was a fixed object collision where a driver of a vehicle drove off the road. The crash was classified as "Non-Incapacitating Injury" (*Injury B*). The crash rate at the intersection was calculated to be 0.52 CMEV.



The intersections of SW Pacific Drive at SW Cipole Road, SW 134th Terrace, and SW 133rd Terrace had no reported crashes during the analysis period.

Based on the most recent five years of crash data at the study area intersections crash rates are relatively low, crash severity was relatively low for crashes likely to occur again, and no significant crash patterns are evident. The crash data does not appear to be indicative of any significant safety hazards. Accordingly, no safety mitigations are recommended.

Detailed information about crashes and crash reports for the study intersections are included in the appendix to this report.



Transportation Planning Rule Analysis

A Transportation Planning Rule (TPR) analysis is required for the proposed development, since annexation of the subject property into the City of Tualatin will result in a change in zoning. The TPR is intended 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.

The applicable portions of the TPR are quoted in *italics* below, with responses directly following.

660-012-0060

Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged 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 this rule, unless the amendment is allowed under section (3), (9), or (10) of this rule.

...

(9) Notwithstanding section (1) of this rule, a local government may find that an amendment to a zoning map does not significantly affect an existing or planned transportation facility if all of the following requirements are met:

- (a) The proposed zoning is consistent with the existing comprehensive plan map designation and the amendment does not change the comprehensive plan map;*
- (b) The local government has an acknowledged TSP and the proposed zoning is consistent with the TSP; and*
- (c) The area subject to the zoning map amendment was not exempted from this rule at the time of an urban growth boundary amendment as permitted in OAR 660-024-0020(1)(d), or the area was exempted from this rule but the local government has a subsequently acknowledged TSP amendment that accounted for urbanization of the area.*

The proposed zoning is consistent with the existing comprehensive plan map designation and will not change the comprehensive plan map. The City of Tualatin's zoning map indicated that the subject property is outside the city, but is included in the planning area and is designated as having future CG zoning. Tony Doran and the City of Tualatin have confirmed that the proposed zoning is consistent with the acknowledged TSP. The annexed property was not exempted from this rule upon amending the urban growth boundary.

Based on the analysis, the proposed zone change is in conformance with the City of Tualatin's Comprehensive Plan, and the levels of development allowable under the proposed CG zoning were already included in the City's planning model and the Transportation System Plan. Accordingly, the City of Tualatin may find that the proposed zone change does not significantly affect an existing or planned transportation facility, and the Transportation Planning Rule is satisfied.



Conclusions

Based on the operational analysis, the study area intersections are projected to operate within ODOT, Washington County, and City of Tualatin performance standards through year 2017 with or without full build-out of the proposed development. At the year 2035 planning horizon, the unsignalized intersections are projected to continue to operate acceptably either with or without the addition of site trips from the proposed zone change. The signalized intersection of SW Pacific Highway at SW Cipole Road is projected to operate with volumes exceeding capacity during the peak hours.

Based on the queuing analysis, the projected 95th percentile queues at the study area intersections are provided adequate vehicle storage space and queues are not projected to back up to adjacent intersections. Therefore, no queuing-related mitigations are recommended.

Left-turn lane warrants are not projected to be met for any of the study area intersections along SW Pacific Drive under any of the year 2017 analysis scenarios.

Right-turn lane warrants are projected to be met for the proposed right-in site access along SW Pacific Highway under 2017 build-out conditions.

Due to insufficient main and side-street traffic volumes, traffic signal warrants will not be met for any of the unsignalized study area intersections under any of the year 2017 analysis scenarios.

Based on detailed analysis, adequate sight distance is projected to be available for the proposed site access along SW Pacific Drive. No sight distance mitigations are necessary or recommended.

Based on the most recent five years of crash data at the study area intersections crash rates are relatively low, crash severity was relatively low, and no significant crash patterns are evident. The crash data does not appear to be indicative of any significant safety hazards. Accordingly, no safety mitigations are recommended.

Based on the analysis, the proposed zone change is in conformance with the City of Tualatin's Comprehensive Plan, and the levels of development allowable under the proposed CG zoning were already included in the City's planning model and the Transportation System Plan. Accordingly, the City of Tualatin may find that the proposed zone change does not significantly affect an existing or planned transportation facility, and the Transportation Planning Rule is satisfied.

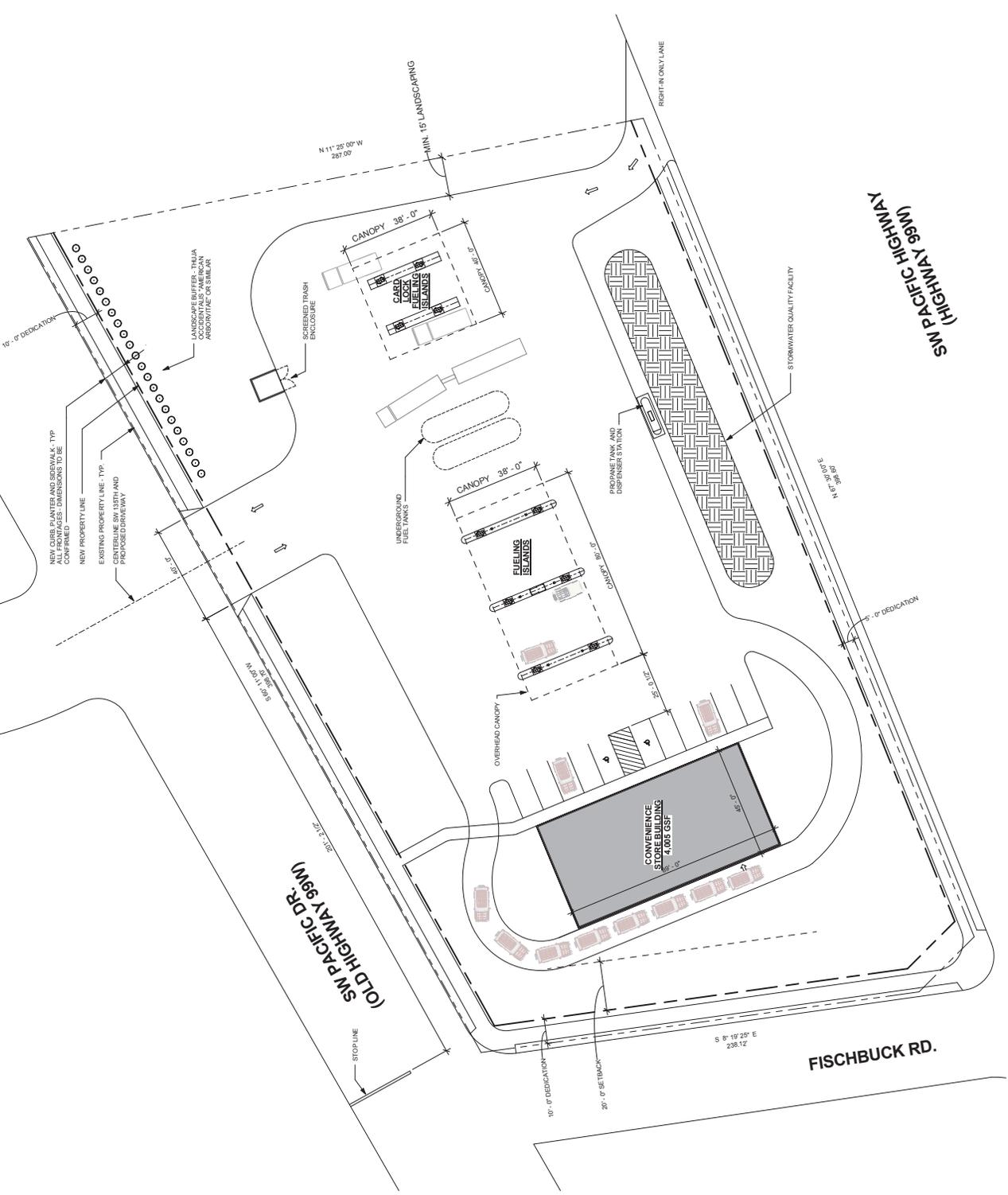


Appendix

SITE STATISTICS

PARKING:
 PROPOSED ZONING (UPON ANNEXATION) - CC
 USE PER TUALA TN 73.270.219
 COMMERCIAL RETAIL 4.0 PER 1,000 SF = 16 SPACES
 2 CARPOOL SPACE REQUIRED PER 73.270.219
 SPACES PROVIDED = 11 AT BUILDING
 23 SPACES

LANDSCAPING:
 SITE AREA (AFTER DEDICATIONS) = 76,700 SF
 BUILDING AREA = 4,000 SF
 IMPERVIOUS AREA = 37,800 SF
 LANDSCAPE AREA = 351,985 SF (45% OF SITE)



CARLETON HART ARCHITECTURE
 322 NW 8th Avenue Portland, Oregon 97209
 1 503 243 2252 | 1 503 243 3261 | carletonhart.com

PRELIMINARY
 NOT FOR CONSTRUCTION



18600 SW PACIFIC DR.
 Proposed Site Plan
 18600 SW Pacific Drive

SITE PLAN
 PROJECT NO.
 15040
 9-8-2015
 REVISIONS:

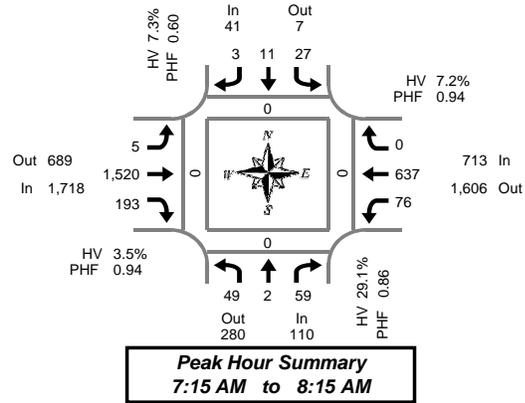
A1.01

1 SITE PLAN
 1" = 20'-0"

Total Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & Hwy 99W

Thursday, September 17, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	4	0	2	0	4	1	0	0	0	126	9	0	4	41	0	0	191	0	0	0	0
7:05 AM	5	0	8	0	6	0	0	0	0	101	11	0	9	54	1	0	195	0	0	0	0
7:10 AM	3	0	3	0	3	0	0	0	0	133	12	0	3	43	0	0	200	0	0	0	0
7:15 AM	3	0	5	0	4	0	0	0	0	97	17	0	10	52	0	0	188	0	0	0	0
7:20 AM	4	0	9	0	3	0	0	0	0	131	14	1	6	57	0	0	224	0	0	0	0
7:25 AM	3	0	4	0	4	1	2	0	0	130	12	0	7	48	0	0	211	0	0	0	0
7:30 AM	6	0	2	0	3	2	1	0	0	142	13	0	5	51	0	0	225	0	0	0	0
7:35 AM	1	0	5	0	2	2	0	0	0	114	17	0	5	58	0	1	204	0	0	0	0
7:40 AM	4	0	6	0	0	1	0	0	0	138	18	2	5	52	0	0	224	0	0	0	0
7:45 AM	4	0	7	0	2	0	0	0	0	126	18	0	5	51	0	0	213	0	0	0	0
7:50 AM	2	0	2	0	0	2	0	0	2	133	16	0	10	52	0	0	219	0	0	0	0
7:55 AM	5	0	7	0	1	2	0	0	3	118	17	0	7	43	0	0	203	0	0	0	0
8:00 AM	7	0	6	0	1	0	0	0	0	146	20	0	7	60	0	0	247	0	0	0	0
8:05 AM	4	0	3	0	1	1	0	0	0	127	20	0	5	60	0	0	221	0	0	0	0
8:10 AM	6	2	3	0	6	0	0	0	0	118	11	0	4	53	0	0	203	0	0	0	0
8:15 AM	3	1	2	0	1	0	2	0	1	100	9	0	2	41	0	0	162	0	0	0	1
8:20 AM	4	0	1	0	2	0	0	0	2	123	13	0	12	78	0	0	235	0	0	0	0
8:25 AM	9	0	2	0	1	0	1	0	1	95	3	0	3	48	0	0	163	0	0	0	0
8:30 AM	4	0	5	0	1	0	0	0	0	88	8	0	4	70	0	0	180	0	0	0	0
8:35 AM	2	0	2	0	3	0	0	0	0	92	7	0	2	55	0	0	163	0	0	0	0
8:40 AM	2	0	3	0	2	0	0	0	1	114	4	0	1	60	0	0	187	0	0	0	0
8:45 AM	4	0	7	0	1	1	0	0	0	76	5	0	7	28	0	0	129	0	0	0	0
8:50 AM	0	0	0	0	1	0	1	0	1	99	6	0	4	68	0	0	180	0	0	0	0
8:55 AM	3	3	2	0	3	0	0	0	0	57	6	0	3	42	0	0	119	0	0	0	0
Total Survey	92	6	96	0	55	13	7	0	11	2,724	286	3	130	1,265	1	1	4,686	0	0	0	1

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	12	0	13	0	13	1	0	0	0	360	32	0	16	138	1	0	586	0	0	0	0
7:15 AM	10	0	18	0	11	1	2	0	0	358	43	1	23	157	0	0	623	0	0	0	0
7:30 AM	11	0	13	0	5	5	1	0	0	394	48	2	15	161	0	1	653	0	0	0	0
7:45 AM	11	0	16	0	3	4	0	0	5	377	51	0	22	146	0	0	635	0	0	0	0
8:00 AM	17	2	12	0	8	1	0	0	0	391	51	0	16	173	0	0	671	0	0	0	0
8:15 AM	16	1	5	0	4	0	3	0	4	318	25	0	17	167	0	0	560	0	0	0	1
8:30 AM	8	0	10	0	6	0	0	0	1	294	19	0	7	185	0	0	530	0	0	0	0
8:45 AM	7	3	9	0	5	1	1	0	1	232	17	0	14	138	0	0	428	0	0	0	0
Total Survey	92	6	96	0	55	13	7	0	11	2,724	286	3	130	1,265	1	1	4,686	0	0	0	1

Peak Hour Summary

7:15 AM to 8:15 AM

By Approach	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	110	280	390	0	41	7	48	0	1,718	689	2,407	3	713	1,606	2,319	1	2,582	0	0	0	0
%HV	29.1%				7.3%				3.5%				7.2%				5.7%				
PHF	0.86				0.60				0.94				0.94				0.96				

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	49	2	59	110	27	11	3	41	5	1,520	193	1,718	76	637	0	713	2,582
%HV	24.5%	50.0%	32.2%	29.1%	3.7%	18.2%	0.0%	7.3%	0.0%	2.3%	13.0%	3.5%	11.8%	6.6%	0.0%	7.2%	5.7%
PHF	0.72	0.25	0.82	0.86	0.61	0.55	0.25	0.60	0.25	0.94	0.85	0.94	0.79	0.92	0.00	0.94	0.96

Rolling Hour Summary

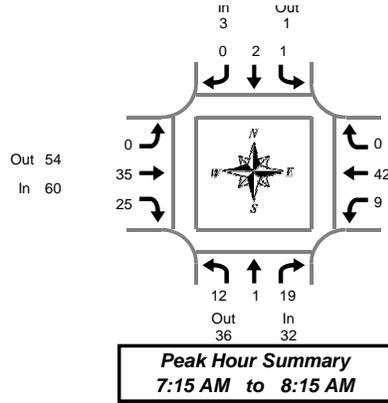
7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	44	0	60	0	32	11	3	0	5	1,489	174	3	76	602	1	1	2,497	0	0	0	0
7:15 AM	49	2	59	0	27	11	3	0	5	1,520	193	3	76	637	0	1	2,582	0	0	0	0
7:30 AM	55	3	46	0	20	10	4	0	9	1,480	175	2	70	647	0	1	2,519	0	0	0	1
7:45 AM	52	3	43	0	21	5	3	0	10	1,380	146	0	62	671	0	0	2,396	0	0	0	1
8:00 AM	48	6	36	0	23	2	4	0	6	1,235	112	0	54	663	0	0	2,189	0	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & Hwy 99W

Thursday, September 17, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	2	3	0	0	0	0	0	6	1	7	0	1	0	1	11
7:05 AM	2	0	4	6	0	0	0	0	0	1	1	2	1	6	1	8	16
7:10 AM	2	0	1	3	0	0	0	0	0	2	0	2	1	1	0	2	7
7:15 AM	0	0	3	3	0	0	0	0	0	4	1	5	1	1	0	2	10
7:20 AM	2	0	4	6	0	0	0	0	0	2	3	5	1	0	0	1	12
7:25 AM	1	0	3	4	1	1	0	2	0	8	0	8	1	5	0	6	20
7:30 AM	2	0	1	3	0	0	0	0	0	1	0	1	1	3	0	4	8
7:35 AM	0	0	1	1	0	1	0	1	0	1	0	1	0	2	0	2	5
7:40 AM	1	0	0	1	0	0	0	0	0	1	2	3	0	3	0	3	7
7:45 AM	0	0	1	1	0	0	0	0	0	4	0	4	1	3	0	4	9
7:50 AM	1	0	0	1	0	0	0	0	0	4	2	6	1	6	0	7	14
7:55 AM	2	0	3	5	0	0	0	0	0	1	5	6	1	4	0	5	16
8:00 AM	1	0	1	2	0	0	0	0	0	3	7	10	1	5	0	6	18
8:05 AM	1	0	1	2	0	0	0	0	0	3	1	4	1	4	0	5	11
8:10 AM	1	1	1	3	0	0	0	0	0	3	4	7	0	6	0	6	16
8:15 AM	2	0	1	3	0	0	0	0	0	2	0	2	0	7	0	7	12
8:20 AM	1	0	0	1	0	0	0	0	1	2	0	3	1	3	0	4	8
8:25 AM	2	0	0	2	1	0	0	1	0	6	1	7	1	5	0	6	16
8:30 AM	1	0	2	3	0	0	0	0	0	1	2	3	1	13	0	14	20
8:35 AM	0	0	0	0	0	0	0	0	0	2	1	3	1	11	0	12	15
8:40 AM	1	0	1	2	0	0	0	0	0	3	0	3	0	11	0	11	16
8:45 AM	1	0	1	2	0	0	0	0	0	4	0	4	1	5	0	6	12
8:50 AM	0	0	0	0	0	0	0	0	0	5	2	7	0	10	0	10	17
8:55 AM	1	1	1	3	0	0	0	0	0	1	1	2	0	6	0	6	11
Total Survey	26	2	32	60	2	2	0	4	1	70	34	105	16	121	1	138	307

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	5	0	7	12	0	0	0	0	0	9	2	11	2	8	1	11	34
7:15 AM	3	0	10	13	1	1	0	2	0	14	4	18	3	6	0	9	42
7:30 AM	3	0	2	5	0	1	0	1	0	3	2	5	1	8	0	9	20
7:45 AM	3	0	4	7	0	0	0	0	0	9	7	16	3	13	0	16	39
8:00 AM	3	1	3	7	0	0	0	0	0	9	12	21	2	15	0	17	45
8:15 AM	5	0	1	6	1	0	0	1	1	10	1	12	2	15	0	17	36
8:30 AM	2	0	3	5	0	0	0	0	0	6	3	9	2	35	0	37	51
8:45 AM	2	1	2	5	0	0	0	0	0	10	3	13	1	21	0	22	40
Total Survey	26	2	32	60	2	2	0	4	1	70	34	105	16	121	1	138	307

Heavy Vehicle Peak Hour Summary

7:15 AM to 8:15 AM

By Approach	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound Hwy 99W			Westbound Hwy 99W			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	32	36	68	3	1	4	60	54	114	51	55	106	146
PHF	0.62			0.25			0.68			0.71			0.76

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	12	1	19	32	1	2	0	3	0	35	25	60	9	42	0	51	146
PHF	0.60	0.25	0.48	0.62	0.25	0.25	0.00	0.25	0.00	0.63	0.45	0.68	0.75	0.70	0.00	0.71	0.76

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	14	0	23	37	1	2	0	3	0	35	15	50	9	35	1	45	135
7:15 AM	12	1	19	32	1	2	0	3	0	35	25	60	9	42	0	51	146
7:30 AM	14	1	10	25	1	1	0	2	1	31	22	54	8	51	0	59	140
7:45 AM	13	1	11	25	1	0	0	1	1	34	23	58	9	78	0	87	171
8:00 AM	12	2	9	23	1	0	0	1	1	35	19	55	7	86	0	93	172

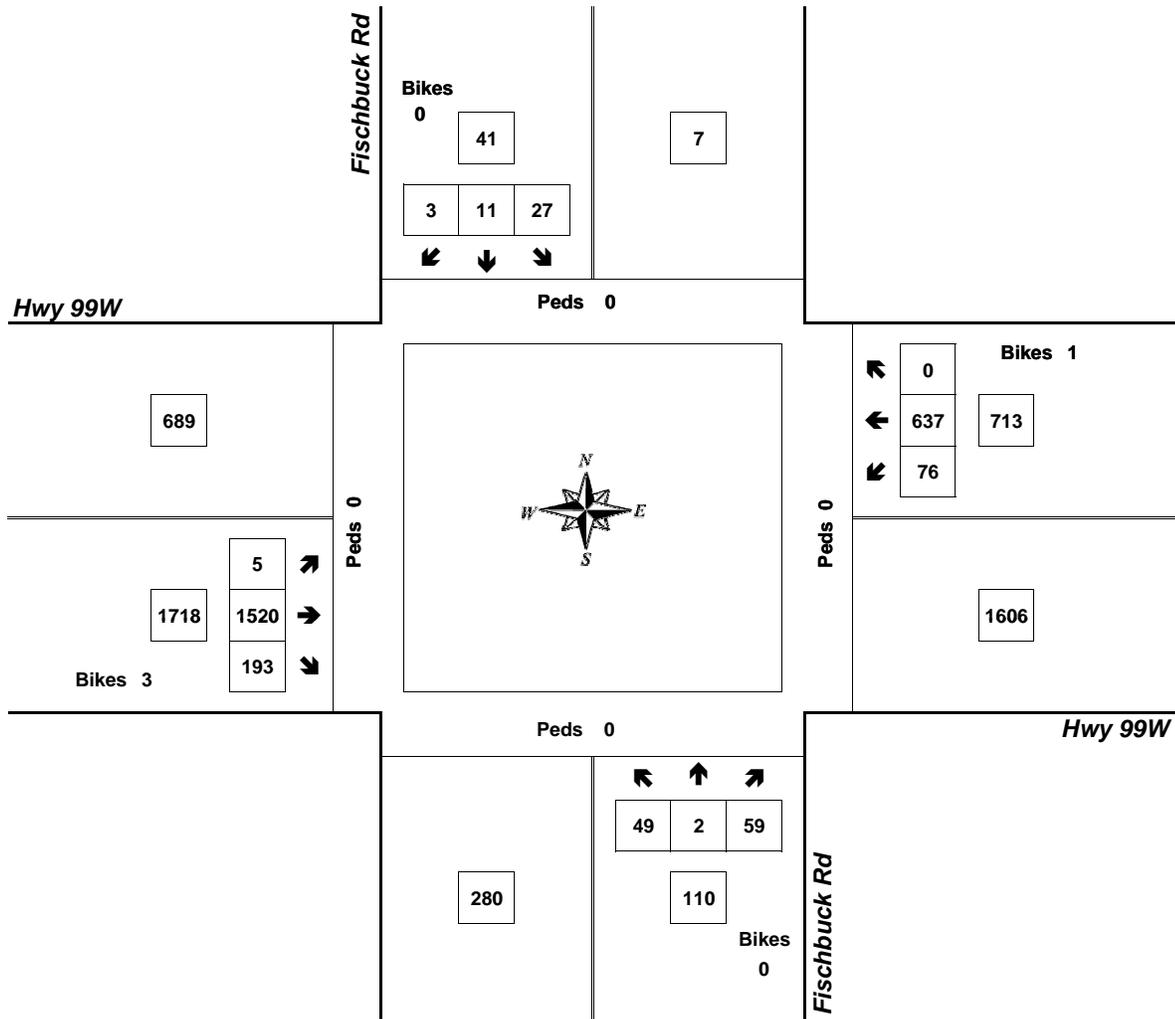
Peak Hour Summary



Clay Carney
(503) 833-2740

Fischbuck Rd & Hwy 99W

7:15 AM to 8:15 AM
Thursday, September 17, 2015



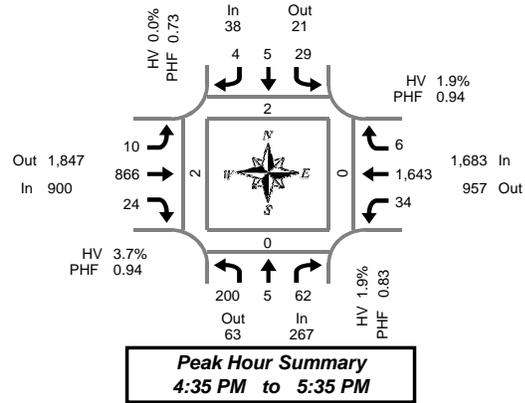
Approach	PHF	HV%	Volume
EB	0.94	3.5%	1,718
WB	0.94	7.2%	713
NB	0.86	29.1%	110
SB	0.60	7.3%	41
Intersection	0.96	5.7%	2,582

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & Hwy 99W

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	21	0	4	0	2	0	1	0	4	73	4	0	5	121	0	0	235	0	0	0	0
4:05 PM	21	0	2	0	3	0	1	0	0	79	4	0	7	136	1	0	254	0	0	0	0
4:10 PM	22	0	5	0	1	0	1	0	0	67	5	0	5	132	0	0	238	0	0	0	0
4:15 PM	16	1	6	0	2	2	0	0	0	73	0	0	7	131	0	0	238	0	0	0	0
4:20 PM	16	0	7	0	2	1	0	0	1	78	4	0	6	110	0	0	225	0	0	0	0
4:25 PM	8	2	5	0	0	1	1	0	0	69	6	0	3	133	0	0	228	0	0	0	0
4:30 PM	21	0	11	0	1	1	0	0	0	72	3	0	8	110	1	0	228	0	0	0	0
4:35 PM	14	0	10	0	1	0	1	0	1	68	1	0	3	182	0	0	281	0	0	0	0
4:40 PM	11	0	7	0	2	1	0	0	0	72	2	1	3	145	0	0	243	1	0	0	1
4:45 PM	25	1	4	0	2	0	0	0	0	68	1	0	1	115	1	0	218	0	0	0	0
4:50 PM	6	0	3	0	5	0	1	0	0	68	1	0	7	154	0	0	245	0	0	0	0
4:55 PM	14	0	4	0	3	0	0	0	1	95	6	0	2	114	1	0	240	0	0	0	0
5:00 PM	19	0	2	0	2	2	0	0	2	63	1	0	5	105	0	0	201	0	0	0	0
5:05 PM	23	1	5	0	4	1	0	0	1	71	0	0	3	143	0	0	252	1	0	0	1
5:10 PM	21	1	4	0	3	0	0	0	1	66	1	0	2	116	0	0	215	0	0	0	0
5:15 PM	18	0	7	0	2	0	1	0	2	70	2	0	5	144	2	0	253	0	0	0	0
5:20 PM	8	0	6	0	1	0	1	0	1	74	3	0	1	163	1	0	259	0	0	0	0
5:25 PM	20	2	3	0	2	0	0	0	0	70	3	0	2	126	0	0	228	0	0	0	0
5:30 PM	21	0	7	0	2	1	0	0	1	81	3	0	0	136	1	0	253	0	0	0	0
5:35 PM	10	0	1	0	2	1	2	0	0	64	3	0	4	109	1	0	197	0	0	0	0
5:40 PM	15	0	2	0	2	1	1	0	0	56	4	0	4	128	0	0	213	0	0	0	0
5:45 PM	12	0	2	0	1	2	1	0	1	52	2	0	6	119	0	1	198	0	0	0	0
5:50 PM	11	0	1	0	3	1	2	0	0	89	2	0	3	86	0	0	198	0	0	0	0
5:55 PM	9	1	2	0	1	1	0	0	0	54	0	0	3	123	0	0	194	0	0	0	0
Total Survey	382	9	110	0	49	16	14	0	16	1,692	61	1	95	3,081	9	1	5,534	2	0	0	2

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	64	0	11	0	6	0	3	0	4	219	13	0	17	389	1	0	727	0	0	0	0
4:15 PM	40	3	18	0	4	4	1	0	1	220	10	0	16	374	0	0	691	0	0	0	0
4:30 PM	46	0	28	0	4	2	1	0	1	212	6	1	14	437	1	0	752	1	0	0	1
4:45 PM	45	1	11	0	10	0	1	0	1	231	8	0	10	383	2	0	703	0	0	0	0
5:00 PM	63	2	11	0	9	3	0	0	4	200	2	0	10	364	0	0	668	1	0	0	1
5:15 PM	46	2	16	0	5	0	2	0	3	214	8	0	8	433	3	0	740	0	0	0	0
5:30 PM	46	0	10	0	6	3	3	0	1	201	10	0	8	373	2	0	663	0	0	0	0
5:45 PM	32	1	5	0	5	4	3	0	1	195	4	0	12	328	0	1	590	0	0	0	0
Total Survey	382	9	110	0	49	16	14	0	16	1,692	61	1	95	3,081	9	1	5,534	2	0	0	2

Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	267	63	330	0	38	21	59	0	900	1,847	2,747	1	1,683	957	2,640	0	2,888	2	0	0	2
%HV	1.9%				0.0%				3.7%				1.9%				2.4%				
PHF	0.83				0.73				0.94				0.94				0.97				

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	200	5	62	267	29	5	4	38	10	866	24	900	34	1,643	6	1,683	2,888
%HV	1.5%	0.0%	3.2%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	4.2%	3.7%	14.7%	1.6%	16.7%	1.9%	2.4%
PHF	0.79	0.63	0.74	0.83	0.73	0.42	0.50	0.73	0.63	0.94	0.67	0.94	0.61	0.93	0.50	0.94	0.97

Rolling Hour Summary

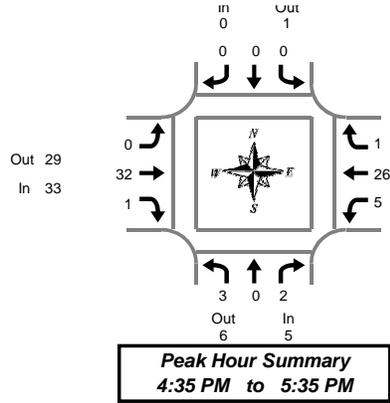
4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	195	4	68	0	24	6	6	0	7	882	37	1	57	1,583	4	0	2,873	1	0	0	1
4:15 PM	194	6	68	0	27	9	3	0	7	863	26	1	50	1,558	3	0	2,814	2	0	0	2
4:30 PM	200	5	66	0	28	5	4	0	9	857	24	1	42	1,617	6	0	2,863	2	0	0	2
4:45 PM	200	5	48	0	30	6	6	0	9	846	28	0	36	1,553	7	0	2,774	1	0	0	1
5:00 PM	187	5	42	0	25	10	8	0	9	810	24	0	38	1,498	5	1	2,661	1	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & Hwy 99W

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				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	3	1	4	2	0	0	2	6
4:05 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	2	0	2	5
4:10 PM	0	0	1	1	0	0	0	0	0	2	1	3	2	6	0	8	12
4:15 PM	1	0	0	1	1	0	0	1	0	1	0	1	3	5	0	8	11
4:20 PM	0	0	2	2	0	0	0	0	0	5	0	5	2	0	0	2	9
4:25 PM	0	0	1	1	0	0	0	0	0	5	2	7	0	2	0	2	10
4:30 PM	0	0	0	0	0	0	0	0	0	6	1	7	1	4	0	5	12
4:35 PM	0	0	0	0	0	0	0	0	0	4	0	4	1	4	0	5	9
4:40 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	1	0	1	4
4:45 PM	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	6
4:50 PM	1	0	0	1	0	0	0	0	0	1	0	1	1	4	0	5	7
4:55 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
5:05 PM	0	0	0	0	0	0	0	0	0	3	0	3	1	6	0	7	10
5:10 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	3	0	4	6
5:15 PM	1	0	1	2	0	0	0	0	0	3	0	3	0	0	1	1	6
5:20 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:25 PM	1	0	0	1	0	0	0	0	0	5	0	5	0	1	0	1	7
5:30 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	3	0	3	5
5:35 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5	9
5:40 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	3	0	3	5
5:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	2	4
5:50 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
5:55 PM	0	0	0	0	0	0	0	0	0	3	0	3	1	2	0	3	6
Total Survey	5	0	6	11	1	0	0	1	0	69	8	77	16	58	1	75	164

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	1	2	0	0	0	0	0	7	2	9	4	8	0	12	23
4:15 PM	1	0	3	4	1	0	0	1	0	11	2	13	5	7	0	12	30
4:30 PM	0	0	1	1	0	0	0	0	0	12	1	13	2	9	0	11	25
4:45 PM	1	0	0	1	0	0	0	0	0	10	0	10	1	5	0	6	17
5:00 PM	0	0	0	0	0	0	0	0	0	5	0	5	3	11	0	14	19
5:15 PM	2	0	1	3	0	0	0	0	0	10	0	10	0	2	1	3	16
5:30 PM	0	0	0	0	0	0	0	0	0	6	2	8	0	11	0	11	19
5:45 PM	0	0	0	0	0	0	0	0	0	8	1	9	1	5	0	6	15
Total Survey	5	0	6	11	1	0	0	1	0	69	8	77	16	58	1	75	164

Heavy Vehicle Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound Hwy 99W			Westbound Hwy 99W			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	6	11	0	1	1	33	29	62	32	34	66	70
PHF	0.42			0.00			0.69			0.57			0.80

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	0	2	5	0	0	0	0	0	32	1	33	5	26	1	32	70
PHF	0.38	0.00	0.50	0.42	0.00	0.00	0.00	0.00	0.00	0.67	0.25	0.69	0.42	0.59	0.25	0.57	0.80

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound Hwy 99W				Westbound Hwy 99W				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	3	0	5	8	1	0	0	1	0	40	5	45	12	29	0	41	95
4:15 PM	2	0	4	6	1	0	0	1	0	38	3	41	11	32	0	43	91
4:30 PM	3	0	2	5	0	0	0	0	0	37	1	38	6	27	1	34	77
4:45 PM	3	0	1	4	0	0	0	0	0	31	2	33	4	29	1	34	71
5:00 PM	2	0	1	3	0	0	0	0	0	29	3	32	4	29	1	34	69

Peak Hour Summary

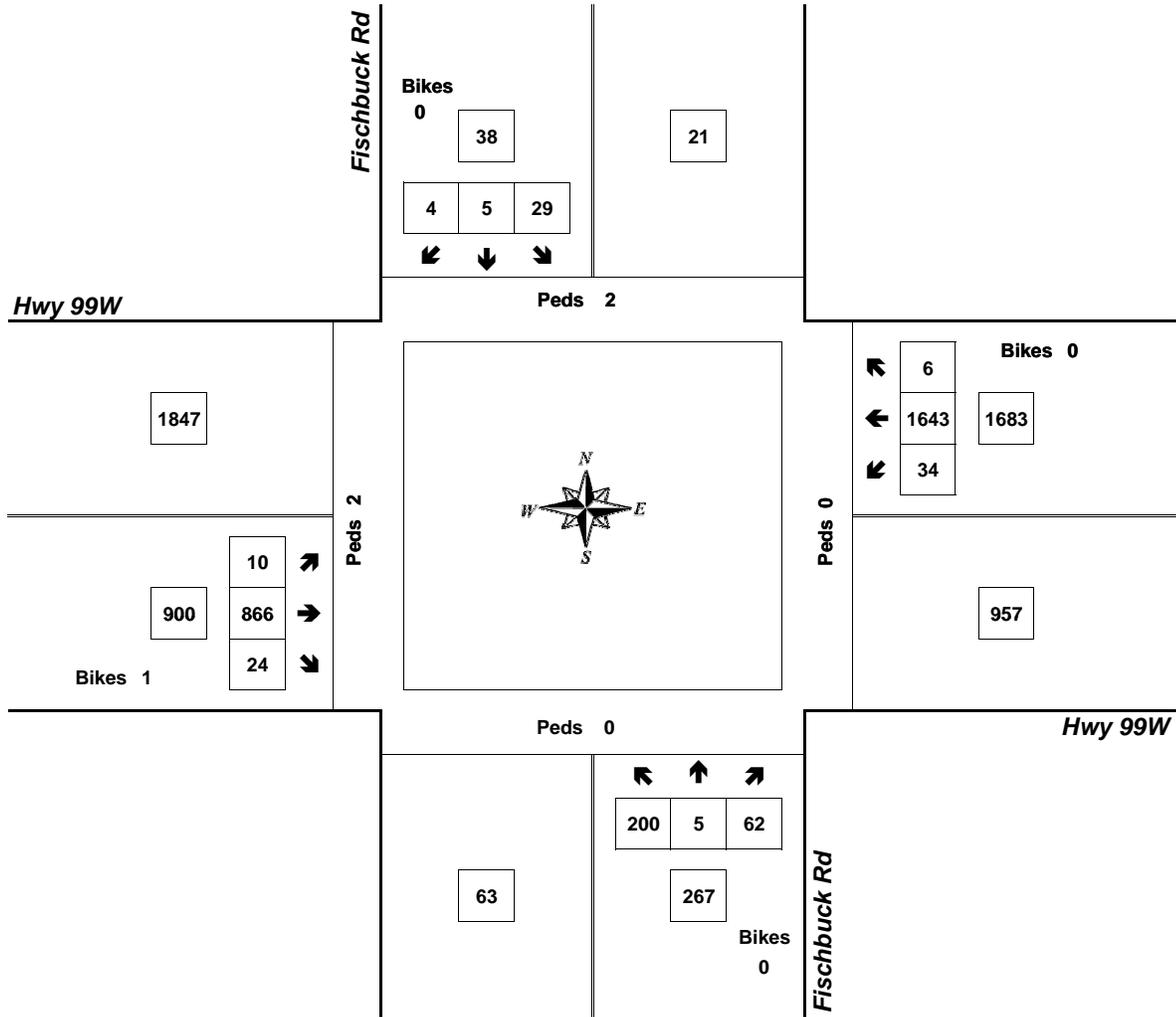


Clay Carney
(503) 833-2740

Fischbuck Rd & Hwy 99W

4:35 PM to 5:35 PM

Wednesday, September 16, 2015



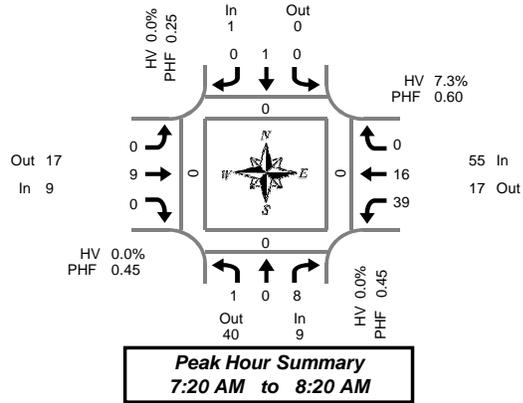
Approach	PHF	HV%	Volume
EB	0.94	3.7%	900
WB	0.94	1.9%	1,683
NB	0.83	1.9%	267
SB	0.73	0.0%	38
Intersection	0.97	2.4%	2,888

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				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	0	0	0	0	0	0	0	0	1	0	0	3	2	0	0	6	0	0	0	0
7:05 AM	0	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	0	0	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	4	1	0	0	6	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	8	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	7	0	0	0	0
7:40 AM	0	0	0	0	0	0	0	0	0	3	0	0	1	2	0	0	6	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0
7:50 AM	0	0	2	0	0	1	0	0	0	0	0	0	2	2	0	0	7	0	0	0	0
7:55 AM	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	8	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	3	0	0	2	1	0	0	6	0	0	0	0
8:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	0	0	0
8:15 AM	1	0	2	0	0	0	0	0	0	1	0	0	3	2	0	0	9	0	0	0	0
8:20 AM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	0
8:25 AM	0	0	1	0	0	0	0	0	0	1	0	0	2	2	0	0	6	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
8:35 AM	0	0	0	0	0	0	0	0	0	2	1	0	2	0	0	0	5	0	0	0	0
8:40 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
8:50 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	1	0	3
8:55 AM	0	0	3	0	0	0	0	0	0	0	0	0	3	1	0	0	7	0	0	0	0
Total Survey	1	1	16	0	0	1	0	0	0	14	1	0	71	22	0	0	127	0	1	0	3

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				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	1	0	0	0	0	0	0	0	1	0	0	12	2	0	0	16	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	14	3	0	0	18	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	11	7	0	0	21	0	0	0	0
7:45 AM	0	0	5	0	0	1	0	0	0	2	0	0	6	4	0	0	18	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	0	3	0	0	9	1	0	0	14	0	0	0	0
8:15 AM	1	0	5	0	0	0	0	0	0	2	0	0	7	4	0	0	19	0	0	0	0
8:30 AM	0	0	1	0	0	0	0	0	0	2	1	0	5	0	0	0	9	0	0	0	0
8:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	7	1	0	0	12	0	1	0	3
Total Survey	1	1	16	0	0	1	0	0	0	14	1	0	71	22	0	0	127	0	1	0	3

Peak Hour Summary

7:20 AM to 8:20 AM

By Approach	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	9	40	49	0	1	0	1	0	9	17	26	0	55	17	72	0	74	0	0	0	0
%HV	0.0%				0.0%				0.0%				7.3%				5.4%				
PHF	0.45				0.25				0.45				0.60				0.80				

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Total
	L	T	R	Total													
Volume	1	0	8	9	0	1	0	1	0	9	0	9	39	16	0	55	74
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	7.3%	5.4%
PHF	0.25	0.00	0.40	0.45	0.00	0.25	0.00	0.25	0.00	0.45	0.00	0.45	0.57	0.57	0.00	0.60	0.80

Rolling Hour Summary

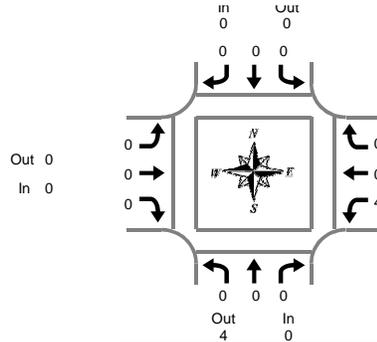
7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				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	1	5	0	0	1	0	0	0	7	0	0	43	16	0	0	73	0	0	0	0
7:15 AM	0	0	6	0	0	1	0	0	0	9	0	0	40	15	0	0	71	0	0	0	0
7:30 AM	1	0	11	0	0	1	0	0	0	10	0	0	33	16	0	0	72	0	0	0	0
7:45 AM	1	0	12	0	0	1	0	0	0	9	1	0	27	9	0	0	60	0	0	0	0
8:00 AM	1	0	11	0	0	0	0	0	0	7	1	0	28	6	0	0	54	0	1	0	3

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:20 AM to 8:20 AM

Fischbuck Rd & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Interval 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	0
7:05 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:10 AM	0	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	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
7:40 AM	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	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	0
8:00 AM	0	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	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
8:30 AM	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	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	0
8:55 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Survey	0	1	2	3	0	0	0	0	0	0	0	0	5	0	0	5	8	8

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Interval Total	
	L	T	R	Total														
7:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
7:45 AM	0	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	0
8:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Survey	0	1	2	3	0	0	0	0	0	0	0	0	5	0	0	5	8	8

Heavy Vehicle Peak Hour Summary

7:20 AM to 8:20 AM

By Approach	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	4	4	0	0	0	0	0	0	4	0	4	4
PHF	0.00			0.00			0.00			0.33			0.33

By Movement	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Total
	L	T	R	Total													
Volume	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.33	0.33

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Fischbuck Rd				Southbound Fischbuck Rd				Eastbound SE Pacific Dr				Westbound SW Pacific Dr				Interval Total
	L	T	R	Total													
7:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	4	0	0	4	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
7:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
7:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
8:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3

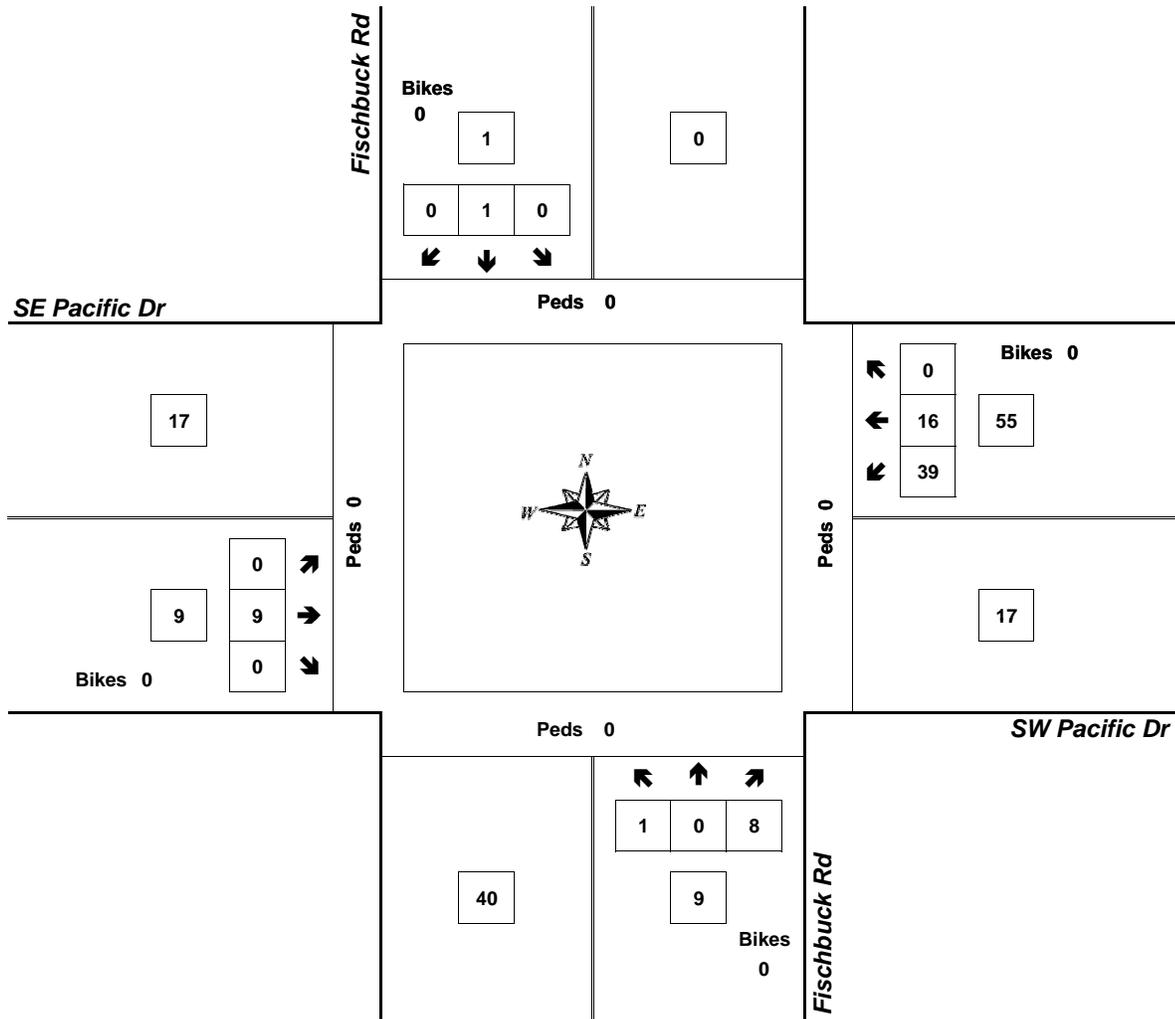
Peak Hour Summary



Clay Carney
(503) 833-2740

Fischbuck Rd & SW Pacific Dr

7:20 AM to 8:20 AM
Thursday, September 17, 2015



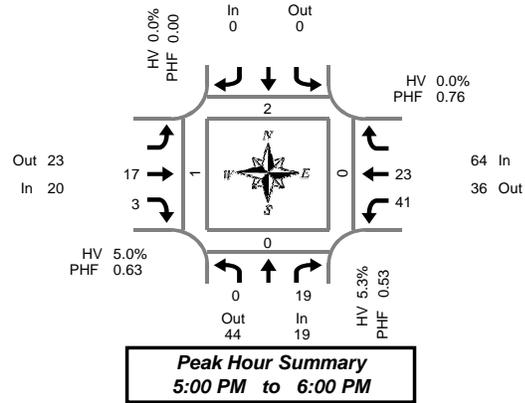
Approach	PHF	HV%	Volume
EB	0.45	0.0%	9
WB	0.60	7.3%	55
NB	0.45	0.0%	9
SB	0.25	0.0%	1
Intersection	0.80	5.4%	74

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

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

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
4:00 PM	0	3	0			0	1	0	0	3	0	0	7	0	0	0	0
4:05 PM	1	1	0			0	1	0	0	4	1	0	8	0	0	0	0
4:10 PM	0	1	0			0	1	1	0	1	2	0	6	0	0	0	0
4:15 PM	0	1	0			0	1	0	0	4	0	0	6	1	0	0	0
4:20 PM	0	1	0			0	0	0	0	3	3	0	7	0	0	0	0
4:25 PM	0	1	0			0	1	0	0	1	0	0	3	0	0	0	0
4:30 PM	1	0	0			0	4	0	0	1	2	0	8	1	0	0	0
4:35 PM	0	0	0			0	0	0	0	2	1	0	3	0	0	0	0
4:40 PM	0	1	0			0	1	0	0	4	1	0	7	0	0	0	0
4:45 PM	0	2	0			0	0	0	0	1	2	0	5	0	0	0	0
4:50 PM	0	0	0			0	0	1	0	5	2	0	8	0	0	0	0
4:55 PM	0	2	0			0	1	0	0	3	1	0	7	0	0	0	0
5:00 PM	0	0	0			0	1	0	0	4	0	0	5	1	0	0	0
5:05 PM	0	4	0			0	1	1	0	4	3	0	13	1	0	0	1
5:10 PM	0	2	0			0	1	0	0	3	3	0	9	0	0	0	0
5:15 PM	0	3	0			0	1	0	0	3	1	0	8	0	0	0	0
5:20 PM	0	3	0			0	2	0	0	2	1	0	8	0	0	0	0
5:25 PM	0	2	0			0	1	0	0	2	1	0	6	0	0	0	0
5:30 PM	0	2	0			0	0	0	0	3	2	0	7	0	0	0	0
5:35 PM	0	1	0			0	0	0	0	5	4	0	10	0	0	0	0
5:40 PM	0	0	0			0	4	1	0	3	2	0	10	0	0	0	0
5:45 PM	0	0	0			0	1	0	0	4	3	0	8	0	0	0	0
5:50 PM	0	1	0			0	2	0	0	6	2	0	11	0	0	0	0
5:55 PM	0	1	0			0	3	1	0	2	1	0	8	0	0	0	0
Total Survey	2	32	0			0	28	5	0	73	38	0	178	4	0	0	1

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

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
4:00 PM	1	5	0			0	3	1	0	8	3	0	21	0	0	0	0
4:15 PM	0	3	0			0	2	0	0	8	3	0	16	1	0	0	0
4:30 PM	1	1	0			0	5	0	0	7	4	0	18	1	0	0	0
4:45 PM	0	4	0			0	1	1	0	9	5	0	20	0	0	0	0
5:00 PM	0	6	0			0	3	1	0	11	6	0	27	2	0	0	1
5:15 PM	0	8	0			0	4	0	0	7	3	0	22	0	0	0	0
5:30 PM	0	3	0			0	4	1	0	11	8	0	27	0	0	0	0
5:45 PM	0	2	0			0	6	1	0	12	6	0	27	0	0	0	0
Total Survey	2	32	0			0	28	5	0	73	38	0	178	4	0	0	1

Peak Hour Summary 5:00 PM to 6:00 PM

By Approach	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Total	Pedestrians Crosswalk							
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West				
Volume	19	44	63	0	0	0	0	20	23	43	0	64	36	100	0	103	2	0	0	1	
%HV	5.3%				0.0%				5.0%				0.0%			1.9%					
PHF	0.53				0.00				0.63				0.76			0.86					

By Movement	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Total				
	L	R	Total			Total	T	R	Total	L	T	Total					
Volume	0	19	19			0	17	3	20	41	23	64	103				
%HV	0.0%	NA	5.3%	5.3%	NA	NA	NA	0.0%	NA	5.9%	0.0%	5.0%	0.0%	0.0%	NA	0.0%	1.9%
PHF	0.00	0.53	0.53			0.00	0.61	0.75	0.63	0.79	0.64	0.76	0.86				

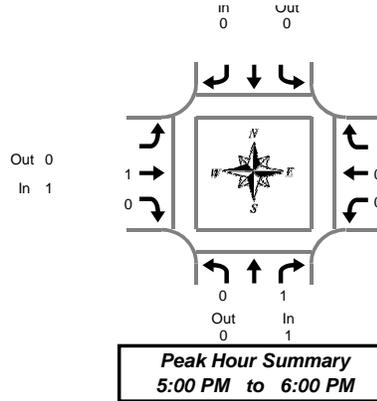
Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
4:00 PM	2	13	0			0	11	2	0	32	15	0	75	2	0	0	0
4:15 PM	1	14	0			0	11	2	0	35	18	0	81	4	0	0	1
4:30 PM	1	19	0			0	13	2	0	34	18	0	87	3	0	0	1
4:45 PM	0	21	0			0	12	3	0	38	22	0	96	2	0	0	1
5:00 PM	0	19	0			0	17	3	0	41	23	0	103	2	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Fischbuck Rd & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

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

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	
	L	R	Total			Total	T	R	Total	L	T	Total		
4:00 PM	0	0	0			0			0	0	0	0	0	
4:05 PM	0	0	0			0			0	0	0	0	0	
4:10 PM	0	0	0			0			0	0	0	0	0	
4:15 PM	0	0	0			0			0	0	1	0	1	
4:20 PM	0	0	0			0			0	0	0	1	1	
4:25 PM	0	0	0			0			0	0	0	0	0	
4:30 PM	0	0	0			0			0	0	0	0	0	
4:35 PM	0	0	0			0			0	0	0	0	0	
4:40 PM	0	0	0			0			0	0	0	0	0	
4:45 PM	0	0	0			0			0	0	0	0	0	
4:50 PM	0	0	0			0			0	0	0	0	0	
4:55 PM	0	0	0			0			0	0	0	0	0	
5:00 PM	0	0	0			0			0	0	0	0	0	
5:05 PM	0	0	0			0			0	0	0	0	0	
5:10 PM	0	0	0			0			0	0	0	0	0	
5:15 PM	0	1	1			0			0	0	0	0	1	
5:20 PM	0	0	0			0		1	0	1	0	0	1	
5:25 PM	0	0	0			0		0	0	0	0	0	0	
5:30 PM	0	0	0			0		0	0	0	0	0	0	
5:35 PM	0	0	0			0		0	0	0	0	0	0	
5:40 PM	0	0	0			0		0	0	0	0	0	0	
5:45 PM	0	0	0			0		0	0	0	0	0	0	
5:50 PM	0	0	0			0		0	0	0	0	0	0	
5:55 PM	0	0	0			0		0	0	0	0	0	0	
Total Survey	0	1	1			0		1	0	1	1	1	2	4

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

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	
	L	R	Total			Total	T	R	Total	L	T	Total		
4:00 PM	0	0	0			0			0	0	0	0	0	
4:15 PM	0	0	0			0			0	0	0	1	1	2
4:30 PM	0	0	0			0			0	0	0	0	0	0
4:45 PM	0	0	0			0			0	0	0	0	0	0
5:00 PM	0	0	0			0			0	0	0	0	0	0
5:15 PM	0	1	1			0		1	0	1	0	0	0	2
5:30 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
Total Survey	0	1	1			0		1	0	1	1	1	2	4

Heavy Vehicle Peak Hour Summary 5:00 PM to 6:00 PM

By Approach	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	1	0	1	0	0	0	1	0	1	0	2	2	2
PHF	0.25			0.00			0.25			0.00			0.25

By Movement	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Total
	L	R	Total			Total	T	R	Total	L	T	Total	
Volume	0	1	1			0	1	0	1	0	0	0	2
PHF	0.00	0.25	0.25			0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.25

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

Interval Start Time	Northbound Fischbuck Rd			Southbound Fischbuck Rd			Eastbound SE Pacific Dr			Westbound SW Pacific Dr			Interval Total	
	L	R	Total			Total	T	R	Total	L	T	Total		
4:00 PM	0	0	0			0			0	0	0	1	1	2
4:15 PM	0	0	0			0			0	0	0	1	1	2
4:30 PM	0	1	1			0		1	0	1	0	0	0	2
4:45 PM	0	1	1			0		1	0	1	0	0	0	2
5:00 PM	0	1	1			0		1	0	1	0	0	0	2

Peak Hour Summary



Clay Carney
(503) 833-2740

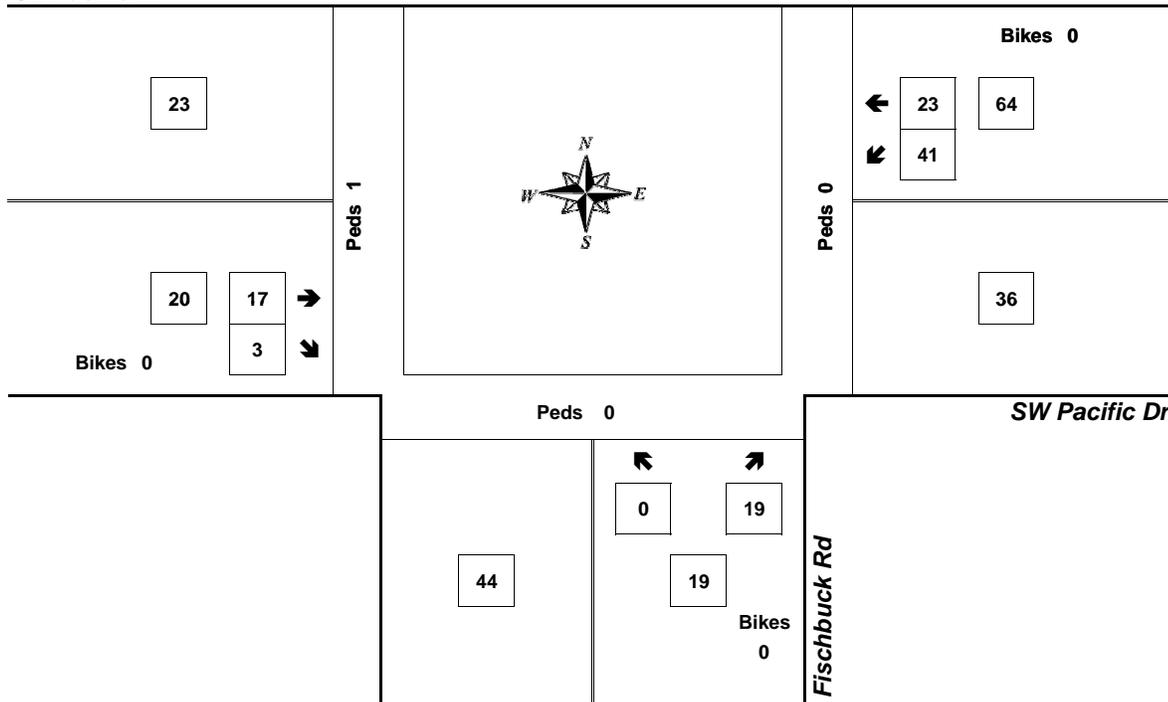
Fischbuck Rd & SW Pacific Dr

5:00 PM to 6:00 PM
Wednesday, September 16, 2015

Bikes
0

SE Pacific Dr

Peds 2



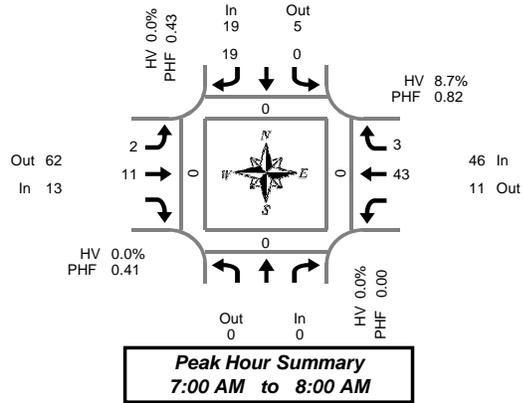
Approach	PHF	HV%	Volume
EB	0.63	5.0%	20
WB	0.76	0.0%	64
NB	0.53	5.3%	19
SB	0.00	0.0%	0
Intersection	0.86	1.9%	103

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 135th Ter & SW Pacific Dr

Thursday, September 17, 2015

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 SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	0	0	1	0	0	0	7	1	0	9	0	0	0	0			
7:05 AM	0	0	2	0	0	0	0	0	4	0	0	6	0	0	0	0			
7:10 AM	0	0	1	0	0	0	0	0	2	0	0	3	0	0	0	0			
7:15 AM	0	0	2	0	0	1	0	0	3	0	0	6	0	0	0	0			
7:20 AM	0	0	1	0	0	0	0	0	3	0	0	4	0	0	0	0			
7:25 AM	0	0	4	0	0	0	0	0	5	0	0	9	0	0	0	0			
7:30 AM	0	0	4	0	0	0	0	0	3	1	0	8	0	0	0	0			
7:35 AM	0	0	3	0	0	0	0	0	5	0	0	8	0	0	0	0			
7:40 AM	0	0	1	0	1	2	0	0	2	0	0	6	0	0	0	0			
7:45 AM	0	0	0	0	0	1	0	0	3	0	0	4	0	0	0	0			
7:50 AM	0	0	1	0	0	1	0	0	4	1	0	7	0	0	0	0			
7:55 AM	0	0	0	0	0	6	0	0	2	0	0	8	0	0	0	0			
8:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0			
8:05 AM	0	0	0	0	1	2	0	0	2	0	0	5	0	0	0	0			
8:10 AM	0	0	2	0	0	0	0	0	4	0	0	6	0	0	0	0			
8:15 AM	0	0	2	0	1	3	0	0	3	0	0	9	0	0	0	0			
8:20 AM	0	0	1	0	0	2	0	0	1	1	0	5	0	0	0	0			
8:25 AM	0	0	0	0	0	1	0	0	5	0	0	6	0	0	0	0			
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0			
8:35 AM	0	0	1	0	0	1	0	0	1	0	0	3	0	0	0	0			
8:40 AM	0	0	0	0	0	1	0	0	2	0	0	3	0	0	0	0			
8:45 AM	0	0	2	0	0	0	0	0	1	0	0	3	0	0	0	0			
8:50 AM	0	0	0	0	0	1	0	0	2	0	0	3	0	0	0	0			
8:55 AM	0	0	1	0	0	2	0	0	3	0	0	6	1	0	0	1			
Total Survey	0	0	29	0	4	25	0	0	69	4	0	131	1	0	0	1			

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	3	0	1	0	0	0	13	1	0	18	0	0	0	0			
7:15 AM	0	0	7	0	0	1	0	0	11	0	0	19	0	0	0	0			
7:30 AM	0	0	8	0	1	2	0	0	10	1	0	22	0	0	0	0			
7:45 AM	0	0	1	0	0	8	0	0	9	1	0	19	0	0	0	0			
8:00 AM	0	0	2	0	1	2	0	0	8	0	0	13	0	0	0	0			
8:15 AM	0	0	3	0	1	6	0	0	9	1	0	20	0	0	0	0			
8:30 AM	0	0	2	0	0	3	0	0	3	0	0	8	0	0	0	0			
8:45 AM	0	0	3	0	0	3	0	0	6	0	0	12	1	0	0	1			
Total Survey	0	0	29	0	4	25	0	0	69	4	0	131	1	0	0	1			

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	0	0	0	0	19	5	24	0	13	62	75	0	46	11	57	0	78	0	0	0	0
%HV	0.0%				0.0%				0.0%				8.7%				5.1%				
PHF	0.00				0.43				0.41				0.82				0.78				

By Movement	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total
	Total	L	R	Total	L	T	Total	T	R	Total	T	R	Total				
Volume	0	0	19	19	2	11	13	43	3	46	78	3	46	78			
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	0.0%	NA	0.0%	9.3%	0.0%	8.7%	5.1%	
PHF			0.00	0.00	0.43	0.43	0.50	0.34	0.41			0.83	0.75	0.82	0.78		

Rolling Hour Summary

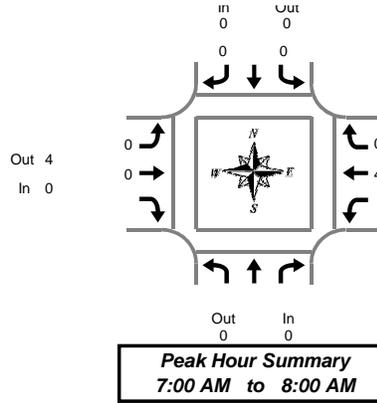
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	19	0	2	11	0	0	43	3	0	78	0	0	0	0			
7:15 AM	0	0	18	0	2	13	0	0	38	2	0	73	0	0	0	0			
7:30 AM	0	0	14	0	3	18	0	0	36	3	0	74	0	0	0	0			
7:45 AM	0	0	8	0	2	19	0	0	29	2	0	60	0	0	0	0			
8:00 AM	0	0	10	0	2	14	0	0	26	1	0	53	1	0	0	1			

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 135th Ter & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	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
7:10 AM	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
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	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
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:20 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
8:25 AM	0	0	0	0	0	0	0	0	1	0	1	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	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
8:55 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Survey	0	0	0	0	0	0	0	2	2	6	0	6	8

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	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	2	0	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:45 AM	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
8:15 AM	0	0	0	0	0	0	1	1	2	0	2	3	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Survey	0	0	0	0	0	0	0	2	2	6	0	6	8

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

By Approach	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	0	0	0	0	4	4	4	0	4	4
PHF	0.00			0.00			0.00			0.25			0.25

By Movement	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	4	0	4	4
PHF	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.25	0.00	0.25	0.25

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
7:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	1	1	4	0	4	5	5
7:45 AM	0	0	0	0	0	0	1	1	2	0	2	3	3
8:00 AM	0	0	0	0	0	0	2	2	2	0	2	4	4

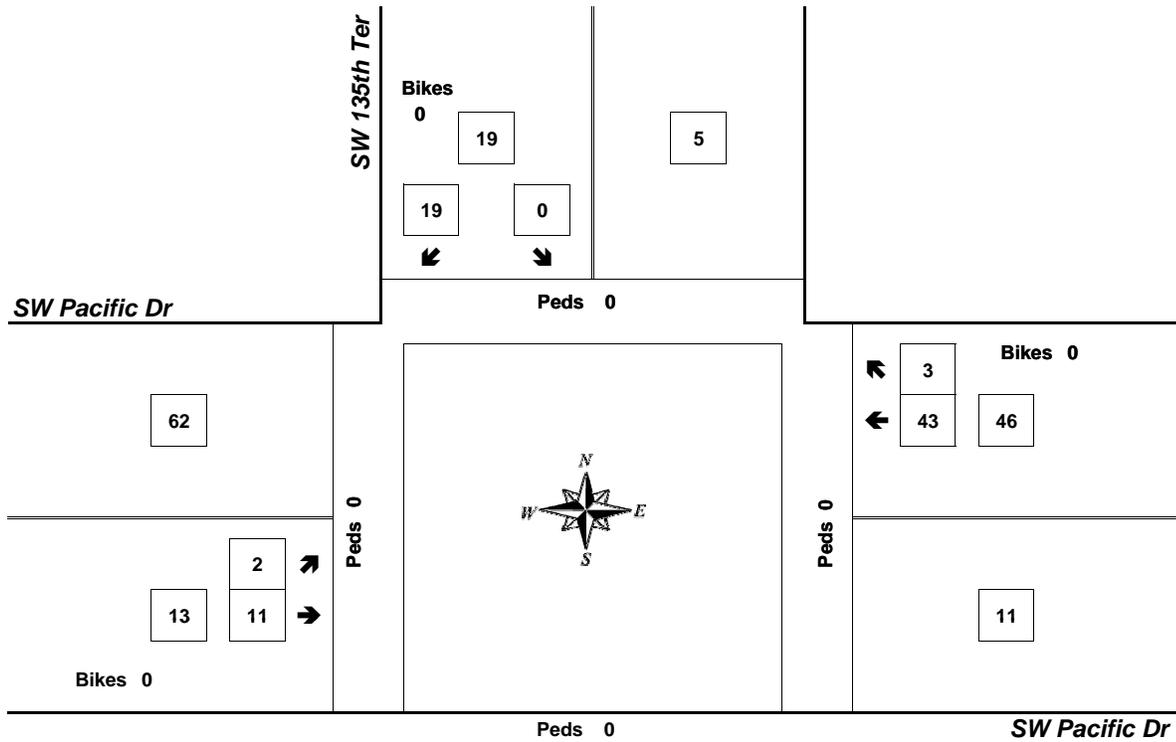
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 135th Ter & SW Pacific Dr

7:00 AM to 8:00 AM
Thursday, September 17, 2015



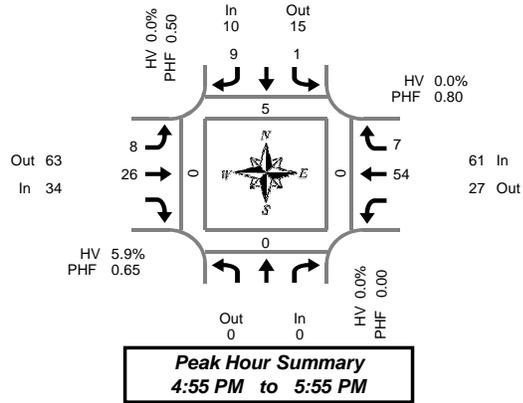
Approach	PHF	HV%	Volume
EB	0.41	0.0%	13
WB	0.82	8.7%	46
NB	0.00	0.0%	0
SB	0.43	0.0%	19
Intersection	0.78	5.1%	78

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 135th Ter & SW Pacific Dr

Wednesday, September 16, 2015

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 SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
4:00 PM																					
4:05 PM																					
4:10 PM																					
4:15 PM																					
4:20 PM																					
4:25 PM																					
4:30 PM																					
4:35 PM																					
4:40 PM																					
4:45 PM																					
4:50 PM																					
4:55 PM																					
5:00 PM																					
5:05 PM																					
5:10 PM																					
5:15 PM																					
5:20 PM																					
5:25 PM																					
5:30 PM																					
5:35 PM																					
5:40 PM																					
5:45 PM																					
5:50 PM																					
5:55 PM																					
Total Survey																					

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
4:00 PM																					
4:15 PM																					
4:30 PM																					
4:45 PM																					
5:00 PM																					
5:15 PM																					
5:30 PM																					
5:45 PM																					
Total Survey																					

Peak Hour Summary

4:55 PM to 5:55 PM

By Approach	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	0	0	0	0	10	15	25	0	34	63	97	0	61	27	88	0	105	5	0	0	0
%HV	0.0%				0.0%				5.9%				0.0%				1.9%				
PHF	0.00				0.50				0.65				0.80				0.82				

By Movement	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total
	Total	L	R	Total	L	T	Total	L	T	Total	T	R	Total				
Volume	0	1	9	10	8	26	34	54	7	61	105	5	2	7			
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	7.7%	NA	5.9%	NA	0.0%	0.0%	0.0%	1.9%
PHF		0.00	0.25	0.45	0.50	0.67	0.54	0.65	0.84	0.44	0.80	0.82					

Rolling Hour Summary

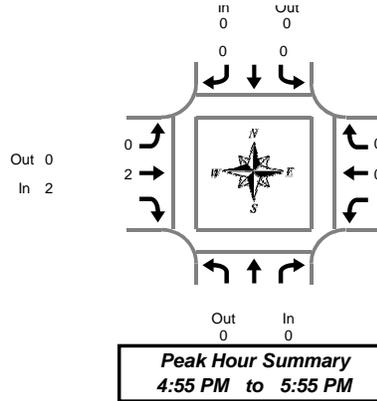
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 135th Ter				Southbound SW 135th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
4:00 PM																					
4:15 PM																					
4:30 PM																					
4:45 PM																					
5:00 PM																					

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 135th Ter & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:20 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	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
4:45 PM	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
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:20 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:30 PM	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
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

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

By Approach	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	0	0	0	2	0	2	0	2	2	2
PHF	0.00			0.00			0.25			0.00			0.25

By Movement	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	0	0	0	0	2	2	0	0	0	2
PHF	0.00	0.00		0.00	0.00		0.00	0.25	0.25	0.00	0.00	0.00	0.25

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

Interval Start Time	Northbound SW 135th Ter			Southbound SW 135th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	2	2	0	0	0	2

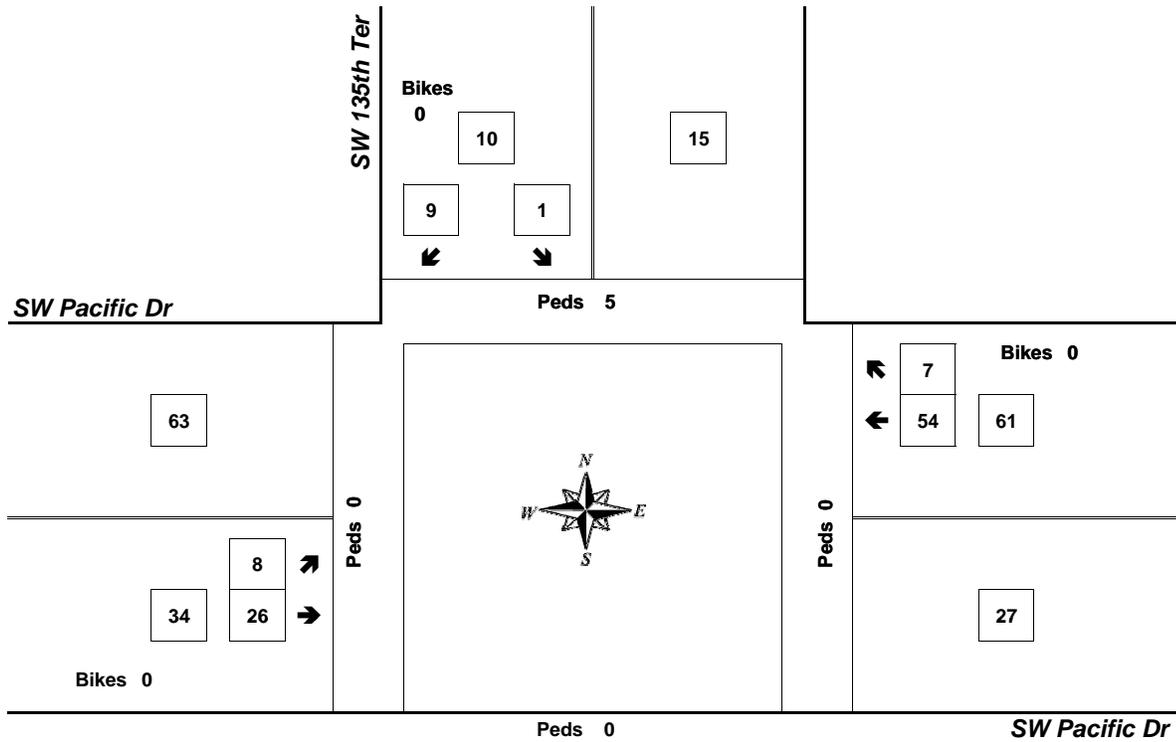
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 135th Ter & SW Pacific Dr

4:55 PM to 5:55 PM
Wednesday, September 16, 2015



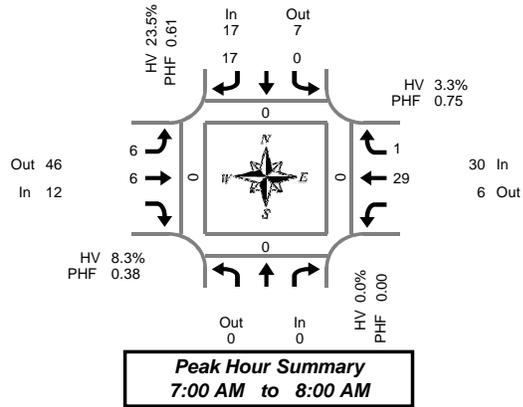
Approach	PHF	HV%	Volume
EB	0.65	5.9%	34
WB	0.80	0.0%	61
NB	0.00	0.0%	0
SB	0.50	0.0%	10
Intersection	0.82	1.9%	105

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 134th Ter & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	1	0	0	0	0	0	0	0	5	0	0	6	0	0	0	0	
7:05 AM	0	0	1	0	0	0	0	0	0	0	3	0	0	4	0	0	0	0	
7:10 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	
7:15 AM	0	0	1	0	1	0	1	0	0	0	2	0	0	4	0	0	0	0	
7:20 AM	0	0	3	0	0	0	0	0	0	0	2	0	0	5	0	0	0	0	
7:25 AM	0	0	2	0	2	0	1	0	0	0	2	0	0	5	0	0	0	0	
7:30 AM	0	0	2	0	0	0	0	0	0	0	3	0	0	5	0	0	0	0	
7:35 AM	0	0	2	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	
7:40 AM	0	0	1	0	1	0	1	1	0	0	1	1	0	5	0	0	0	0	
7:45 AM	0	0	3	0	1	0	1	0	0	0	1	0	0	5	0	0	0	0	
7:50 AM	0	0	1	0	0	0	1	0	0	0	3	0	0	5	0	0	0	0	
7:55 AM	0	0	0	0	2	4	0	0	0	0	3	0	0	9	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
8:05 AM	0	0	2	0	1	0	0	0	0	0	1	0	0	4	0	0	0	0	
8:10 AM	0	0	2	0	0	1	0	1	0	0	2	0	0	5	0	0	0	0	
8:15 AM	0	0	2	0	0	2	0	0	0	0	1	0	0	5	0	0	0	0	
8:20 AM	0	0	0	0	1	0	0	0	0	0	2	0	0	3	0	0	0	0	
8:25 AM	0	0	2	0	1	1	1	0	0	0	2	1	0	7	0	0	0	0	
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
8:35 AM	0	0	0	0	0	0	2	0	0	0	1	0	0	3	0	0	0	0	
8:40 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
8:50 AM	0	0	0	0	0	0	1	0	0	0	3	0	0	4	1	0	0	0	
8:55 AM	0	0	1	0	0	0	2	0	0	0	2	0	0	5	0	0	0	0	
Total Survey	0	0	27	0	9	16	0	0	0	0	46	2	0	100	1	0	0	0	

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	2	0	0	0	0	0	0	0	10	0	0	12	0	0	0	0	
7:15 AM	0	0	6	0	2	0	2	0	0	0	6	0	0	14	0	0	0	0	
7:30 AM	0	0	5	0	1	1	1	0	0	0	6	1	0	14	0	0	0	0	
7:45 AM	0	0	4	0	3	5	0	0	0	0	7	0	0	19	0	0	0	0	
8:00 AM	0	0	4	0	1	1	0	0	0	0	4	0	0	10	0	0	0	0	
8:15 AM	0	0	4	0	2	3	0	0	0	0	5	1	0	15	0	0	0	0	
8:30 AM	0	0	1	0	0	3	0	0	0	0	2	0	0	6	0	0	0	0	
8:45 AM	0	0	1	0	0	3	0	0	0	0	6	0	0	10	1	0	0	0	
Total Survey	0	0	27	0	9	16	0	0	0	0	46	2	0	100	1	0	0	0	

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	0	0	0	0	17	7	24	0	12	46	58	0	30	6	36	0	59	0	0	0	0
%HV	0.0%				23.5%				8.3%				3.3%				10.2%				
PHF	0.00				0.61				0.38				0.75				0.78				

By Movement	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total
	Total	L	R	Total	L	T	Total	L	T	Total	T	R	Total				
Volume	0	0	17	17	6	6	12	6	6	12	29	1	30	59			
%HV	NA	NA	NA	0.0%	0.0%	NA	23.5%	23.5%	16.7%	0.0%	NA	8.3%	NA	3.4%	0.0%	3.3%	10.2%
PHF			0.00	0.00	0.61	0.61	0.50	0.30	0.38		0.73	0.25	0.75	0.78			

Rolling Hour Summary

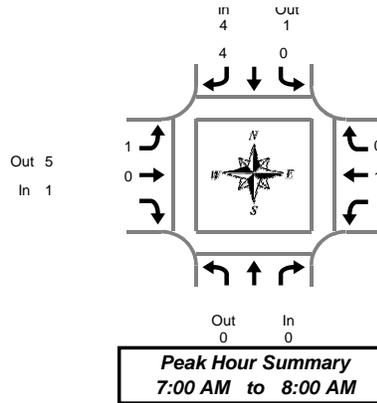
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
7:00 AM	0	0	17	0	6	6	0	0	0	0	29	1	0	59	0	0	0	0	
7:15 AM	0	0	19	0	7	7	0	0	0	0	23	1	0	57	0	0	0	0	
7:30 AM	0	0	17	0	7	10	0	0	0	0	22	2	0	58	0	0	0	0	
7:45 AM	0	0	13	0	6	12	0	0	0	0	18	1	0	50	0	0	0	0	
8:00 AM	0	0	10	0	3	10	0	0	0	0	17	1	0	41	1	0	0	0	

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 134th Ter & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	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
7:10 AM	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
7:20 AM	0	0	1	1	0	0	0	0	0	0	0	0	1
7:25 AM	0	0	1	1	0	0	0	0	0	1	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	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
7:45 AM	0	0	1	1	1	0	1	0	1	0	0	0	2
7:50 AM	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
8:00 AM	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
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	1	0	1	0	0	0	1
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	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
8:55 AM	0	0	0	0	0	0	1	0	1	0	0	0	1
Total Survey	0	0	4	4	1	2	3	2	0	2	9		

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	2	2	0	0	0	0	0	1	0	1	3
7:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	1	1	1	0	1	0	1	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	1	0	1	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	0	1	0	0	0	1
Total Survey	0	0	4	4	1	2	3	2	0	2	9		

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

By Approach	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	4	1	5	1	5	6	1	0	1	6
PHF	0.00			0.50			0.25			0.25			0.50

By Movement	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	4	4	1	0	1	0	1	0	1	6
PHF	0.00	0.00		0.50	0.50	0.25	0.00	0.25		0.25	0.00	0.25	0.50

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	0	0	0	4	4	1	0	1	0	1	0	1	6
7:15 AM	0	0	0	4	4	1	0	1	0	1	0	1	6
7:30 AM	0	0	0	2	2	1	0	1	0	1	0	1	4
7:45 AM	0	0	0	1	1	1	1	2	0	1	0	1	4
8:00 AM	0	0	0	0	0	0	2	2	0	1	0	1	3

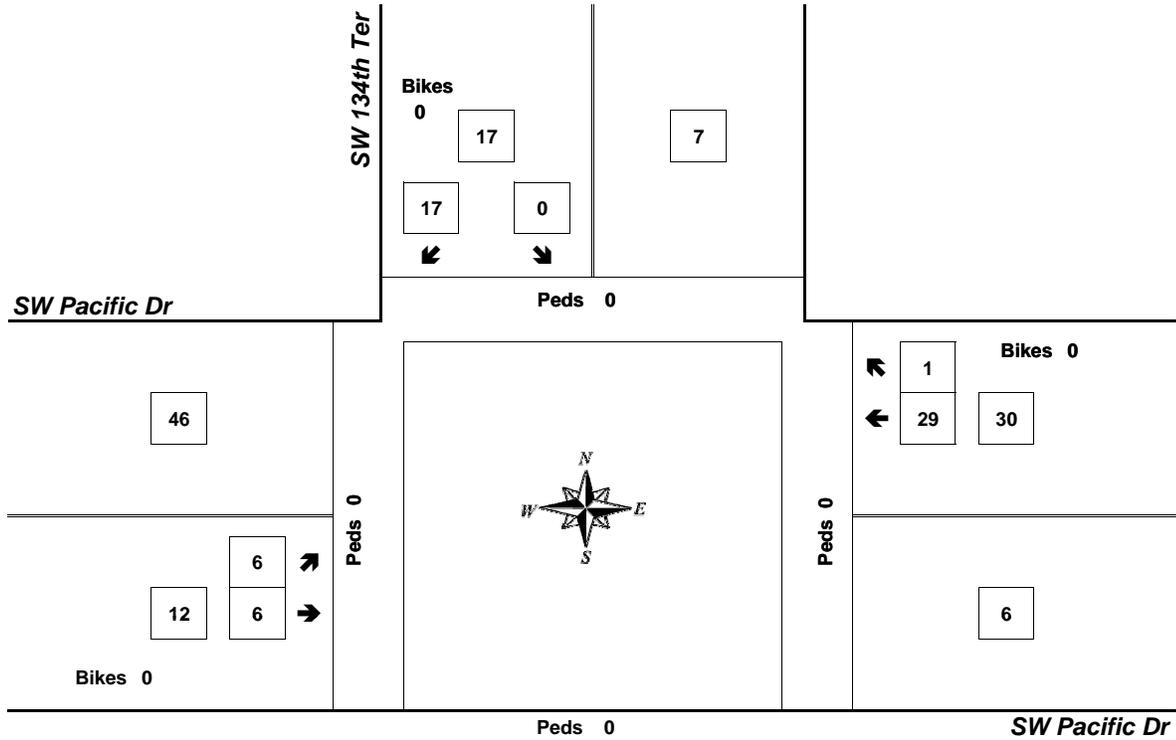
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 134th Ter & SW Pacific Dr

7:00 AM to 8:00 AM
Thursday, September 17, 2015



Bikes
0

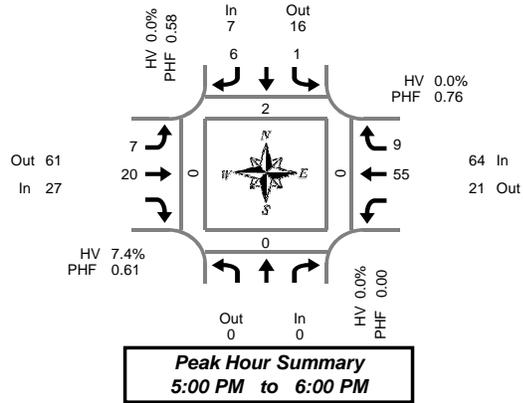
Approach	PHF	HV%	Volume
EB	0.38	8.3%	12
WB	0.75	3.3%	30
NB	0.00	0.0%	0
SB	0.61	23.5%	17
Intersection	0.78	10.2%	59

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 134th Ter & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk					
	In	Out	Total	Bikes	L	R	Total	Bikes	L	T	R	Total	Bikes	T		R	Total	North	South	East	West
4:00 PM				0	0	1	0	1	3	0	2	1	0	2	1	0	8	0	0	0	0
4:05 PM				0	0	1	0	0	2	0	4	0	0	4	0	0	7	0	0	0	0
4:10 PM				0	0	0	0	0	1	0	3	0	0	3	0	0	5	0	0	0	0
4:15 PM				0	0	0	0	0	1	0	4	1	0	4	1	0	6	0	0	0	0
4:20 PM				0	0	1	0	0	1	0	4	0	0	4	0	0	6	0	0	0	0
4:25 PM				0	0	0	0	0	1	1	1	1	0	1	1	0	4	0	0	0	0
4:30 PM				0	0	0	0	0	3	0	6	0	0	6	0	0	9	0	0	0	0
4:35 PM				0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0
4:40 PM				0	0	0	0	0	1	0	3	0	0	3	0	0	4	0	0	0	0
4:45 PM				0	0	1	0	0	0	0	3	0	0	3	0	0	4	0	0	0	0
4:50 PM				0	0	0	0	0	1	0	8	1	0	8	1	0	10	0	0	0	0
4:55 PM				0	0	0	0	0	1	0	3	0	0	3	0	0	4	0	0	0	0
5:00 PM				0	1	1	0	1	1	0	3	2	0	9	2	0	9	0	0	0	0
5:05 PM				0	0	0	0	1	3	0	9	0	0	9	0	0	13	1	0	0	0
5:10 PM				0	0	1	0	0	1	0	5	0	0	5	0	0	7	0	0	0	0
5:15 PM				0	0	1	0	0	2	0	3	1	0	3	1	0	7	0	0	0	0
5:20 PM				0	0	0	0	3	4	0	4	0	0	4	0	0	11	0	0	0	0
5:25 PM				0	0	0	0	1	1	0	3	0	0	3	0	0	5	0	0	0	0
5:30 PM				0	0	0	0	0	2	0	5	2	0	5	2	0	9	1	0	0	0
5:35 PM				0	0	0	0	0	0	0	10	1	0	10	1	0	11	0	0	0	0
5:40 PM				0	0	0	0	1	1	0	1	0	0	1	0	0	3	0	0	0	0
5:45 PM				0	0	1	0	0	1	0	5	1	0	5	1	0	8	0	0	0	0
5:50 PM				0	0	1	0	0	2	0	5	0	0	5	0	0	8	0	0	0	0
5:55 PM				0	0	1	0	0	2	0	2	2	0	2	2	0	7	0	0	0	0
Total Survey				0	1	10	0	10	35	0	97	13	0	166			2	0	0	0	

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk					
	In	Out	Total	Bikes	L	R	Total	Bikes	L	T	R	Total	Bikes	T		R	Total	North	South	East	West
4:00 PM				0	0	2	0	2	6	0	9	1	0	9	1	0	20	0	0	0	0
4:15 PM				0	0	1	0	1	3	0	9	2	0	16	2	0	16	0	0	0	0
4:30 PM				0	0	0	0	0	4	0	10	0	0	14	0	0	14	0	0	0	0
4:45 PM				0	0	1	0	0	2	0	14	1	0	18	1	0	18	0	0	0	0
5:00 PM				0	1	2	0	2	5	0	17	2	0	29	2	0	29	1	0	0	0
5:15 PM				0	0	1	0	4	7	0	10	1	0	23	1	0	23	0	0	0	0
5:30 PM				0	0	0	0	1	3	0	16	3	0	23	3	0	23	1	0	0	0
5:45 PM				0	0	3	0	0	5	0	12	3	0	23	3	0	23	0	0	0	0
Total Survey				0	1	10	0	10	35	0	97	13	0	166			2	0	0	0	

Peak Hour Summary

5:00 PM to 6:00 PM

By Approach	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		Total	North	South	East												
Volume	0	0	0	0	7	16	23	0	27	61	88	0	64	21	85	0	98	2	0	0	0
%HV	0.0%				0.0%				7.4%				0.0%				2.0%				
PHF	0.00				0.58				0.61				0.76				0.84				

By Movement	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total				
	Total	L	R	Total	L	T	Total	L	T	Total	T	R	Total	Total							
Volume	0	1	6	7	7	20	27	7	20	27	55	9	64	98							
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	10.0%	NA	7.4%	NA	0.0%	0.0%	0.0%	2.0%				
PHF		0.00	0.25	0.50	0.58	0.44	0.71	0.61			0.76	0.75	0.76	0.84							

Rolling Hour Summary

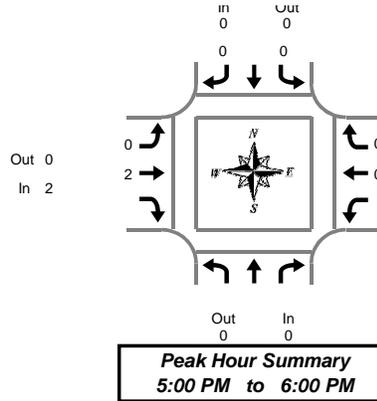
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 134th Ter				Southbound SW 134th Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk				
	In	Out	Total	Bikes	L	R	Total	Bikes	L	T	R	Total	Bikes	T		R	Total	North	South	East
4:00 PM				0	0	4	0	3	15	0	42	4	0	68			0	0	0	0
4:15 PM				0	1	4	0	3	14	0	50	5	0	77			1	0	0	0
4:30 PM				0	1	4	0	6	18	0	51	4	0	84			1	0	0	0
4:45 PM				0	1	4	0	7	17	0	57	7	0	93			2	0	0	0
5:00 PM				0	1	6	0	7	20	0	55	9	0	98			2	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 134th Ter & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:20 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	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
4:45 PM	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
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:20 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:30 PM	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
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

Heavy Vehicle Peak Hour Summary 5:00 PM to 6:00 PM

By Approach	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	0	0	0	2	0	2	0	2	2	2
PHF	0.00			0.00			0.25			0.00			0.25

By Movement	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	0	0	0	0	2	2	0	0	0	2
PHF	0.00	0.00		0.00	0.00		0.00	0.25	0.25	0.00	0.00	0.00	0.25

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

Interval Start Time	Northbound SW 134th Ter			Southbound SW 134th Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	2	2	0	0	0	2

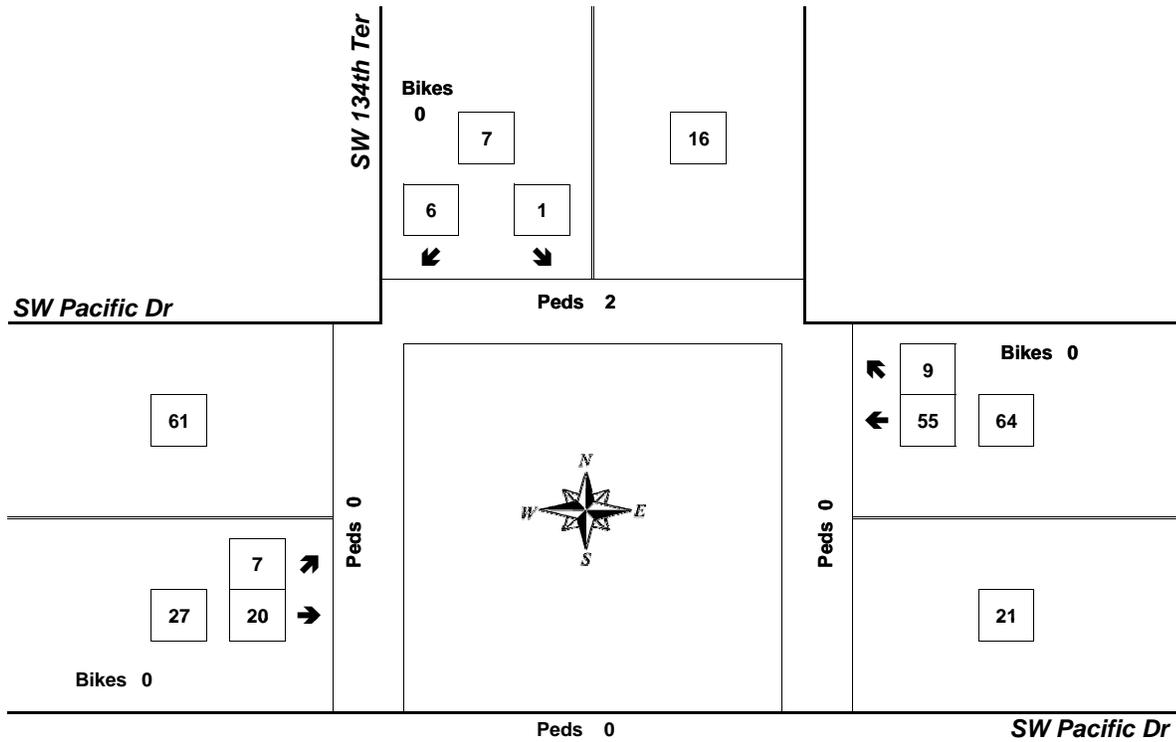
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 134th Ter & SW Pacific Dr

5:00 PM to 6:00 PM
Wednesday, September 16, 2015



Bikes
0

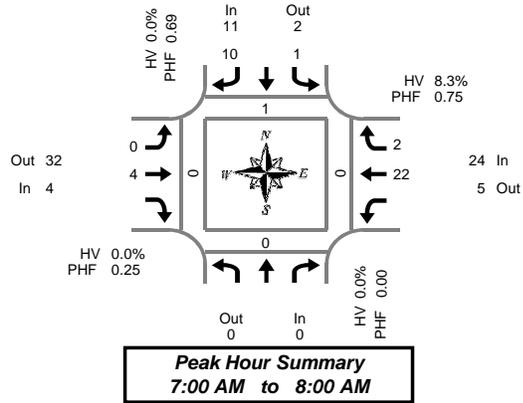
Approach	PHF	HV%	Volume
EB	0.61	7.4%	27
WB	0.76	0.0%	64
NB	0.00	0.0%	0
SB	0.58	0.0%	7
Intersection	0.84	2.0%	98

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 133rd Ter & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk				
	In	Out	Total	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	North		South	East	West		
7:00 AM				0	0	3	0	0	0	0	0	0	4	0	0	7	0	0	0	0
7:05 AM				0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0
7:10 AM				0	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	0
7:15 AM				0	0	1	0	0	0	0	0	0	1	0	0	2	1	0	0	0
7:20 AM				0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0
7:25 AM				0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
7:30 AM				0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
7:35 AM				0	1	2	0	0	0	0	0	0	3	1	0	7	0	0	0	0
7:40 AM				0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
7:45 AM				0	0	0	0	0	0	1	0	0	2	0	0	3	0	0	0	0
7:50 AM				0	0	2	0	0	0	1	0	0	1	0	0	4	0	0	0	0
7:55 AM				0	0	1	0	0	0	2	0	0	1	0	0	4	0	0	0	0
8:00 AM				0	0	1	0	1	0	0	0	0	2	1	0	5	0	0	0	0
8:05 AM				0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:10 AM				0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:15 AM				0	0	1	0	0	0	2	0	0	1	0	0	4	0	0	0	0
8:20 AM				0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
8:25 AM				0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0
8:30 AM				0	0	0	0	0	0	2	0	0	1	1	0	4	0	0	0	0
8:35 AM				0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
8:40 AM				0	0	0	0	1	1	0	0	0	1	0	0	3	0	0	0	0
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	3	0	0	3	0	0	0	0
8:55 AM				0	0	1	0	1	1	0	0	0	1	0	0	4	0	0	0	0
Total Survey				0	1	15	0	3	10	0	0	0	37	4	0	70	1	0	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk				
	In	Out	Total	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	North		South	East	West		
7:00 AM				0	0	4	0	0	0	0	0	0	8	0	0	12	0	0	0	0
7:15 AM				0	0	1	0	0	0	0	0	0	4	1	0	6	1	0	0	0
7:30 AM				0	1	2	0	0	0	0	0	0	6	1	0	10	0	0	0	0
7:45 AM				0	0	3	0	0	0	4	0	0	4	0	0	11	0	0	0	0
8:00 AM				0	0	3	0	1	0	0	0	0	2	1	0	7	0	0	0	0
8:15 AM				0	0	1	0	0	0	2	0	0	6	0	0	9	0	0	0	0
8:30 AM				0	0	0	0	1	3	0	0	0	3	1	0	8	0	0	0	0
8:45 AM				0	0	1	0	1	1	0	0	0	4	0	0	7	0	0	0	0
Total Survey				0	1	15	0	3	10	0	0	0	37	4	0	70	1	0	0	0

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	0	0	0	0	11	2	13	0	4	32	36	0	24	5	29	0	39	1	0	0	0
%HV	0.0%				0.0%				0.0%				8.3%				5.1%				
PHF	0.00				0.69				0.25				0.75				0.81				

By Movement	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total
	Total	L	R	Total	L	T	Total	T	R	Total	T	R	Total				
Volume	0	1	10	11	0	4	0	4	0	0	22	2	24	39			
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	0.0%	NA	4.5%	50.0%	8.3%	5.1%		
PHF		0.00	0.25	0.63	0.69	0.00	0.25	0.25			0.69	0.50	0.75	0.81			

Rolling Hour Summary

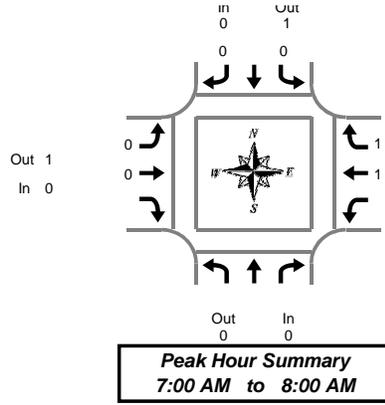
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk				
	In	Out	Total	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	North		South	East	West		
7:00 AM				0	1	10	0	0	0	4	0	0	22	2	0	39	1	0	0	0
7:15 AM				0	1	9	0	1	4	0	0	0	16	3	0	34	1	0	0	0
7:30 AM				0	1	9	0	1	6	0	0	0	18	2	0	37	0	0	0	0
7:45 AM				0	0	7	0	2	9	0	0	0	15	2	0	35	0	0	0	0
8:00 AM				0	0	5	0	3	6	0	0	0	15	2	0	31	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 133rd Ter & SW Pacific Dr

Thursday, September 17, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	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
7:10 AM	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
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	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
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	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
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	0	1	1	2	1	3	4

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	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	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
7:45 AM	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
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	0	1	1	2	1	3	4

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	0	1	1	0	1	1	2	0	2	2
PHF	0.00			0.00			0.00			0.25			0.25

By Movement	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	1	1	2	2
PHF	0.00	0.00		0.00	0.00		0.00	0.00		0.25	0.25	0.25	0.25

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	2
7:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	2
7:45 AM	0	0	0	0	0	0	0	1	1	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	1	1	1	0	1	2

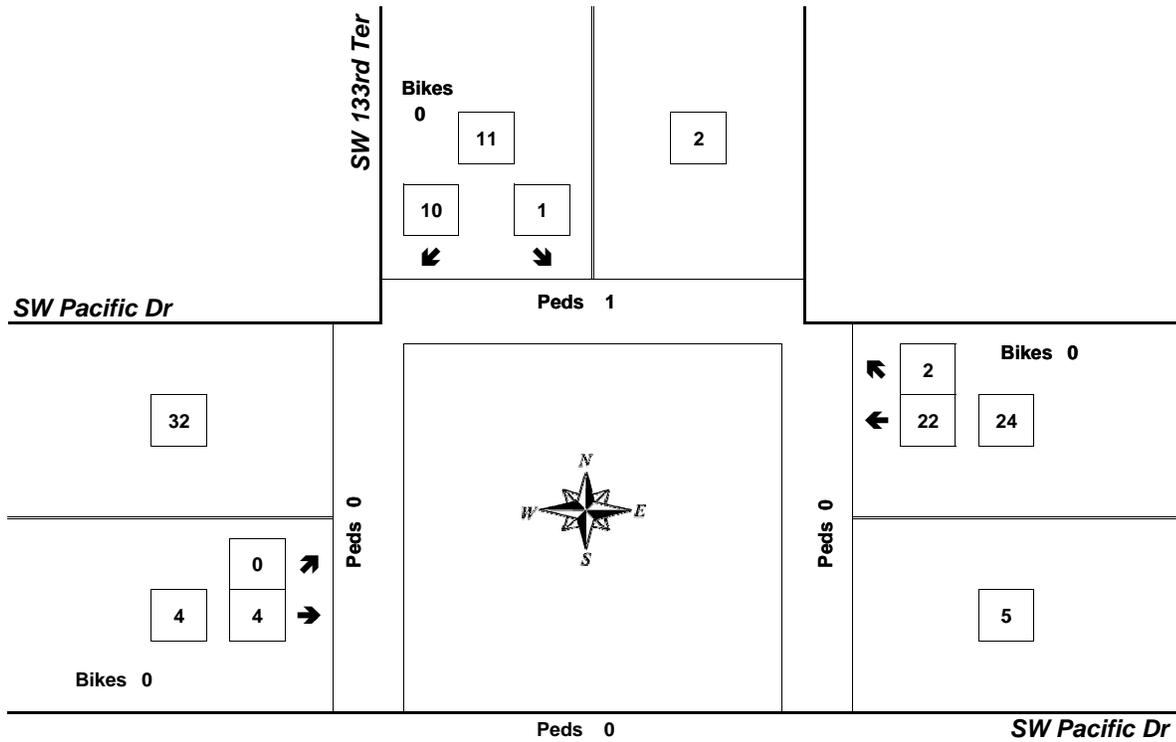
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 133rd Ter & SW Pacific Dr

7:00 AM to 8:00 AM
Thursday, September 17, 2015



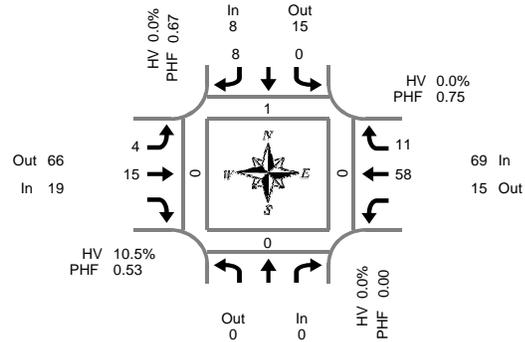
Approach	PHF	HV%	Volume
EB	0.25	0.0%	4
WB	0.75	8.3%	24
NB	0.00	0.0%	0
SB	0.69	0.0%	11
Intersection	0.81	5.1%	39

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



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

SW 133rd Ter & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
4:00 PM	0	0	2	0	1	1	0	3	0	0	7	0	0	0	0	0	0	0	
4:05 PM	0	1	1	0	1	2	0	3	1	0	9	0	0	0	0	0	0	0	
4:10 PM	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	
4:20 PM	0	0	0	0	0	1	0	6	1	0	8	0	0	0	0	0	0	0	
4:25 PM	0	0	0	0	1	0	0	3	0	0	4	0	0	0	0	0	0	0	
4:30 PM	0	0	0	2	0	4	0	3	2	0	9	0	0	1	0	0	0	0	
4:35 PM	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	
4:40 PM	0	0	0	2	0	1	0	3	1	0	5	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	3	2	1	5	0	0	0	0	0	0	0	
4:50 PM	0	0	1	0	0	1	0	7	0	0	9	0	0	0	0	0	0	0	
4:55 PM	0	0	2	0	0	0	0	3	0	0	5	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	2	1	0	5	1	0	9	0	0	0	0	0	0	0	
5:05 PM	0	0	0	0	1	2	0	6	1	0	10	0	0	0	0	0	0	0	
5:10 PM	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	
5:15 PM	0	0	1	0	0	3	0	4	3	0	11	0	0	0	0	0	0	0	
5:20 PM	0	0	0	0	0	5	0	2	1	0	8	0	0	0	0	0	0	0	
5:25 PM	0	0	1	0	1	0	0	2	1	0	5	0	0	0	0	0	0	0	
5:30 PM	0	0	1	0	0	1	0	2	1	0	5	0	0	0	0	0	0	0	
5:35 PM	0	0	1	0	0	1	0	11	0	0	13	0	0	0	0	0	0	0	
5:40 PM	0	0	0	0	0	1	0	4	2	0	7	0	0	0	0	0	0	0	
5:45 PM	0	0	1	0	0	0	0	5	1	0	7	0	0	0	0	0	0	0	
5:50 PM	0	0	0	0	0	2	0	4	1	0	7	0	0	1	0	0	0	0	
5:55 PM	0	0	0	0	2	1	0	2	0	0	5	0	0	0	0	0	0	0	
Total Survey	0	1	11	4	9	28	0	97	20	1	166	1	0	2	0	0	0	0	

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
4:00 PM	0	1	3	0	2	4	0	7	1	0	18	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	1	1	0	13	1	0	16	0	0	0	0	0	0	0	
4:30 PM	0	0	0	4	0	5	0	10	4	0	19	0	0	1	0	0	0	0	
4:45 PM	0	0	3	0	0	1	0	13	2	1	19	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	3	3	0	18	2	0	26	0	0	0	0	0	0	0	
5:15 PM	0	0	2	0	1	8	0	8	5	0	24	0	0	0	0	0	0	0	
5:30 PM	0	0	2	0	0	3	0	17	3	0	25	1	0	0	0	0	0	0	
5:45 PM	0	0	1	0	2	3	0	11	2	0	19	0	0	1	0	0	0	0	
Total Survey	0	1	11	4	9	28	0	97	20	1	166	1	0	2	0	0	0	0	

Peak Hour Summary

4:50 PM to 5:50 PM

By Approach	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes		North	South	East	West												
Volume	0	0	0	0	8	15	23	0	19	66	85	0	69	15	84	0	96	1	0	0	0
%HV	0.0%				0.0%				10.5%				0.0%				2.1%				
PHF	0.00				0.67				0.53				0.75				0.86				

By Movement	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr				Westbound SW Pacific Dr				Total
	Total	L	R	Total	L	T	Total	T	R	Total	T	R	Total				
Volume	0	0	8	8	4	15	19	58	11	69	96	1	0	0	0		
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	13.3%	NA	10.5%	NA	0.0%	0.0%	0.0%	2.1%
PHF	0.00	0.00	0.67	0.67	0.33	0.47	0.53	0.73	0.55	0.75	0.86						

Rolling Hour Summary

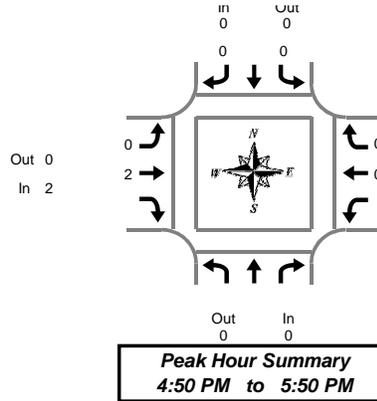
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 133rd Ter				Southbound SW 133rd Ter				Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total	Pedestrians Crosswalk			
	Bikes	L	R	Bikes	L	T	Bikes	T	R	Bikes	T	R	North	South		East	West		
4:00 PM	0	1	6	4	3	11	0	43	8	1	72	0	0	1	0	0	0	0	
4:15 PM	0	0	3	4	4	10	0	54	9	1	80	0	0	1	0	0	0	0	
4:30 PM	0	0	5	4	4	17	0	49	13	1	88	0	0	1	0	0	0	0	
4:45 PM	0	0	7	0	4	15	0	56	12	1	94	1	0	0	0	0	0	0	
5:00 PM	0	0	5	0	6	17	0	54	12	0	94	1	0	1	0	0	0	0	

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 133rd Ter & SW Pacific Dr

Wednesday, September 16, 2015

4:00 PM to 6:00 PM

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

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:20 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	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
4:45 PM	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
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:20 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

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

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:30 PM	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
Total Survey	0	0	0	0	0	0	0	2	2	2	0	2	4

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

By Approach	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	In	Out	Total										
Volume	0	0	0	0	0	0	2	0	2	0	2	2	2
PHF	0.00			0.00			0.25			0.00			0.25

By Movement	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
Volume	0	0	0	0	0	0	0	2	2	0	0	0	2
PHF	0.00	0.00		0.00	0.00		0.00	0.25	0.25	0.00	0.00	0.00	0.25

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

Interval Start Time	Northbound SW 133rd Ter			Southbound SW 133rd Ter			Eastbound SW Pacific Dr			Westbound SW Pacific Dr			Interval Total
	Total	L	R	Total	L	R	Total	T	Total	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	2	2	0	0	0	2



93-Tigard/Sherwood

Weekday		To Tigard Transit Center		
SW Railroad & Washington Stop ID 3670	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639	SW Pacific Hwy & Durham Stop ID 8792	Tigard Transit Center	
4:30	4:36	4:44	4:53	
4:56	5:02	5:10	5:19	
—	—	5:30	5:39	
5:32	5:38	5:47	5:56	
6:07	6:14	6:22	6:32	
6:35	6:42	6:51	7:02	
7:06	7:13	7:22	7:34	
7:38	7:45	7:54	8:06	
8:31	8:38	8:47	8:59	
9:16	9:23	9:32	9:43	
10:01	10:08	10:17	10:28	
10:46	10:53	11:02	11:13	
11:31	11:38	11:48	11:59	
12:16	12:23	12:33	12:45	
1:01	1:08	1:18	1:30	
1:46	1:53	2:03	2:15	
2:31	2:39	2:49	3:01	
3:15	3:23	3:33	3:45	
3:34	3:42	3:52	4:04	
3:52	4:00	4:10	4:22	
4:10	4:18	4:28	4:40	
4:27	4:35	4:45	4:57	
4:44	4:52	5:02	5:14	
4:57	5:05	5:15	5:27	
5:11	5:19	5:29	5:41	
5:45	5:53	6:03	6:14	
6:27	6:35	6:44	6:55	
7:00	7:07	7:16	7:26	
7:36	7:43	7:52	8:02	
8:15	8:22	8:31	8:40	
8:57	9:04	9:12	9:20	
9:38	9:45	9:53	10:01	
10:18	10:24	10:31	10:38	
10:47	10:53	11:00	11:07	
11:32	11:38	11:45	11:52	

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93-Tigard/Sherwood

Weekday		To Sherwood	
Tigard Transit Center Stop ID 8211	SW Pacific Hwy & Durham Stop ID 8644	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186	SW Railroad & Washington Stop ID 3670
6:12	6:20	6:28	6:35
6:42	6:50	6:58	7:06
7:12	7:21	7:30	7:38
7:42	7:52	8:01	8:10
8:27	8:37	8:46	8:55
9:11	9:22	9:31	9:40
9:56	10:07	10:16	10:25
10:41	10:52	11:01	11:10
11:25	11:37	11:46	11:55
12:10	12:22	12:31	12:40
12:55	1:07	1:16	1:25
1:40	1:52	2:01	2:10
2:25	2:38	2:47	2:56
3:15	3:28	3:37	3:46
4:02	4:15	4:24	4:33
4:45	4:59	5:09	5:17
5:31	5:45	5:54	6:02
5:58	6:11	6:19	6:27
6:32	6:44	6:52	7:00
7:09	7:20	7:28	7:36
7:38	7:49	7:57	8:05
8:08	8:18	8:25	8:33
8:42	8:52	8:59	9:07
9:22	9:31	9:37	9:44
10:03	10:11	10:17	10:24
10:40	10:48	10:54	11:01
11:11	11:19	11:25	11:32
12:18	12:25	—	—
1:02	1:09	—	—

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94-Pacific Hwy/Sherwood

Weekday		To Portland City Center			
SW Railroad & Washington Stop ID 3670	SW Pacific Hwy & Durham Stop ID 8792	SW Main & Commercial Stop ID 13636	Barbur Transit Center Stop ID 212	SW 6th & Yamhill Stop ID 7807	SW 6th & W Burnside Stop ID 7751
5:43	5:57	6:06	6:17	6:32	6:36
5:54	6:08	6:18	6:29	6:44	6:48
6:03	6:18	6:28	6:39	6:54	6:58
6:10	6:25	6:35	6:47	7:02	7:05
6:18	6:33	6:43	6:55	7:10	7:14
6:24	6:39	6:49	7:02	7:19	7:23
6:29	6:45	6:56	7:09	7:26	7:30
6:36	6:52	7:03	7:16	7:33	7:37
—	—	—	7:21	7:38	7:42
6:44	7:00	7:12	7:25	7:42	7:46
—	—	—	7:30	7:48	7:51
6:53	7:09	7:21	7:34	7:52	7:56
7:00	7:16	7:28	7:41	8:00	8:04
7:08	7:24	7:36	7:49	8:08	8:12
7:17	7:33	7:45	7:58	8:18	8:22
—	—	—	8:10	8:30	8:33
7:39	7:55	8:07	8:20	8:40	8:44
—	—	—	8:27	8:47	8:51
—	8:09	8:21	8:34	8:53	8:57
8:10	8:26	8:38	8:51	9:09	9:12
8:55	9:11	9:22	9:35	9:51	9:54
9:40	9:56	10:07	10:20	10:36	10:39
10:25	10:41	10:52	11:05	11:21	11:24
11:10	11:27	11:38	11:51	12:07	12:10
11:55	12:12	12:24	12:37	12:53	12:56
12:40	12:57	1:09	1:22	1:38	1:41
1:25	1:42	1:54	2:07	2:23	2:26
2:10	2:27	2:39	2:53	3:09	3:12
2:56	3:14	3:26	3:40	3:58	4:01
3:46	4:04	4:16	4:30	4:50	4:53
4:33	4:51	5:03	5:17	5:36	5:39
5:17	5:35	5:47	6:01	6:17	6:20
6:02	6:20	6:31	6:44	6:59	7:02

Note: Buses to Portland City Center serve: all stops from Sherwood to Main & Commercial in Tigard, then Main & Scoffins, 99W & Main, 99W & 74th, Barbur Blvd & Capitol Hwy, Barbur Blvd Transit Center, Barbur & Bertha, then travel express with no stops to SW Broadway & 5th, SW 6th at Market, Jefferson, Yamhill, Oak (Z stops) and Burnside.

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94-Pacific Hwy/Sherwood

Weekday		To Sherwood		
SW 5th & Morrison Stop ID 7625	Barbur Transit Center Stop ID 8213	SW Main & Commercial Stop ID 3656	SW Pacific Hwy & Durham Stop ID 8644	SW Railroad & Washington Stop ID 3670
7:32	7:51	8:02	8:13	8:31
8:16	8:35	8:46	8:58	9:16
9:01	9:20	9:31	9:43	10:01
9:46	10:05	10:16	10:28	10:46
10:30	10:49	11:00	11:13	11:31
11:15	11:34	11:45	11:58	12:16
12:00	12:19	12:30	12:43	1:01
12:45	1:04	1:15	1:28	1:46
1:30	1:49	2:00	2:13	2:31
2:13	2:32	2:43	2:57	3:15
2:32	2:51	3:02	3:16	3:34
2:49	3:09	3:20	3:34	3:52
3:06	3:26	3:38	3:52	4:10
3:23	3:43	3:55	4:09	4:27
3:40	4:00	4:13	4:27	4:44
3:53	4:13	4:26	4:40	4:57
4:06	4:26	4:39	4:54	5:11
4:14	4:34	4:47	5:02	5:20
4:22	4:43	4:56	5:11	5:29
4:30	4:51	5:04	5:19	5:37
4:38	4:59	5:12	5:27	5:45
4:45	5:06	5:19	5:34	5:51
4:53	5:14	5:27	5:42	5:59
4:59	5:20	5:33	5:48	6:05
5:05	5:26	5:39	5:54	6:11
5:11	5:33	5:46	6:01	6:17
5:17	5:39	5:52	6:06	6:22
5:23	5:45	5:58	6:12	6:28
5:38	5:59	6:12	6:26	6:42
5:54	6:14	6:26	6:40	6:56
6:09	6:28	6:40	6:53	7:09
6:24	6:43	6:54	7:07	7:23
6:54	7:13	7:24	7:36	7:52
7:34	7:53	8:04	8:16	8:31

Note: Line 94 buses to Sherwood serve: stops on SW 5th at Pine, Morrison, Madison (D stops), Market, Hall, and Broadway then travel express to Barbur & Bertha; then stop at: Barbur Blvd Transit Center; Pacific Hwy at 74th, SW Main in Tigard, then all stops to Sherwood.

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93-Tigard/Sherwood

Saturday		To Tigard Transit Center	
SW Railroad & Washington Stop ID 3670	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639	SW Pacific Hwy & Durham Stop ID 8792	Tigard Transit Center
4:32	4:38	4:46	4:53
5:12	5:18	5:26	5:33
5:52	5:58	6:06	6:13
6:46	6:53	7:02	7:09
7:22	7:29	7:38	7:45
8:03	8:10	8:19	8:27
8:31	8:38	8:47	8:55
8:59	9:06	9:16	9:24
9:28	9:35	9:45	9:53
9:56	10:03	10:13	10:22
10:26	10:33	10:43	10:52
10:56	11:03	11:13	11:22
11:25	11:32	11:42	11:51
11:53	12:00	12:10	12:20
12:23	12:30	12:40	12:50
12:53	1:00	1:10	1:20
1:23	1:30	1:40	1:50
1:52	1:59	2:09	2:20
2:22	2:29	2:39	2:50
2:52	2:59	3:09	3:20
3:22	3:29	3:39	3:50
3:52	3:59	4:09	4:20
4:22	4:29	4:39	4:50
4:55	5:02	5:12	5:23
5:37	5:44	5:54	6:05
6:24	6:31	6:40	6:50
6:56	7:03	7:12	7:21
7:35	7:42	7:51	8:00
8:09	8:16	8:25	8:33
8:57	9:04	9:12	9:20
9:38	9:45	9:53	10:01
10:47	10:53	11:00	11:07
11:32	11:38	11:45	11:52

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93-Tigard/Sherwood

Saturday		To Sherwood	
Tigard Transit Center Stop ID 8211	SW Pacific Hwy & Durham Stop ID 8644	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186	SW Railroad & Washington Stop ID 3670
6:03	6:11	6:19	6:26
7:11	7:19	7:27	7:35
7:47	7:56	8:04	8:12
8:29	8:38	8:46	8:55
9:07	9:17	9:25	9:34
9:35	9:45	9:53	10:02
10:05	10:16	10:24	10:33
10:36	10:47	10:55	11:04
11:07	11:18	11:26	11:35
11:37	11:48	11:56	12:05
12:07	12:18	12:26	12:35
12:37	12:48	12:56	1:05
1:07	1:18	1:26	1:35
1:37	1:48	1:56	2:05
2:07	2:18	2:26	2:35
2:37	2:48	2:56	3:05
3:07	3:18	3:26	3:35
3:37	3:48	3:56	4:05
4:07	4:18	4:26	4:35
4:37	4:48	4:56	5:05
5:07	5:18	5:26	5:35
5:37	5:48	5:56	6:05
6:07	6:18	6:26	6:35
6:37	6:48	6:56	7:05
7:07	7:18	7:26	7:35
7:42	7:53	8:01	8:09
8:02	8:12	8:19	8:27
8:42	8:52	8:59	9:07
9:22	9:31	9:37	9:44
10:03	10:11	10:17	10:24
11:11	11:19	11:25	11:32
12:18	12:25	—	—
1:02	1:09	—	—

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93-Tigard/Sherwood

Sunday		To Tigard Transit Center	
SW Railroad & Washington Stop ID 3670	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639	SW Pacific Hwy & Durham Stop ID 8792	Tigard Transit Center
4:32	4:38	4:46	4:53
5:12	5:18	5:26	5:33
5:52	5:58	6:06	6:13
6:46	6:53	7:02	7:09
7:22	7:29	7:38	7:45
8:03	8:10	8:19	8:27
8:31	8:38	8:47	8:55
9:06	9:13	9:23	9:31
9:43	9:50	10:00	10:09
10:20	10:27	10:37	10:46
10:58	11:05	11:15	11:24
11:36	11:43	11:53	12:02
12:13	12:20	12:30	12:40
12:53	1:00	1:10	1:20
1:33	1:40	1:50	2:00
2:13	2:20	2:30	2:41
2:53	3:00	3:10	3:20
3:33	3:40	3:50	4:01
4:13	4:20	4:30	4:41
4:53	5:00	5:10	5:21
5:33	5:40	5:50	6:01
6:13	6:20	6:30	6:40
6:53	7:00	7:09	7:18
7:33	7:40	7:49	7:58
8:09	8:16	8:25	8:33
8:57	9:04	9:12	9:20
9:38	9:45	9:53	10:01
10:47	10:53	11:00	11:07
11:32	11:38	11:45	11:52

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93-Tigard/Sherwood

Sunday		To Sherwood	
Tigard Transit Center Stop ID 8211	SW Pacific Hwy & Durham Stop ID 8644	SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186	SW Railroad & Washington Stop ID 3670
6:03	6:11	6:19	6:26
7:11	7:19	7:27	7:35
7:47	7:56	8:04	8:12
8:29	8:38	8:46	8:55
9:05	9:15	9:23	9:32
9:41	9:51	9:59	10:08
10:30	10:41	10:49	10:58
11:08	11:19	11:27	11:36
11:45	11:56	12:04	12:13
12:25	12:36	12:44	12:53
1:05	1:16	1:24	1:33
1:45	1:56	2:04	2:13
2:25	2:36	2:44	2:53
3:05	3:16	3:24	3:33
3:45	3:56	4:04	4:13
4:25	4:36	4:44	4:53
5:05	5:16	5:24	5:33
5:45	5:56	6:04	6:13
6:25	6:36	6:44	6:53
7:05	7:16	7:24	7:33
7:42	7:53	8:01	8:09
8:04	8:14	8:21	8:29
8:42	8:52	8:59	9:07
9:22	9:31	9:37	9:44
10:03	10:11	10:17	10:24
11:11	11:19	11:25	11:32
12:18	12:25	—	—
1:02	1:09	—	—

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TRIP GENERATION CALCULATIONS

Land Use: Day Care Center
Land Use Code: 565
Variable: 1000 Sq Ft Gross Floor Area
Variable Value: 9

AM PEAK HOUR

Trip Rate: 12.18

	Enter	Exit	Total
Directional Distribution	53%	47%	
Trip Ends	58	52	110

PM PEAK HOUR

Trip Rate: 12.34

	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	52	59	111

WEEKDAY

Trip Rate: 74.06

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	333	333	666

SATURDAY

Trip Rate: 6.21

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	28	28	56

Source: TRIP GENERATION, Ninth Edition



TRIP GENERATION CALCULATIONS

Land Use: Library
Land Use Code: 590
Variable: 1000 Sq Ft Gross Floor Area
Variable Value: 13.3

AM PEAK HOUR

Trip Rate: 1.04

	Enter	Exit	Total
Directional Distribution	71%	29%	
Trip Ends	10	4	14

PM PEAK HOUR

Trip Rate: 7.30

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	47	50	97

WEEKDAY

Trip Rate: 56.24

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	374	374	748

SATURDAY

Trip Rate: 46.55

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	310	310	620

Source: TRIP GENERATION, Ninth Edition



TRIP GENERATION CALCULATIONS

Land Use: Gasoline/Service Station w/Convenience Market
Land Use Code: 945
Variable: 1000 Square Feet Gross Floor Area
Variable Value: 4.005

AM PEAK HOUR

Trip Rate: 82.13

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	165	164	329

PM PEAK HOUR

Trip Rate: 97.47

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	195	195	390

Source: TRIP GENERATION, Ninth Edition



TRIP GENERATION CALCULATIONS

Land Use: Gasoline/Service Station w/Convenience Market

Land Use Code: 945

Variable: Number Of Fueling Positions

Variable Value: 20

AM PEAK HOUR

Trip Rate: 10.16

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	102	101	203

PM PEAK HOUR

Trip Rate: 13.51

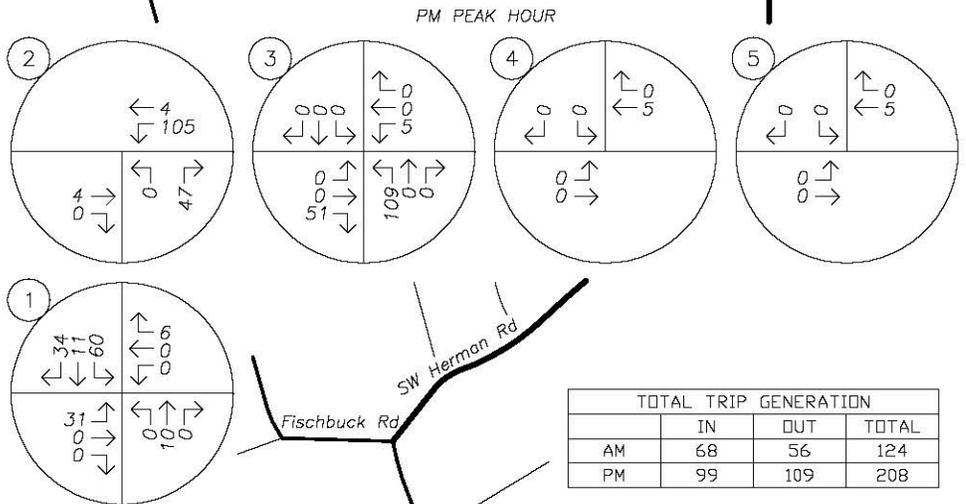
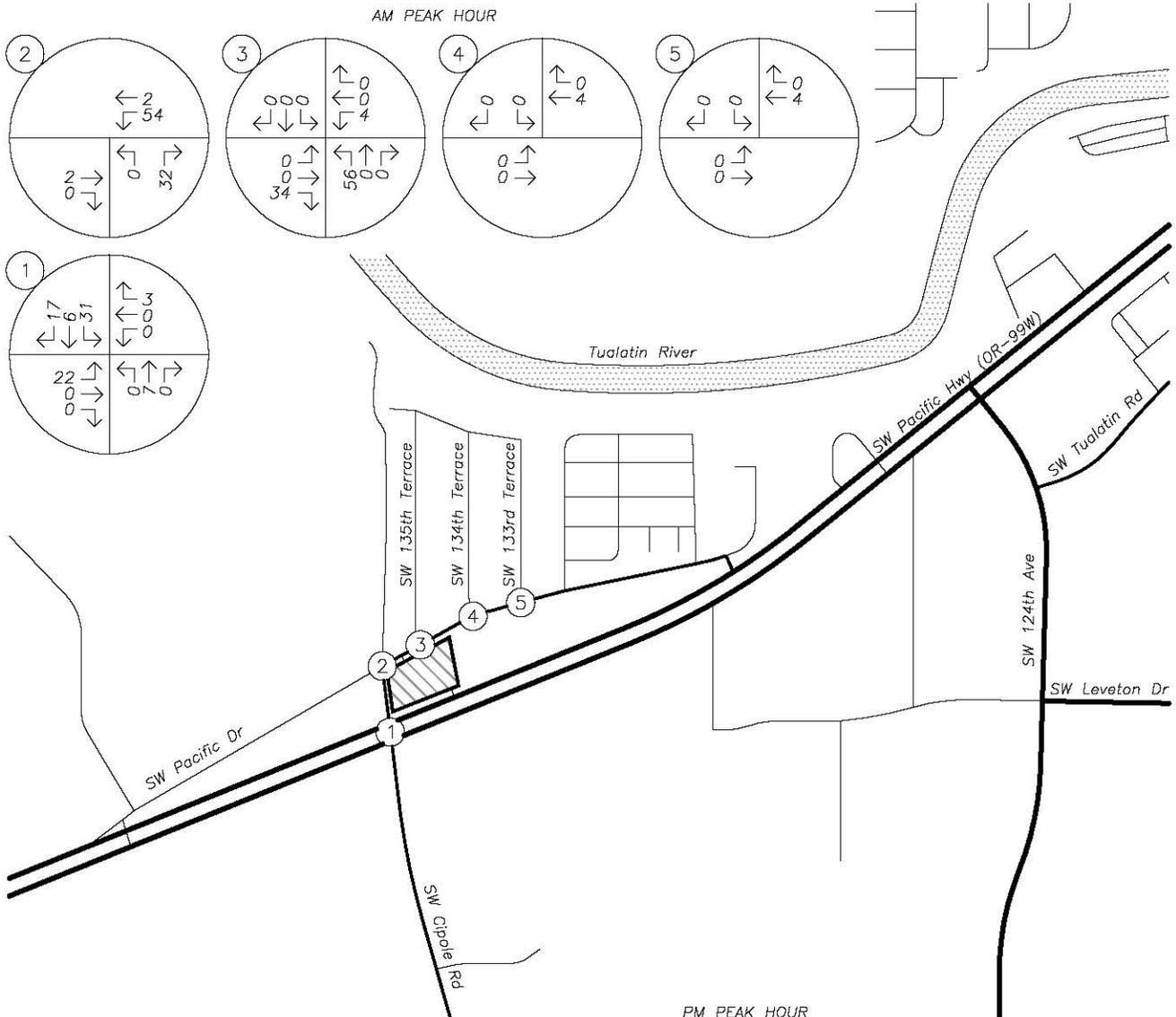
	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	135	135	270

WEEKDAY

Trip Rate: 162.78

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,628	1,628	3,256

Source: TRIP GENERATION, Ninth Edition



TOTAL TRIP GENERATION			
	IN	OUT	TOTAL
AM	68	56	124
PM	99	109	208



SITE TRIP DISTRIBUTION & ASSIGNMENT
 Existing Zoning – Site Trips
 AM & PM Peak Hours





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*

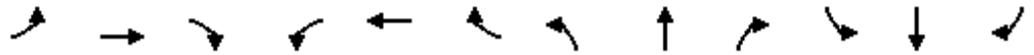
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

*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

HCM Signalized Intersection Capacity Analysis
1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
Existing Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.93			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1736	3471	1519	1687	3374			1338			1703	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.84			0.81	
Satd. Flow (perm)	1736	3471	1519	1687	3374			1143			1418	
Volume (vph)	6	1520	193	76	637	0	49	3	59	29	12	3
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1583	201	79	664	0	51	3	61	30	12	3
RTOR Reduction (vph)	0	0	76	0	0	0	0	53	0	0	3	0
Lane Group Flow (vph)	6	1583	125	79	664	0	0	62	0	0	42	0
Conf. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	29%	29%	29%	7%	7%	7%
Turn Type	Prot		Perm	Prot		Perm				Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	1.3	37.5	37.5	6.7	42.9			8.8			8.8	
Effective Green, g (s)	1.3	37.5	37.5	6.7	42.9			8.8			8.8	
Actuated g/C Ratio	0.02	0.58	0.58	0.10	0.66			0.14			0.14	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	35	2003	876	174	2227			155			192	
v/s Ratio Prot	0.00	c0.46		c0.05	0.20							
v/s Ratio Perm			0.08					c0.05			0.03	
v/c Ratio	0.17	0.79	0.14	0.45	0.30			0.40			0.22	
Uniform Delay, d1	31.3	10.7	6.3	27.4	4.7			25.7			25.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.3	3.3	0.3	1.9	0.3			1.7			0.6	
Delay (s)	33.6	14.0	6.7	29.3	5.0			27.4			25.6	
Level of Service	C	B	A	C	A			C			C	
Approach Delay (s)		13.2			7.6			27.4			25.6	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM Average Control Delay		12.5	HCM Level of Service	B
HCM Volume to Capacity ratio		0.68		
Actuated Cycle Length (s)		65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization		63.1%	ICU Level of Service	B
Analysis Period (min)		15		
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
 2: SW Pacific Dr & SW Cipole Rd

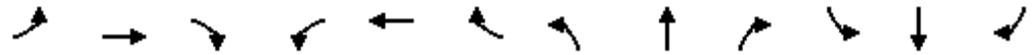
Pacific Drive Gas Annexation
 Existing Conditions - AM Peak Hour



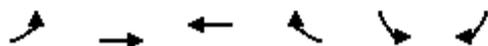
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	9	0	1	8	44	18
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	11	0	1	10	55	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	79	66	78			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	79	66	78			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	928	1003	1534			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	11	11	78			
Volume Left	11	1	0			
Volume Right	0	0	22			
cSH	928	1534	1700			
Volume to Capacity	0.01	0.00	0.05			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.9	0.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.9	0.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.4%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
 Existing Conditions - AM Peak Hour



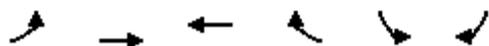
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	14	0	0	43	3	0	0	0	0	0	19
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	4	18	0	0	55	4	0	0	0	0	0	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)		591										
pX, platoon unblocked												
vC, conflicting volume	59			18			107	85	18	83	83	57
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			18			107	85	18	83	83	57
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	98
cM capacity (veh/h)	1558			1554			850	804	1061	908	809	1015
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	59	0	24								
Volume Left	4	0	0	0								
Volume Right	0	4	0	24								
cSH	1558	1554	1700	1015								
Volume to Capacity	0.00	0.00	0.00	0.02								
Queue Length 95th (ft)	0	0	0	2								
Control Delay (s)	1.3	0.0	0.0	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	1.3	0.0	0.0	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			13.3%		ICU Level of Service				A			
Analysis Period (min)			15									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	7	29	1	0	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	9	9	37	1	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		904				
pX, platoon unblocked						
vC, conflicting volume	38				65	38
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38				65	38
tC, single (s)	4.2				6.6	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.7	3.5
p0 queue free %	99				100	98
cM capacity (veh/h)	1534				884	975

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	18	38	22
Volume Left	9	0	0
Volume Right	0	1	22
cSH	1534	1700	975
Volume to Capacity	0.01	0.02	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	3.7	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay		3.3	
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	4	22	2	1	10
Peak Hour Factor	0.81	0.81	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	24	2	1	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		1158				
pX, platoon unblocked						
vC, conflicting volume	27				31	26
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				31	26
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1585				982	1049
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	5	26	12			
Volume Left	0	0	1			
Volume Right	0	2	11			
cSH	1585	1700	1043			
Volume to Capacity	0.00	0.02	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization		13.7%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
 1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
 Existing Conditions - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96			0.96	
Satd. Flow (prot)	1735	3471	1521	1770	3537			1736			1805	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.78	
Satd. Flow (perm)	1735	3471	1521	1770	3537			1352			1457	
Volume (vph)	10	866	24	34	1643	6	200	5	62	34	6	4
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	10	893	25	35	1694	6	206	5	64	35	6	4
RTOR Reduction (vph)	0	0	11	0	0	0	0	16	0	0	3	0
Lane Group Flow (vph)	10	893	14	35	1700	0	0	259	0	0	42	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm		Perm		Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	0.8	40.2	40.2	2.0	41.4			15.8			15.8	
Effective Green, g (s)	0.8	40.2	40.2	2.0	41.4			15.8			15.8	
Actuated g/C Ratio	0.01	0.57	0.57	0.03	0.59			0.23			0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	20	1993	873	51	2092			305			329	
v/s Ratio Prot	0.01	0.26		c0.02	c0.48							
v/s Ratio Perm			0.01					c0.19			0.03	
v/c Ratio	0.50	0.45	0.02	0.69	0.81			0.85			0.13	
Uniform Delay, d1	34.4	8.5	6.4	33.7	11.2			26.0			21.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	18.3	0.7	0.0	32.0	3.6			19.2			0.2	
Delay (s)	52.7	9.3	6.4	65.7	14.8			45.1			21.8	
Level of Service	D	A	A	E	B			D			C	
Approach Delay (s)		9.7			15.8			45.1			21.8	
Approach LOS		A			B			D			C	
Intersection Summary												
HCM Average Control Delay			16.7			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			68.8%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

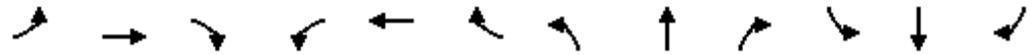
Pacific Drive Gas Annexation
Existing Conditions - PM Peak Hour



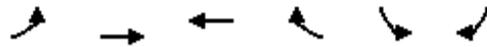
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	17	3	0	21	41	23
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	20	3	0	24	48	27
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	86	62	75			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	86	62	75			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	907	994	1504			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	23	24	74			
Volume Left	20	0	0			
Volume Right	3	0	27			
cSH	919	1504	1700			
Volume to Capacity	0.03	0.00	0.04			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			13.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
 Existing Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	29	0	0	55	7	0	0	0	1	0	9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	11	35	0	0	67	9	0	0	0	1	0	11
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		600										
pX, platoon unblocked												
vC, conflicting volume	81			35			140	138	35	134	134	76
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	81			35			140	138	35	134	134	76
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	1486			1589			814	744	1037	832	752	986
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	46	76	0	12								
Volume Left	11	0	0	1								
Volume Right	0	9	0	11								
cSH	1486	1589	1700	968								
Volume to Capacity	0.01	0.00	0.00	0.01								
Queue Length 95th (ft)	1	0	0	1								
Control Delay (s)	1.8	0.0	0.0	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	1.8	0.0	0.0	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			18.7%		ICU Level of Service				A			
Analysis Period (min)			15									



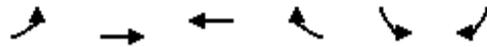
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	22	56	9	1	6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	10	26	67	11	1	7
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		913				
pX, platoon unblocked						
vC, conflicting volume	79				119	74
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	79				119	74
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1485				874	992

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	36	77	8
Volume Left	10	0	1
Volume Right	0	11	7
cSH	1485	1700	973
Volume to Capacity	0.01	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	2.0	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	2.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 5: SW Pacific Dr & SW 133rd Terrace

Pacific Drive Gas Annexation
 Existing Conditions - PM Peak Hour



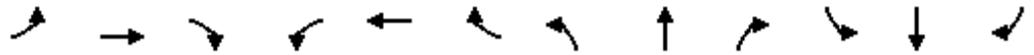
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	15	58	11	0	8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	17	67	13	0	9
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		1167				
pX, platoon unblocked						
vC, conflicting volume	81				102	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	81				102	75
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1460				898	991

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	22	80	9
Volume Left	5	0	0
Volume Right	0	13	9
cSH	1460	1700	991
Volume to Capacity	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	1.6	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	1.6	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
2017 Background Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.93			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1736	3471	1519	1687	3374			1338			1703	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.83			0.80	
Satd. Flow (perm)	1736	3471	1519	1687	3374			1140			1403	
Volume (vph)	6	1629	215	79	680	0	53	3	61	30	12	3
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1697	224	82	708	0	55	3	64	31	12	3
RTOR Reduction (vph)	0	0	79	0	0	0	0	55	0	0	3	0
Lane Group Flow (vph)	6	1697	145	82	708	0	0	67	0	0	43	0
Conf. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	29%	29%	29%	7%	7%	7%
Turn Type	Prot		Perm	Prot		Perm				Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	1.1	37.3	37.3	6.6	42.8			9.1			9.1	
Effective Green, g (s)	1.1	37.3	37.3	6.6	42.8			9.1			9.1	
Actuated g/C Ratio	0.02	0.57	0.57	0.10	0.66			0.14			0.14	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	29	1992	872	171	2222			160			196	
v/s Ratio Prot	0.00	c0.49		c0.05	0.21							
v/s Ratio Perm			0.10					c0.06			0.03	
v/c Ratio	0.21	0.85	0.17	0.48	0.32			0.42			0.22	
Uniform Delay, d1	31.5	11.5	6.5	27.6	4.8			25.5			24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.5	4.8	0.4	2.1	0.4			1.8			0.6	
Delay (s)	35.0	16.4	6.9	29.7	5.2			27.3			25.4	
Level of Service	D	B	A	C	A			C			C	
Approach Delay (s)		15.4			7.7			27.3			25.4	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

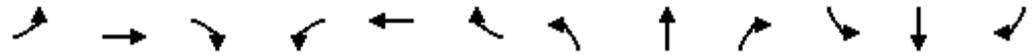
Pacific Drive Gas Annexation
2017 Background Conditions - AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	9	0	1	8	46	19
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	11	0	1	10	58	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	82	69	81			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	82	69	81			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	924	999	1529			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	11	11	81			
Volume Left	11	1	0			
Volume Right	0	0	24			
cSH	924	1529	1700			
Volume to Capacity	0.01	0.00	0.05			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.9	0.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.9	0.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
 2017 Background Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	15	0	0	45	3	0	0	0	0	0	20
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	4	19	0	0	58	4	0	0	0	0	0	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage veh												
Upstream signal (ft)		605										
pX, platoon unblocked												
vC, conflicting volume	62			19			112	88	19	87	87	60
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	62			19			112	88	19	87	87	60
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	97
cM capacity (veh/h)	1554			1553			842	800	1059	902	805	1012

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	62	0	26
Volume Left	4	0	0	0
Volume Right	0	4	0	26
cSH	1554	1553	1700	1012
Volume to Capacity	0.00	0.00	0.00	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	1.2	0.0	0.0	8.7
Lane LOS	A		A	A
Approach Delay (s)	1.2	0.0	0.0	8.7
Approach LOS			A	A

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: SW Pacific Dr & SW 134th Terrace

Pacific Drive Gas Annexation
2017 Background Conditions - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	7	30	1	0	18
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	9	9	38	1	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		918				
pX, platoon unblocked						
vC, conflicting volume	40				66	39
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40				66	39
tC, single (s)	4.2				6.6	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.7	3.5
p0 queue free %	99				100	98
cM capacity (veh/h)	1532				882	973

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	18	40	23
Volume Left	9	0	0
Volume Right	0	1	23
cSH	1532	1700	973
Volume to Capacity	0.01	0.02	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	3.7	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	8.8
Approach LOS			A

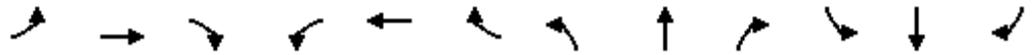
Intersection Summary			
Average Delay		3.3	
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	4	23	2	1	10
Peak Hour Factor	0.81	0.81	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	25	2	1	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		1172				
pX, platoon unblocked						
vC, conflicting volume	28				32	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	28				32	27
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1584				981	1047
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	5	27	12			
Volume Left	0	0	1			
Volume Right	0	2	11			
cSH	1584	1700	1041			
Volume to Capacity	0.00	0.02	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			13.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
2017 Background Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96			0.96	
Satd. Flow (prot)	1735	3471	1521	1770	3537			1737			1805	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.78	
Satd. Flow (perm)	1735	3471	1521	1770	3537			1348			1466	
Volume (vph)	10	918	27	35	1757	6	222	5	65	35	6	4
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	10	946	28	36	1811	6	229	5	67	36	6	4
RTOR Reduction (vph)	0	0	12	0	0	0	0	15	0	0	3	0
Lane Group Flow (vph)	10	946	16	36	1817	0	0	286	0	0	43	0
Conf. Peds. (#/hr)	2					2	2					2
Conf. Bikes (#/hr)			1									
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm		Perm		Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	0.8	40.0	40.0	2.0	41.2			16.0			16.0	
Effective Green, g (s)	0.8	40.0	40.0	2.0	41.2			16.0			16.0	
Actuated g/C Ratio	0.01	0.57	0.57	0.03	0.59			0.23			0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	20	1983	869	51	2082			308			335	
v/s Ratio Prot	0.01	0.27		c0.02	c0.51							
v/s Ratio Perm			0.01					c0.21			0.03	
v/c Ratio	0.50	0.48	0.02	0.71	0.87			0.93			0.13	
Uniform Delay, d1	34.4	8.8	6.5	33.7	12.2			26.4			21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	18.3	0.8	0.0	36.0	5.4			33.0			0.2	
Delay (s)	52.7	9.7	6.5	69.7	17.6			59.4			21.6	
Level of Service	D	A	A	E	B			E			C	
Approach Delay (s)		10.0			18.6			59.4			21.6	
Approach LOS		B			B			E			C	

Intersection Summary

HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

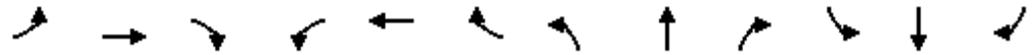
Pacific Drive Gas Annexation
2017 Background Conditions - PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	18	3	0	22	43	24
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	21	3	0	26	50	28
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	91	65	79			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	91	65	79			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	902	990	1499			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	24	26	78			
Volume Left	21	0	0			
Volume Right	3	0	28			
cSH	913	1499	1700			
Volume to Capacity	0.03	0.00	0.05			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			13.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
 2017 Background Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	30	0	0	57	7	0	0	0	1	0	9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	11	37	0	0	70	9	0	0	0	1	0	11
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		590										
pX, platoon unblocked												
vC, conflicting volume	83			37			143	142	37	137	137	79
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	83			37			143	142	37	137	137	79
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	1483			1587			810	741	1036	827	749	983
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	48	78	0	12								
Volume Left	11	0	0	1								
Volume Right	0	9	0	11								
cSH	1483	1587	1700	965								
Volume to Capacity	0.01	0.00	0.00	0.01								
Queue Length 95th (ft)	1	0	0	1								
Control Delay (s)	1.8	0.0	0.0	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	1.8	0.0	0.0	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			18.7%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: SW Pacific Dr & SW 134th Terrace

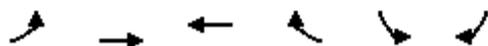
Pacific Drive Gas Annexation
 2017 Background Conditions - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	23	58	9	1	6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	10	27	69	11	1	7
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		903				
pX, platoon unblocked						
vC, conflicting volume	82				123	76
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	82				123	76
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1482				870	989

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	37	80	8
Volume Left	10	0	1
Volume Right	0	11	7
cSH	1482	1700	970
Volume to Capacity	0.01	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	2.0	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	2.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



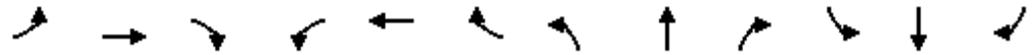
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	16	60	11	0	8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	19	70	13	0	9
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		1157				
pX, platoon unblocked						
vC, conflicting volume	84				105	77
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84				105	77
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1457				894	989

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	23	83	9
Volume Left	5	0	0
Volume Right	0	13	9
cSH	1457	1700	989
Volume to Capacity	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	1.5	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	1.5	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
 2017 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.93			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1736	3471	1519	1687	3362			1344			1644	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.80			0.77	
Satd. Flow (perm)	1736	3471	1519	1687	3362			1098			1307	
Volume (vph)	64	1587	215	79	632	13	53	8	61	100	17	67
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	67	1653	224	82	658	14	55	8	64	104	18	70
RTOR Reduction (vph)	0	0	85	0	2	0	0	52	0	0	34	0
Lane Group Flow (vph)	67	1653	139	82	670	0	0	75	0	0	158	0
Conf. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	29%	29%	29%	7%	7%	7%
Turn Type	Prot		Perm	Prot		Perm				Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	4.2	36.2	36.2	5.0	37.0			11.8			11.8	
Effective Green, g (s)	4.2	36.2	36.2	5.0	37.0			11.8			11.8	
Actuated g/C Ratio	0.06	0.56	0.56	0.08	0.57			0.18			0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	112	1933	846	130	1914			199			237	
v/s Ratio Prot	0.04	c0.48		c0.05	0.20							
v/s Ratio Perm			0.09					0.07			c0.12	
v/c Ratio	0.60	0.86	0.16	0.63	0.35			0.37			0.67	
Uniform Delay, d1	29.6	12.2	7.0	29.1	7.5			23.4			24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.3	5.1	0.4	9.6	0.5			1.2			6.9	
Delay (s)	37.9	17.3	7.4	38.7	8.0			24.6			31.6	
Level of Service	D	B	A	D	A			C			C	
Approach Delay (s)		16.9			11.4			24.6			31.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

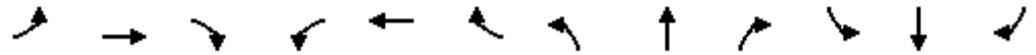
Pacific Drive Gas Annexation
2017 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	11	0	1	84	185	21
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	14	0	1	105	231	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	352	244	258			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	352	244	258			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	649	799	1319			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	14	106	258			
Volume Left	14	1	0			
Volume Right	0	0	26			
cSH	649	1319	1700			
Volume to Capacity	0.02	0.00	0.15			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	10.7	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.7	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization	21.0%		ICU Level of Service	A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

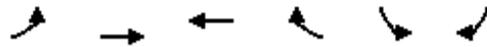
Pacific Drive Gas Annexation
 2017 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	14	79	5	43	3	143	0	1	0	0	20
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	4	18	101	6	55	4	183	0	1	0	0	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage veh												
Upstream signal (ft)		603										
pX, platoon unblocked												
vC, conflicting volume	59			119			172	148	69	147	197	57
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			119			172	148	69	147	197	57
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			76	100	100	100	100	97
cM capacity (veh/h)	1558			1426			767	738	995	820	697	1015

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	123	65	185	26
Volume Left	4	6	183	0
Volume Right	101	4	1	26
cSH	1558	1426	769	1015
Volume to Capacity	0.00	0.00	0.24	0.03
Queue Length 95th (ft)	0	0	23	2
Control Delay (s)	0.2	0.8	11.2	8.6
Lane LOS	A	A	B	A
Approach Delay (s)	0.2	0.8	11.2	8.6
Approach LOS			B	A

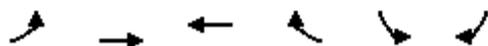
Intersection Summary			
Average Delay		5.9	
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	7	33	1	0	18
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	9	9	42	1	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		916				
pX, platoon unblocked						
vC, conflicting volume	44				70	43
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	44				70	43
tC, single (s)	4.2				6.6	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.7	3.5
p0 queue free %	99				100	98
cM capacity (veh/h)	1527				878	968

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	18	44	23
Volume Left	9	0	0
Volume Right	0	1	23
cSH	1527	1700	968
Volume to Capacity	0.01	0.03	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	3.7	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization	16.6%		ICU Level of Service A
Analysis Period (min)		15	



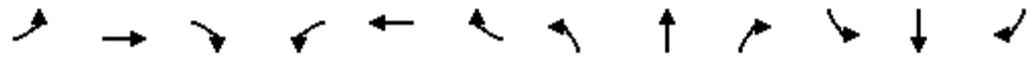
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	4	26	2	1	10
Peak Hour Factor	0.81	0.81	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	28	2	1	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		1170				
pX, platoon unblocked						
vC, conflicting volume	31				35	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	31				35	30
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1580				977	1043

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	30	12
Volume Left	0	0	1
Volume Right	0	2	11
cSH	1580	1700	1037
Volume to Capacity	0.00	0.02	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.5
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay		2.2	
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
 2017 Background + Site Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1736	3471	1521	1770	3531			1741			1728	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.64			0.80	
Satd. Flow (perm)	1736	3471	1521	1770	3531			1154			1411	
Volume (vph)	54	897	27	35	1690	23	222	12	65	96	13	94
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	56	925	28	36	1742	24	229	12	67	99	13	97
RTOR Reduction (vph)	0	0	13	0	1	0	0	14	0	0	45	0
Lane Group Flow (vph)	56	925	15	36	1765	0	0	294	0	0	164	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm		Perm		Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	2.4	38.0	38.0	2.0	37.6			18.0			18.0	
Effective Green, g (s)	2.4	38.0	38.0	2.0	37.6			18.0			18.0	
Actuated g/C Ratio	0.03	0.54	0.54	0.03	0.54			0.26			0.26	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	60	1884	826	51	1897			297			363	
v/s Ratio Prot	c0.03	0.27		0.02	c0.50							
v/s Ratio Perm			0.01					c0.25			0.12	
v/c Ratio	0.93	0.49	0.02	0.71	0.93			0.99			0.45	
Uniform Delay, d1	33.7	10.0	7.4	33.7	15.0			25.9			21.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	91.8	0.9	0.0	36.0	9.7			48.8			0.9	
Delay (s)	125.6	10.9	7.4	69.7	24.7			74.7			22.8	
Level of Service	F	B	A	E	C			E			C	
Approach Delay (s)		17.2			25.6			74.7			22.8	
Approach LOS		B			C			E			C	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

Pacific Drive Gas Annexation
2017 Background + Site Conditions - PM Peak Hour



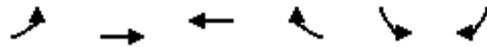
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	21	3	0	90	201	27
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	24	3	0	105	234	31
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	355	250	266			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	355	250	266			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	100			
cM capacity (veh/h)	636	780	1279			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	28	105	265			
Volume Left	24	0	0			
Volume Right	3	0	31			
cSH	651	1279	1700			
Volume to Capacity	0.04	0.00	0.16			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	10.8	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.8	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization	22.2%		ICU Level of Service	A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
2017 Background + Site Conditions - PM Peak Hour



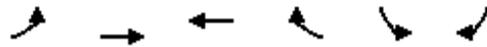
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	29	72	6	55	7	163	0	1	1	0	9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	11	35	88	7	67	9	199	0	1	1	0	11
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		605										
pX, platoon unblocked												
vC, conflicting volume	81			123			198	196	79	193	236	76
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	81			123			198	196	79	193	236	76
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			73	100	100	100	100	99
cM capacity (veh/h)	1486			1476			743	688	981	757	657	986
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	134	83	200	12								
Volume Left	11	7	199	1								
Volume Right	88	9	1	11								
cSH	1486	1476	744	957								
Volume to Capacity	0.01	0.00	0.27	0.01								
Queue Length 95th (ft)	1	0	27	1								
Control Delay (s)	0.7	0.7	11.6	8.8								
Lane LOS	A	A	B	A								
Approach Delay (s)	0.7	0.7	11.6	8.8								
Approach LOS			B	A								
Intersection Summary												
Average Delay			6.0									
Intersection Capacity Utilization			30.7%		ICU Level of Service				A			
Analysis Period (min)			15									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	23	62	9	1	6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	10	27	74	11	1	7
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		918				
pX, platoon unblocked						
vC, conflicting volume	87				128	81
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				128	81
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1476				865	983

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	37	85	8
Volume Left	10	0	1
Volume Right	0	11	7
cSH	1476	1700	964
Volume to Capacity	0.01	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	2.0	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	2.0	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



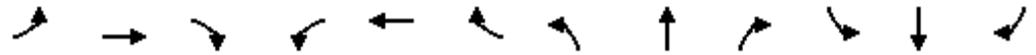
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	16	64	11	0	8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	19	74	13	0	9
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		1172				
pX, platoon unblocked						
vC, conflicting volume	88				110	82
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	88				110	82
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1451				889	983

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	23	87	9
Volume Left	5	0	0
Volume Right	0	13	9
cSH	1451	1700	983
Volume to Capacity	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	1.5	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	1.5	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	14.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
 2035 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.93			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1736	3471	1519	1687	3365			1341			1650	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.66	
Satd. Flow (perm)	1736	3471	1519	1687	3365			1032			1114	
Volume (vph)	67	2162	301	113	873	13	75	9	88	113	23	68
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	70	2252	314	118	909	14	78	9	92	118	24	71
RTOR Reduction (vph)	0	0	53	0	1	0	0	31	0	0	15	0
Lane Group Flow (vph)	70	2252	262	118	922	0	0	148	0	0	198	0
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	29%	29%	29%	7%	7%	7%
Turn Type	Prot		Perm	Prot		Perm				Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	7.7	78.0	78.0	9.0	79.3			21.0			21.0	
Effective Green, g (s)	7.7	78.0	78.0	9.0	79.3			21.0			21.0	
Actuated g/C Ratio	0.06	0.65	0.65	0.08	0.66			0.18			0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	2256	987	127	2224			181			195	
v/s Ratio Prot	0.04	c0.65		c0.07	0.27							
v/s Ratio Perm			0.17					0.14			c0.18	
v/c Ratio	0.63	1.00	0.26	0.93	0.41			0.82			1.02	
Uniform Delay, d1	54.8	20.9	8.9	55.2	9.5			47.6			49.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	11.1	18.5	0.7	57.7	0.6			23.8			68.7	
Delay (s)	65.9	39.5	9.5	112.9	10.1			71.4			118.2	
Level of Service	E	D	A	F	B			E			F	
Approach Delay (s)		36.6			21.7			71.4			118.2	
Approach LOS		D			C			E			F	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

Pacific Drive Gas Annexation
2035 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	15	0	1	88	204	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	19	0	1	110	255	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	386	273	291			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	386	273	291			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	621	770	1282			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	19	111	291			
Volume Left	19	1	0			
Volume Right	0	0	36			
cSH	621	1282	1700			
Volume to Capacity	0.03	0.00	0.17			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	11.0	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	11.0	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization	22.5%		ICU Level of Service	A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
3: SW Pacific Dr & SW 135th Terrace

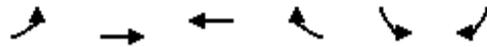
Pacific Drive Gas Annexation
2035 Background + Site Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	20	79	5	62	4	143	0	1	0	0	28
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	5	26	101	6	79	5	183	0	1	0	0	36
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage veh												
Upstream signal (ft)		605										
pX, platoon unblocked												
vC, conflicting volume	85			127			217	184	76	183	232	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	85			127			217	184	76	183	232	82
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			74	100	100	100	100	96
cM capacity (veh/h)	1525			1417			708	705	985	777	666	983

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	132	91	185	36
Volume Left	5	6	183	0
Volume Right	101	5	1	36
cSH	1525	1417	709	983
Volume to Capacity	0.00	0.00	0.26	0.04
Queue Length 95th (ft)	0	0	26	3
Control Delay (s)	0.3	0.6	11.9	8.8
Lane LOS	A	A	B	A
Approach Delay (s)	0.3	0.6	11.9	8.8
Approach LOS			B	A

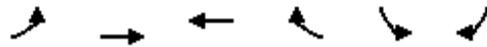
Intersection Summary			
Average Delay		5.9	
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	10	46	1	0	25
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	13	13	59	1	0	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		918				
pX, platoon unblocked						
vC, conflicting volume	60				98	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60				98	60
tC, single (s)	4.2				6.6	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.7	3.5
p0 queue free %	99				100	97
cM capacity (veh/h)	1506				843	947

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	26	60	32
Volume Left	13	0	0
Volume Right	0	1	32
cSH	1506	1700	947
Volume to Capacity	0.01	0.04	0.03
Queue Length 95th (ft)	1	0	3
Control Delay (s)	3.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		



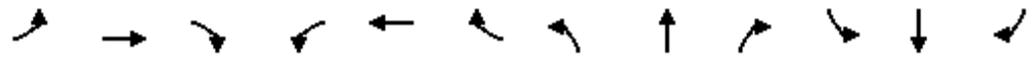
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	6	36	3	1	15
Peak Hour Factor	0.81	0.81	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	7	39	3	1	16
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		1172				
pX, platoon unblocked						
vC, conflicting volume	43				49	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	43				49	42
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	98
cM capacity (veh/h)	1564				959	1028

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	7	42	17
Volume Left	0	0	1
Volume Right	0	3	16
cSH	1564	1700	1024
Volume to Capacity	0.00	0.02	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.6
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay		2.2	
Intersection Capacity Utilization	13.7%		ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
 2035 Background + Site Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1736	3471	1521	1770	3532			1739			1734	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.62			0.77	
Satd. Flow (perm)	1736	3471	1521	1770	3532			1122			1362	
Volume (vph)	59	1225	38	51	2312	26	311	14	92	112	16	96
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	61	1263	39	53	2384	27	321	14	95	115	16	99
RTOR Reduction (vph)	0	0	11	0	0	0	0	8	0	0	23	0
Lane Group Flow (vph)	61	1263	28	53	2411	0	0	422	0	0	207	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm		Perm		Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	4.0	64.1	64.1	6.9	67.0			37.0			37.0	
Effective Green, g (s)	4.0	64.1	64.1	6.9	67.0			37.0			37.0	
Actuated g/C Ratio	0.03	0.53	0.53	0.06	0.56			0.31			0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	58	1854	812	102	1972			346			420	
v/s Ratio Prot	c0.04	0.36		0.03	c0.68							
v/s Ratio Perm			0.02					c0.38			0.15	
v/c Ratio	1.05	0.68	0.03	0.52	1.22			1.22			0.49	
Uniform Delay, d1	58.0	20.5	13.3	54.9	26.5			41.5			33.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	133.4	2.0	0.1	4.4	104.9			121.9			0.9	
Delay (s)	191.4	22.5	13.3	59.4	131.4			163.4			34.8	
Level of Service	F	C	B	E	F			F			C	
Approach Delay (s)		29.8			129.8			163.4			34.8	
Approach LOS		C			F			F			C	

Intersection Summary

HCM Average Control Delay	97.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 2: SW Pacific Dr & SW Cipole Rd

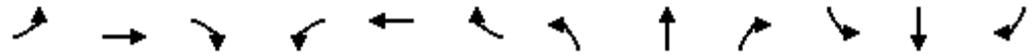
Pacific Drive Gas Annexation
 2035 Background + Site Conditions - PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	28	4	0	99	219	37
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	33	5	0	115	255	43
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				326		
pX, platoon unblocked						
vC, conflicting volume	392	277	299			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	392	277	299			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	100			
cM capacity (veh/h)	606	754	1245			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	37	115	298			
Volume Left	33	0	0			
Volume Right	5	0	43			
cSH	621	1245	1700			
Volume to Capacity	0.06	0.00	0.18			
Queue Length 95th (ft)	5	0	0			
Control Delay (s)	11.2	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	11.2	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization		23.8%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

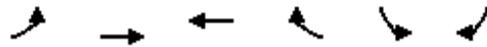
Pacific Drive Gas Annexation
 2035 Background + Site Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	13	42	72	6	80	10	163	0	1	1	0	13
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	16	51	88	7	98	12	199	0	1	1	0	16
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type							None				None	
Median storage veh												
Upstream signal (ft)		590										
pX, platoon unblocked												
vC, conflicting volume	115			139			261	256	95	251	294	109
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	115			139			261	256	95	251	294	109
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			70	100	100	100	100	98
cM capacity (veh/h)	1444			1457			670	635	961	692	608	947

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	155	117	200	17
Volume Left	16	7	199	1
Volume Right	88	12	1	16
cSH	1444	1457	671	922
Volume to Capacity	0.01	0.01	0.30	0.02
Queue Length 95th (ft)	1	0	31	1
Control Delay (s)	0.9	0.5	12.6	9.0
Lane LOS	A	A	B	A
Approach Delay (s)	0.9	0.5	12.6	9.0
Approach LOS			B	A

Intersection Summary			
Average Delay		5.9	
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	33	87	13	1	9
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	14	39	104	15	1	11
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		903				
pX, platoon unblocked						
vC, conflicting volume	121				181	113
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121				181	113
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1434				803	943

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	54	119	12
Volume Left	14	0	1
Volume Right	0	15	11
cSH	1434	1700	927
Volume to Capacity	0.01	0.07	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	2.1	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	22	90	16	0	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	7	26	105	19	0	14
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1157				
pX, platoon unblocked						
vC, conflicting volume	124				154	115
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124				154	115
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1407				837	942

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	33	123	14
Volume Left	7	0	0
Volume Right	0	19	14
cSH	1407	1700	942
Volume to Capacity	0.00	0.07	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	1.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	16.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis

Pacific Drive Gas Annexation

1: SW Pacific Hwy & SW Cipole Rd

2035 Background Conditions (with Daycare) - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.93			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1736	3471	1519	1687	3372			1343			1681	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.80			0.60	
Satd. Flow (perm)	1736	3471	1519	1687	3372			1099			1045	
Volume (vph)	31	2204	301	113	921	3	75	11	88	74	24	21
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	32	2296	314	118	959	3	78	11	92	77	25	22
RTOR Reduction (vph)	0	0	52	0	0	0	0	31	0	0	7	0
Lane Group Flow (vph)	32	2296	262	118	962	0	0	150	0	0	117	0
Confl. Bikes (#/hr)			3			1						
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	29%	29%	29%	7%	7%	7%
Turn Type	Prot		Perm	Prot		Perm				Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	3.6	81.7	81.7	9.0	87.1			17.3			17.3	
Effective Green, g (s)	3.6	81.7	81.7	9.0	87.1			17.3			17.3	
Actuated g/C Ratio	0.03	0.68	0.68	0.08	0.73			0.14			0.14	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	52	2363	1034	127	2448			158			151	
v/s Ratio Prot	0.02	c0.66		c0.07	0.29							
v/s Ratio Perm			0.17					c0.14			0.11	
v/c Ratio	0.62	0.97	0.25	0.93	0.39			0.95			0.78	
Uniform Delay, d1	57.5	18.1	7.4	55.2	6.3			50.9			49.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	19.7	13.0	0.6	57.7	0.5			56.8			21.7	
Delay (s)	77.2	31.0	8.0	112.9	6.8			107.7			71.2	
Level of Service	E	C	A	F	A			F			E	
Approach Delay (s)		28.8			18.4			107.7			71.2	
Approach LOS		C			B			F			E	

Intersection Summary

HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 2: SW Pacific Dr & SW Cipole Rd

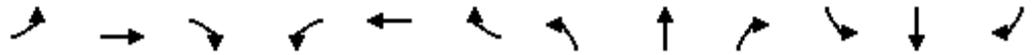
Pacific Drive Gas Annexation
 2035 Background Conditions (with Daycare) - AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	15	0	1	44	119	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	19	0	1	55	149	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	326					
pX, platoon unblocked						
vC, conflicting volume	224	167	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224	167	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	768	883	1402			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	19	56	185			
Volume Left	19	1	0			
Volume Right	0	0	36			
cSH	768	1402	1700			
Volume to Capacity	0.02	0.00	0.11			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.8	0.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.8	0.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization	18.0%		ICU Level of Service	A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 3: SW Pacific Dr & SW 135th Terrace

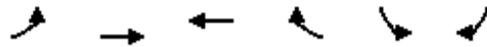
Pacific Drive Gas Annexation
 2035 Background Conditions (with Daycare) - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	21	34	4	64	4	56	0	0	0	0	28
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	5	27	44	5	82	5	72	0	0	0	0	36
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage veh												
Upstream signal (ft)		605										
pX, platoon unblocked												
vC, conflicting volume	87			71			190	156	49	154	176	85
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	87			71			190	156	49	154	176	85
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			90	100	100	100	100	96
cM capacity (veh/h)	1522			1487			738	731	1020	813	717	980
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	76	92	72	36								
Volume Left	5	5	72	0								
Volume Right	44	5	0	36								
cSH	1522	1487	738	980								
Volume to Capacity	0.00	0.00	0.10	0.04								
Queue Length 95th (ft)	0	0	8	3								
Control Delay (s)	0.5	0.4	10.4	8.8								
Lane LOS	A	A	B	A								
Approach Delay (s)	0.5	0.4	10.4	8.8								
Approach LOS			B	A								
Intersection Summary												
Average Delay			4.1									
Intersection Capacity Utilization			21.2%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: SW Pacific Dr & SW 134th Terrace

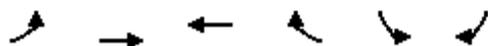
Pacific Drive Gas Annexation
 2035 Background Conditions (with Daycare) - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	10	47	1	0	25
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	13	13	60	1	0	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		918				
pX, platoon unblocked						
vC, conflicting volume	62				99	61
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	62				99	61
tC, single (s)	4.2				6.6	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.7	3.5
p0 queue free %	99				100	97
cM capacity (veh/h)	1504				841	946

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	26	62	32
Volume Left	13	0	0
Volume Right	0	1	32
cSH	1504	1700	946
Volume to Capacity	0.01	0.04	0.03
Queue Length 95th (ft)	1	0	3
Control Delay (s)	3.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	6	37	3	1	15
Peak Hour Factor	0.81	0.81	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	7	40	3	1	16
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		1172				
pX, platoon unblocked						
vC, conflicting volume	44				50	43
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	44				50	43
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	98
cM capacity (veh/h)	1562				958	1027

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	7	43	17
Volume Left	0	0	1
Volume Right	0	3	16
cSH	1562	1700	1022
Volume to Capacity	0.00	0.03	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.6
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay		2.2	
Intersection Capacity Utilization		13.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
1: SW Pacific Hwy & SW Cipole Rd

Pacific Drive Gas Annexation
2035 Background Conditions - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1736	3471	1521	1770	3535			1740			1776	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.68			0.73	
Satd. Flow (perm)	1736	3471	1521	1770	3535			1236			1339	
Volume (vph)	46	1246	38	51	2379	15	311	17	92	111	20	40
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	47	1285	39	53	2453	15	321	18	95	114	21	41
RTOR Reduction (vph)	0	0	11	0	0	0	0	9	0	0	9	0
Lane Group Flow (vph)	47	1285	28	53	2468	0	0	426	0	0	167	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm		Perm		Perm		
Protected Phases	5	2		1	6			4			8	
Permitted Phases			2			4				8		
Actuated Green, G (s)	3.2	66.1	66.1	6.9	69.8			35.0			35.0	
Effective Green, g (s)	3.2	66.1	66.1	6.9	69.8			35.0			35.0	
Actuated g/C Ratio	0.03	0.55	0.55	0.06	0.58			0.29			0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	46	1912	838	102	2056			361			391	
v/s Ratio Prot	c0.03	0.37		0.03	c0.70							
v/s Ratio Perm			0.02					c0.34			0.12	
v/c Ratio	1.02	0.67	0.03	0.52	1.20			1.18			0.43	
Uniform Delay, d1	58.4	19.2	12.3	54.9	25.1			42.5			34.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	139.1	1.9	0.1	4.4	95.1			105.5			0.8	
Delay (s)	197.5	21.1	12.4	59.4	120.2			148.0			35.1	
Level of Service	F	C	B	E	F			F			D	
Approach Delay (s)		26.9			118.9			148.0			35.1	
Approach LOS		C			F			F			D	
Intersection Summary												
HCM Average Control Delay			90.4			HCM Level of Service					F	
HCM Volume to Capacity ratio			1.19									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			102.1%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
2: SW Pacific Dr & SW Cipole Rd

Pacific Drive Gas Annexation
2035 Background Conditions - PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	29	4	0	78	166	38
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	34	5	0	91	193	44
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				326		
pX, platoon unblocked						
vC, conflicting volume	307	216	238			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	307	216	238			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	100			
cM capacity (veh/h)	678	816	1310			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	38	91	237			
Volume Left	34	0	0			
Volume Right	5	0	44			
cSH	693	1310	1700			
Volume to Capacity	0.06	0.00	0.14			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	10.5	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.5	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization		21.0%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
3: SW Pacific Dr & SW 135th Terrace

Pacific Drive Gas Annexation
2035 Background Conditions - PM Peak Hour



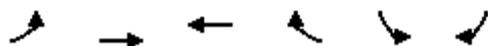
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	13	43	51	5	82	10	109	0	0	1	0	13
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	16	52	62	6	100	12	133	0	0	1	0	16
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		590										
pX, platoon unblocked												
vC, conflicting volume	117			115			249	245	84	239	270	111
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	117			115			249	245	84	239	270	111
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			81	100	100	100	100	98
cM capacity (veh/h)	1441			1487			682	645	976	706	628	944

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	130	118	133	17
Volume Left	16	6	133	1
Volume Right	62	12	0	16
cSH	1441	1487	682	922
Volume to Capacity	0.01	0.00	0.19	0.02
Queue Length 95th (ft)	1	0	18	1
Control Delay (s)	1.0	0.4	11.6	9.0
Lane LOS	A	A	B	A
Approach Delay (s)	1.0	0.4	11.6	9.0
Approach LOS			B	A

Intersection Summary			
Average Delay		4.7	
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: SW Pacific Dr & SW 134th Terrace

Pacific Drive Gas Annexation
2035 Background Conditions - PM Peak Hour



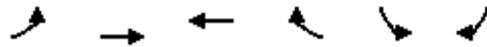
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	33	88	13	1	9
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	14	39	105	15	1	11
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		903				
pX, platoon unblocked						
vC, conflicting volume	122				182	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122				182	114
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1432				802	942

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	54	120	12
Volume Left	14	0	1
Volume Right	0	15	11
cSH	1432	1700	926
Volume to Capacity	0.01	0.07	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	2.1	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 5: SW Pacific Dr & SW 133rd Terrace

Pacific Drive Gas Annexation
 2035 Background Conditions - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	22	91	16	0	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	7	26	106	19	0	14
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		1157				
pX, platoon unblocked						
vC, conflicting volume	125				156	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125				156	116
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1406				836	941

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	33	124	14
Volume Left	7	0	0
Volume Right	0	19	14
cSH	1406	1700	941
Volume to Capacity	0.00	0.07	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	1.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	16.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	33	341	293	167	123	91	97	155	77
Average Queue (ft)	5	144	122	40	46	34	26	60	30
95th Queue (ft)	21	265	240	100	94	72	67	126	64
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		5	4	0					
Queuing Penalty (veh)		0	7	0					

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	32
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	13
95th Queue (ft)	34
Link Distance (ft)	508
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	15
95th Queue (ft)	45
Link Distance (ft)	353
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	29
Link Distance (ft)	324
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 7

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	33	188	165	40	81	340	327	245	70
Average Queue (ft)	6	83	64	7	27	154	132	123	25
95th Queue (ft)	21	156	136	27	63	279	252	215	58
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)								0	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		1	1			2			
Queuing Penalty (veh)		0	0			1			

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	48
Average Queue (ft)	17
95th Queue (ft)	45
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	EB	SB
Directions Served	LTR	LR
Maximum Queue (ft)	24	26
Average Queue (ft)	1	5
95th Queue (ft)	10	22
Link Distance (ft)	182	508
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	32
Average Queue (ft)	1	7
95th Queue (ft)	12	29
Link Distance (ft)	257	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	6
95th Queue (ft)	24
Link Distance (ft)	324
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	19	494	477	171	103	95	78	167	87
Average Queue (ft)	2	200	180	56	47	35	24	70	31
95th Queue (ft)	12	373	360	145	88	79	61	139	67
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)		0	0					0	
Queuing Penalty (veh)		0	0					0	
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		9	8	0					
Queuing Penalty (veh)		1	17	0					

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	32
Average Queue (ft)	10
95th Queue (ft)	34
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	EB	SB
Directions Served	LTR	LR
Maximum Queue (ft)	6	30
Average Queue (ft)	0	12
95th Queue (ft)	4	33
Link Distance (ft)	182	508
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	6	56
Average Queue (ft)	0	20
95th Queue (ft)	4	54
Link Distance (ft)	257	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	9
95th Queue (ft)	30
Link Distance (ft)	324
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 18

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	46	193	176	62	107	361	326	256	78
Average Queue (ft)	6	89	75	7	31	163	137	147	25
95th Queue (ft)	25	157	140	35	81	289	254	236	63
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)								1	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		1	0	0		3			
Queuing Penalty (veh)		0	0	0		1			

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	43
Average Queue (ft)	15
95th Queue (ft)	43
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	EB	SB
Directions Served	LTR	LR
Maximum Queue (ft)	28	26
Average Queue (ft)	1	9
95th Queue (ft)	10	28
Link Distance (ft)	182	508
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	32
Average Queue (ft)	6
95th Queue (ft)	27
Link Distance (ft)	353
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	6	27
Average Queue (ft)	0	5
95th Queue (ft)	5	22
Link Distance (ft)	202	324
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	142	502	501	171	120	130	128	177	180
Average Queue (ft)	41	223	204	53	48	63	52	62	85
95th Queue (ft)	99	404	394	135	95	111	101	129	150
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)		0	0					0	0
Queuing Penalty (veh)		0	0					0	0
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		11	9	0	0				
Queuing Penalty (veh)		7	20	0	0				

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	32
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LR	LR
Maximum Queue (ft)	10	6	65	35
Average Queue (ft)	0	0	37	14
95th Queue (ft)	5	4	58	36
Link Distance (ft)	182	257	193	508
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	6	51
Average Queue (ft)	0	15
95th Queue (ft)	6	46
Link Distance (ft)	257	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	SB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	324
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 27

Intersection: 1: SW Pacific Hwy & SW Cipole Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	78	169	163	38	148	486	431	266	178
Average Queue (ft)	29	87	81	7	27	244	222	145	88
95th Queue (ft)	69	148	138	27	80	398	367	250	147
Link Distance (ft)		523	523			1468	1468	253	228
Upstream Blk Time (%)								3	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	145			140	190				
Storage Blk Time (%)		1	0			11			
Queuing Penalty (veh)		0	0			4			

Intersection: 2: SW Pacific Dr & SW Cipole Rd

Movement	EB
Directions Served	TR
Maximum Queue (ft)	48
Average Queue (ft)	18
95th Queue (ft)	46
Link Distance (ft)	593
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Pacific Dr & SW 135th Terrace

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LR	LR
Maximum Queue (ft)	6	6	78	26
Average Queue (ft)	0	0	41	7
95th Queue (ft)	4	6	67	26
Link Distance (ft)	182	257	193	508
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW Pacific Dr & SW 134th Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	13	31
Average Queue (ft)	1	6
95th Queue (ft)	9	26
Link Distance (ft)	257	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: SW Pacific Dr & SW 133rd Terrace

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	6	31
Average Queue (ft)	0	7
95th Queue (ft)	4	25
Link Distance (ft)	202	324
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 4

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW Cipole Road
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour

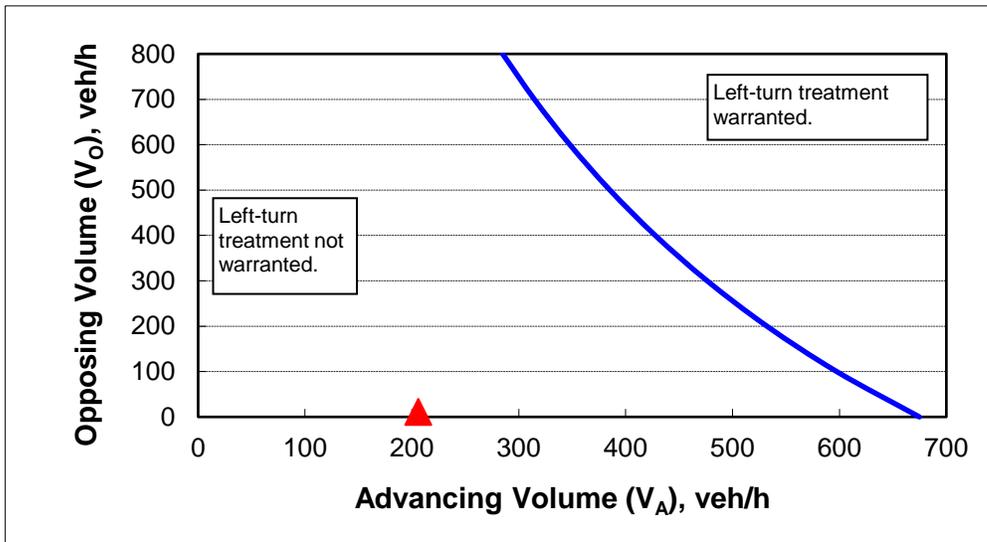
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	90%
Advancing volume (V_A), veh/h:	206
Opposing volume (V_O), veh/h:	11

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	666
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW Cipole Road
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - PM Peak Hour

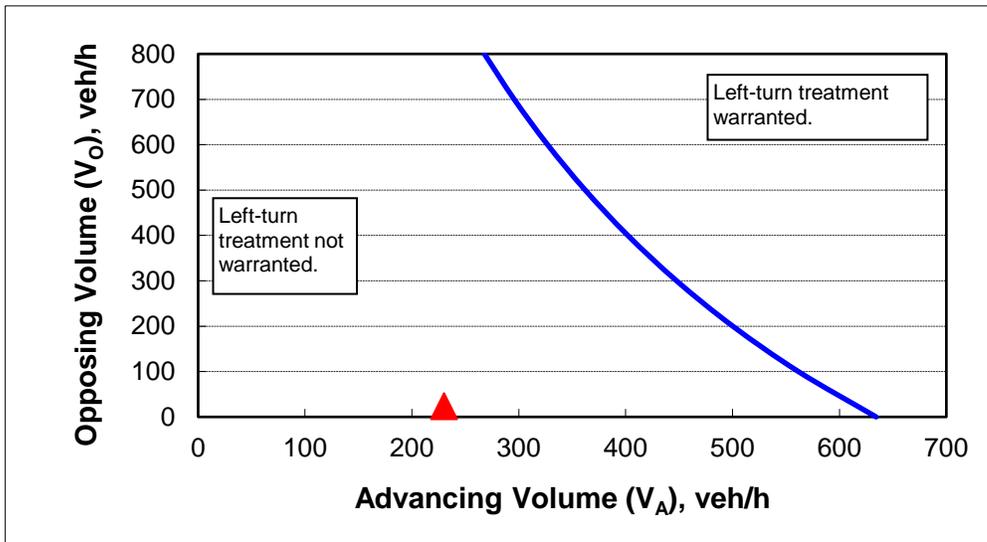
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	88%
Advancing volume (V_A), veh/h:	230
Opposing volume (V_O), veh/h:	24

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	616
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 135th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour (EB LT)

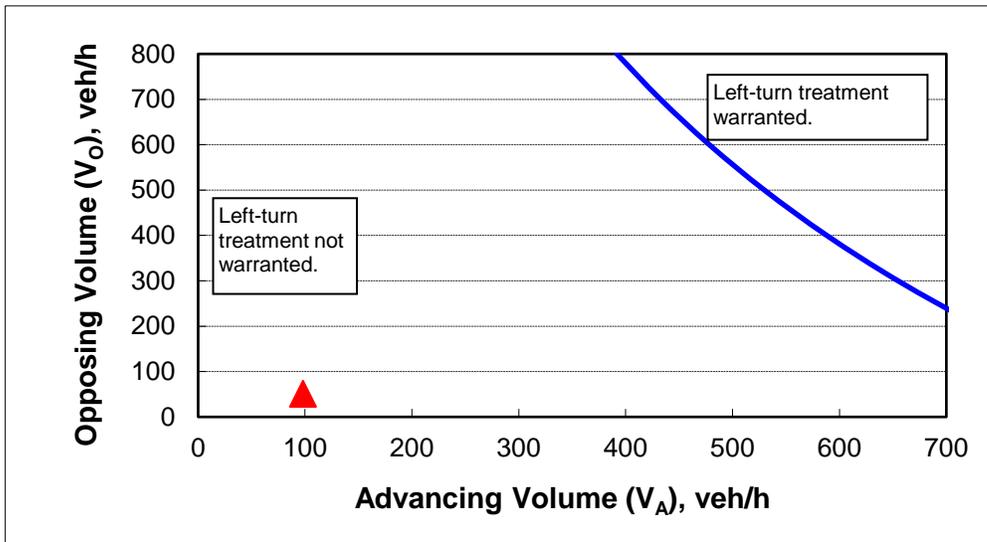
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	5%
Advancing volume (V_A), veh/h:	98
Opposing volume (V_O), veh/h:	51

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	871
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 135th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - PM Peak Hour (EB LT)

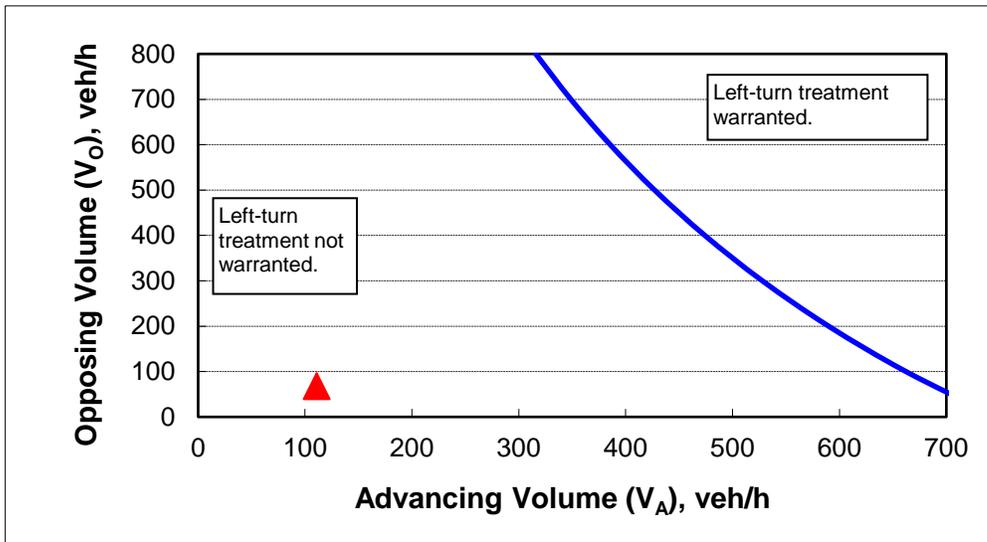
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	111
Opposing volume (V_O), veh/h:	68

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	688
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 135th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour (WB LT)

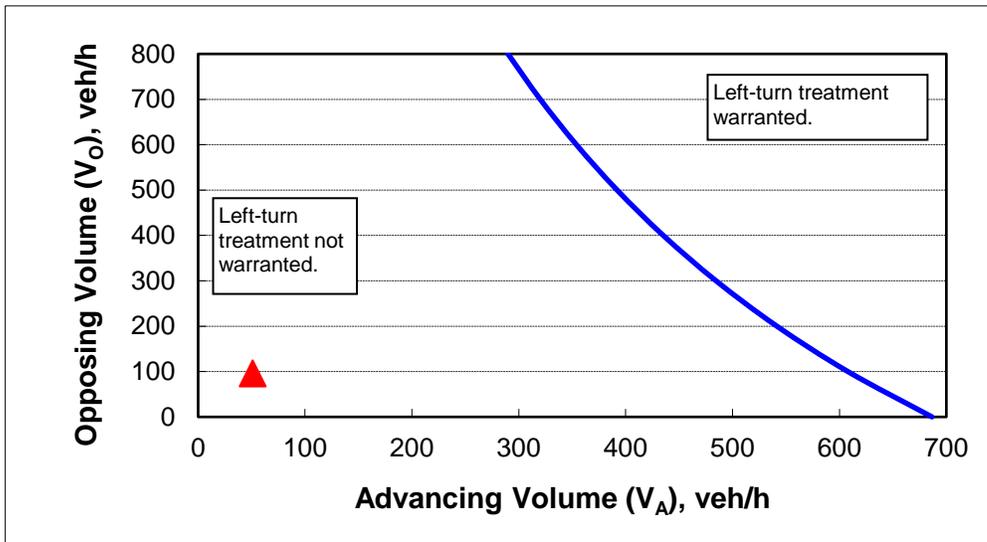
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	10%
Advancing volume (V_A), veh/h:	51
Opposing volume (V_O), veh/h:	96

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	611
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 135th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour (WB LT)

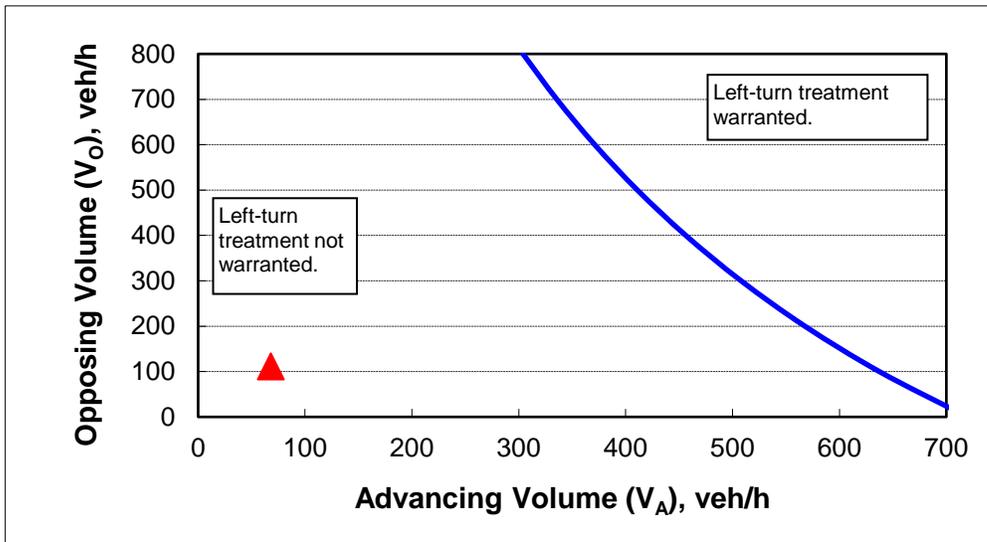
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	9%
Advancing volume (V_A), veh/h:	68
Opposing volume (V_O), veh/h:	111

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	629
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 134th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour

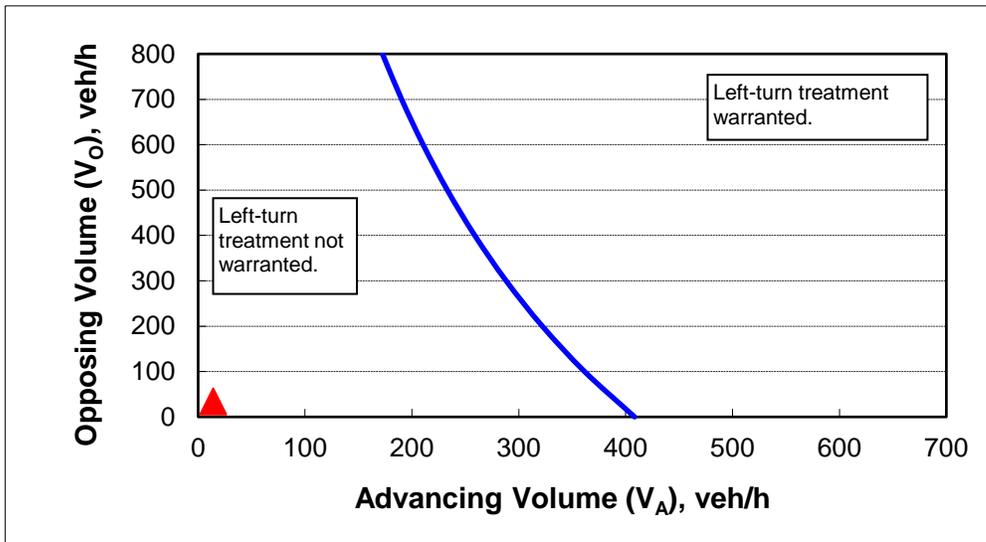
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	50%
Advancing volume (V_A), veh/h:	14
Opposing volume (V_O), veh/h:	34

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	391
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 134th Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - PM Peak Hour

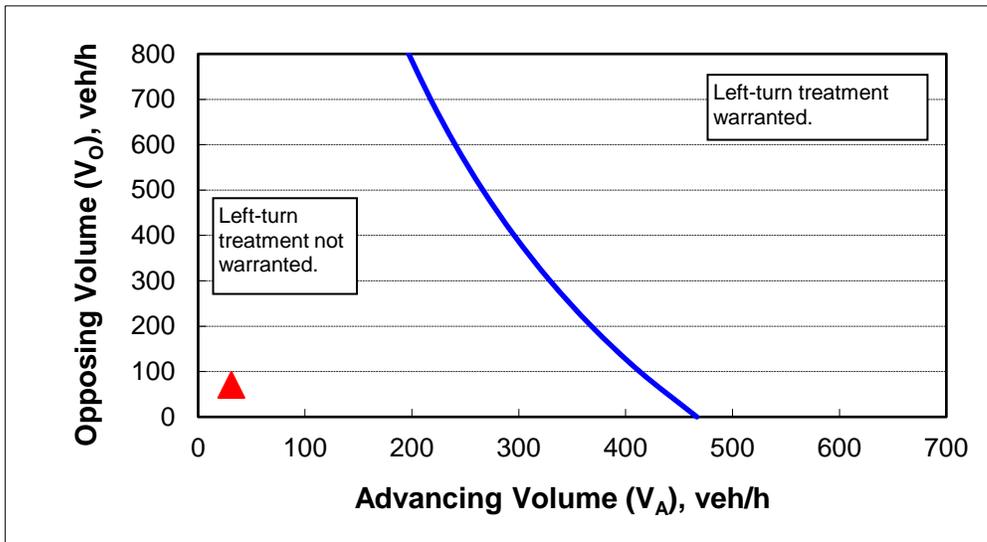
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	26%
Advancing volume (V_A), veh/h:	31
Opposing volume (V_O), veh/h:	71

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	428
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 133rd Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - AM Peak Hour

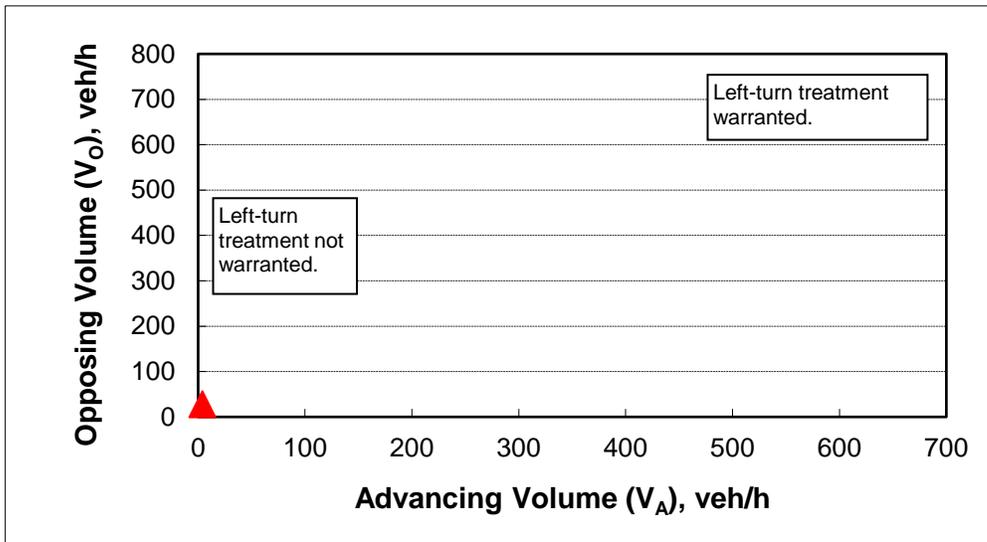
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	4
Opposing volume (V_O), veh/h:	28

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	3954
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 15143 - Pacific Drive Gas Annexation
 Intersection: SW Pacific Drive at SW 133rd Terrace
 Date: 11/2/2015
 Scenario: 2017 Background + Site Conditions - PM Peak Hour

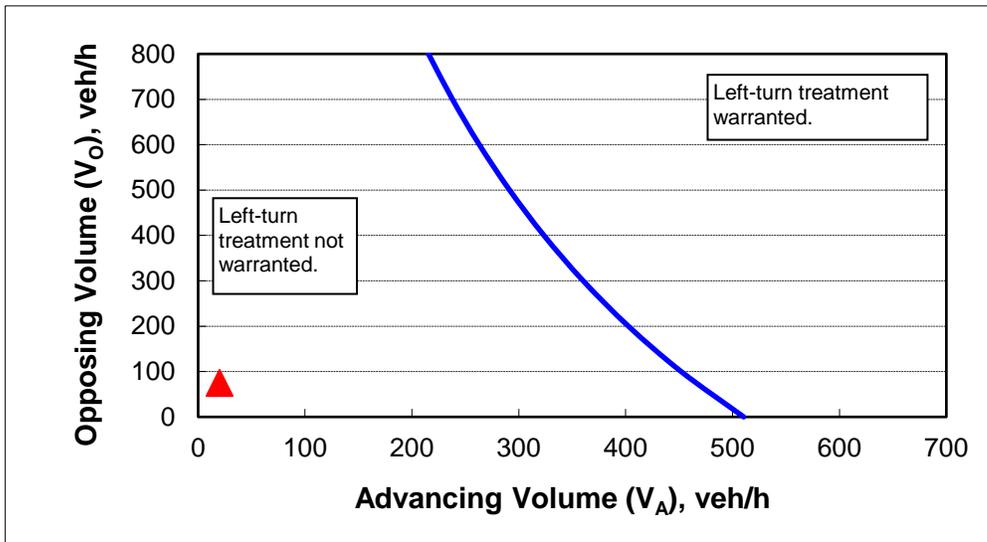
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	20%
Advancing volume (V_A), veh/h:	20
Opposing volume (V_O), veh/h:	75

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	466
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

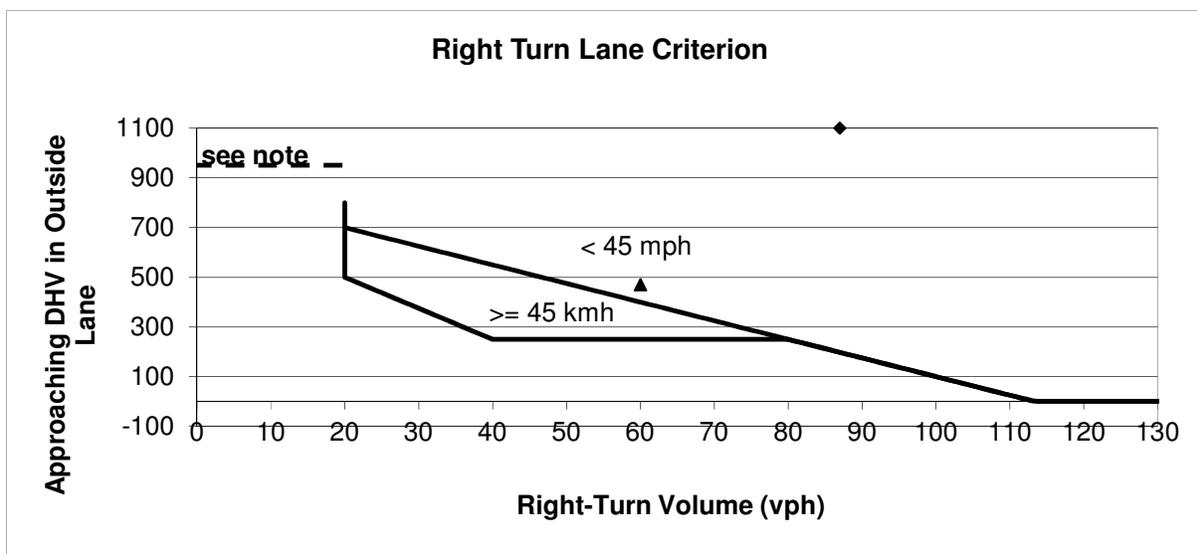


Project: 15143 - Pacific Drive Gas Annexation
Date: 11/2/2015
Scenario: 2017 Background plus Site Conditions

Speed? 65 mph 105 kmh

AM Peak Hour
Right-Turn Volume 60
Approaching DHV 470
Lane Needed? No

PM Peak Hour
Right-Turn Volume 87
Approaching DHV 1100
Lane Needed? Yes



Note: If there is no right turn lane, a shoulder needs to be provided.
If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Traffic Signal Warrant Analysis



Project: 15143 - Pacific Drive Gas Annexation
 Date: 11/2/2015
 Scenario: 2017 Background plus Site Conditions - PM Peak Hour

Major Street:	SW Pacific Drive	Minor Street:	SW Cipole Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	254	PM Peak Hour Volumes:	68

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)	ADT on Minor St. (higher-volume approach)		
Major St.	Minor St.	100% Warrants	70% Warrants	100% Warrants	70% Warrants
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	2,540	8,850	
Minor Street*	680	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	2,540	13,300	
Minor Street*	680	1,350	No
<i>Combination Warrant</i>			
Major Street	2,540	10,640	
Minor Street*	680	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: 15143 - Pacific Drive Gas Annexation
 Date: 11/2/2015
 Scenario: 2017 Background plus Site Conditions - PM Peak Hour

Major Street:	SW Pacific Drive	Minor Street:	SW 135th Terrace
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	179	PM Peak Hour Volumes:	166

Warrant Used:
 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)	ADT on Minor St. (higher-volume approach)		
Major St.	Minor St.	100% Warrants	70% Warrants	100% Warrants	70% Warrants
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	1,790	8,850	
Minor Street*	1,660	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	1,790	13,300	
Minor Street*	1,660	1,350	No
<i>Combination Warrant</i>			
Major Street	1,790	10,640	
Minor Street*	1,660	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: 15143 - Pacific Drive Gas Annexation
 Date: 11/2/2015
 Scenario: 2017 Background plus Site Conditions - PM Peak Hour

Major Street: SW Pacific Drive Minor Street: SW 134th Terrace
 Number of Lanes: 1 Number of Lanes: 1
 PM Peak Hour Volumes: 102 PM Peak Hour Volumes: 6

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)	ADT on Minor St. (higher-volume approach)		
Major St.	Minor St.	100% Warrants	70% Warrants	100% Warrants	70% Warrants
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	1,020	8,850	
Minor Street*	60	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	1,020	13,300	
Minor Street*	60	1,350	No
<i>Combination Warrant</i>			
Major Street	1,020	10,640	
Minor Street*	60	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: 15143 - Pacific Drive Gas Annexation
 Date: 11/2/2015
 Scenario: 2017 Background plus Site Conditions - PM Peak Hour

Major Street:	SW Pacific Drive	Minor Street:	SW 133rd Terrace
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	95	PM Peak Hour Volumes:	6

Warrant Used:
 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)	ADT on Minor St. (higher-volume approach)		
Major St.	Minor St.	100% Warrants	70% Warrants	100% Warrants	70% Warrants
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	950	8,850	
Minor Street*	60	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	950	13,300	
Minor Street*	60	1,350	No
<i>Combination Warrant</i>			
Major Street	950	10,640	
Minor Street*	60	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

09/08/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

PACIFIC HY 99W at CIPOLE RD, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

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: 2012														
TURNING MOVEMENTS	0	2	0	2	0	4	0	1	1	1	1	2	0	0
YEAR 2012 TOTAL	0	2	0	2	0	4	0	1	1	1	1	2	0	0
YEAR: 2011														
REAR-END	0	1	0	1	0	2	0	0	1	1	0	1	0	0
YEAR 2011 TOTAL	0	1	0	1	0	2	0	0	1	1	0	1	0	0
YEAR: 2009														
REAR-END	0	1	3	4	0	1	0	4	0	2	2	4	0	0
YEAR 2009 TOTAL	0	1	3	4	0	1	0	4	0	2	2	4	0	0
FINAL TOTAL	0	4	3	7	0	7	0	5	2	4	3	7	0	0

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

09/08/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

PACIFIC DR at CIPOLE RD, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

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	SECTION RELATED	OFF- ROAD
FINAL TOTAL														

Page 126 of 130

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

09/08/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

PACIFIC DR at 135TH TER, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

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	SECTION RELATED	OFF- ROAD
YEAR: 2012														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
YEAR 2012 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	1
FINAL TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	1

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

09/08/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

PACIFIC DR at 134TH TER, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

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	SECTION RELATED	OFF- ROAD
FINAL TOTAL														

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

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

PACIFIC DR and Intersectional Crashes at PACIFIC DR, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 2

SER#	E A U C O DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE (MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	SPCL USE TRLR QTY	MOVE	A S	PED	ACT	EVENT	CAUSE						
INVEST	D C S L K TIME	DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G E LICNS	LOC	ERROR						
		FROM	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	E#	TYPE	SVRTY	E X RES	LOC	ERROR	ACT	EVENT	CAUSE	
04367	N N N N N 09/21/2012	17	SW 135TH TER	INTER	3-LEG	N	Y	CLR	FIX OBJ	01 NONE	0	STRGHT								062,093	27	
CITY	TU	0	SW PACIFIC DR	W		STOP SIGN	N	DRY	FIX	PRVTE	E -W									000	062	00
	12P			05	0		N	DAY	INJ	PSNGR CAR			01	DRVR	INJB	37 F	OR-Y	016,080,081	038	093	27	
										01 NONE	0	STRGHT										
										PRVTE	E -W									000	062	00
										PSNGR CAR			02	PSNG	NO<5	04 F		000		000	062	00
05104	N N N N N 09/28/2010	17	SW PACIFIC DR	STRGHT		N	N	CLR	O-STRGHT	01 NONE	0	STRGHT										10
CITY	TU	100	SW 135TH TER	E	(NONE)	NONE	N	DRY	SS-M	PRVTE	W -E									000		00
	1P			08			N	DAY	PDO	PSNGR CAR			01	DRVR	NONE	63 F	OR-Y	080		000		10
						(02)																
										02 NONE	0	STRGHT										
										PRVTE	E -W									000		00
										PSNGR CAR			01	DRVR	NONE	61 F	OR-Y	000		000		00
										03 NONE	0	STRGHT										
										PRVTE	E -W									022		00
										PSNGR CAR			01	DRVR	NONE	48 F	OR-Y	000		000		00

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