



MEMORANDUM

CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council
FROM: Sherilyn Lombos, City Manager
DATE: January 13, 2014
SUBJECT: Work Session for January 13, 2014

5:00 p.m. (45 min) – Seneca Street / Council Building. At the November 25, 2013 work session, staff presented information that Council had requested regarding parking at the Library, cost of the Seneca Street extension under various time scenarios, a deadline for making a decision, and information regarding additional traffic analysis. Council directed that additional traffic analysis be conducted and compiled regarding the full build-out of the extension, along with alternatives to the full build-out. That analysis has been conducted and will be discussed at tonight's meeting. Attached is information that will be discussed at the meeting.

5:45 p.m. (45 min) – Medical Marijuana Dispensaries. At the December 9, 2013 work session, the City Council requested that staff return with policy options for placing a moratorium on medical marijuana dispensaries in Tualatin in order to allow the Council time to gather input from the community, review the final rules adopted by the state for regulating dispensaries, and to consider options for regulation. Staff will present three policy options for the Council's consideration. Attached is information that will be discussed at the meeting.

6:30 p.m. (15 min) – Basalt Creek Concept Plan Update. On October 29, 2013, the City Councils of Tualatin and Wilsonville met to discuss this planning project. At that meeting, a subcommittee was convened charged with establishing a decision-making framework and identifying community engagement techniques to be used throughout the project. At tonight's meeting, sub-committee members (Council President Beikman and Councilor Davis) will brief the rest of the Council on their progress and staff will discuss next steps.

6:45 p.m. (10 min) – Council Meeting Agenda Review, Communications & Roundtable. Council will review the agenda for the January 13th City Council meeting and brief the Council on issues of mutual interest.



MEMORANDUM

CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council

THROUGH: Sherilyn Lombos

FROM: Kaaren Hofmann, Engineering Manager

DATE: 01/13/2014

SUBJECT: SW Seneca Street Analysis

ISSUE BEFORE THE COUNCIL:

At the November 12, 2013 City Council Work Session, the Council directed staff to collect additional information regarding the proposed Seneca Street extension as part of the Nyberg Rivers project and the Council Building. At the November 25th City Council Work Session, staff presented the results of the short-term research and provided a timeline for returning with more detailed traffic analysis related to Seneca Street. This report provides the results of the traffic analysis completed by DKS Associates and staff's summary of the analysis.

EXECUTIVE SUMMARY:

The City Council approved the Nyberg Rivers Master Plan on August 26, 2013. The approved Nyberg Rivers Plan shows the extension of Seneca Street per the City's Transportation System Plan (TSP) to improve circulation, pedestrian safety and enhance the access to the adjacent development site. The extension of the street would require the demolition of the existing Council Building.

The Council has many key decisions to make including when the street should be constructed, if a replacement building should be constructed, where a replacement building should be located, and if a building is constructed, how should it be financed? Staff worked with the Citizen Involvement Organizations (CIOs) and the City's Advisory Committees to conduct outreach in the community regarding these questions throughout the months of October and November. Following the report on citizen involvement and Council discussion, staff was directed to complete additional research and analysis related to the following:

- 1) parking at the Tualatin Library,
- 2) the cost of constructing the street now with the development versus constructing the street later,
- 3) the deadline for the final decision on whether the street will be constructed as part of the Nyberg Rivers Development,
- 4) the scope, cost, and timing for additional traffic analysis regarding Seneca Street and alternatives for other traffic and pedestrian safety improvements, and
- 5) a Facilities Study scope, cost, and timeline.

On November 25th, staff presented the research related to parking, cost of constructing the street, and the decision deadlines. Staff will be back in February or March with information related to a facilities study. Tonight's discussion will focus on the traffic analysis which was conducted by DKS Associates regarding additional options for Seneca Street and how they compare with the full build out of the Seneca Street extension as shown in the City's TSP.

DISCUSSION:

The DKS analysis compares and summarizes eight different alternatives for SW Seneca Street. The detailed traffic operational analysis and conceptual cost estimates are included in the attached memo. The eight alternatives are:

1. Existing Configuration - No Build
2. Full Seneca Street Build-Out
3. Narrower Seneca Street
4. Close the Driveway at Martinazzi Avenue/Left turn onto Nyberg
5. Close the Driveway at the Property Line/Left turn onto Nyberg
6. Right In/Right Out & Left In
7. Right In/Right Out/Left turn onto Nyberg
8. Dual Signals

For graphics depicting each alternative see the PowerPoint in Attachment B.

Existing Configuration

The existing configuration of the driveway has 3 travel lanes and a full sidewalk on the south side of the driveway. The sidewalk on the north side ends prior to the exit from the parking area. There have been numerous concerns voiced about pedestrian safety crossing SW Martinazzi Avenue and the driveway. With the addition of the traffic from Nyberg Rivers, the intersection will not meet the City's operational standards and the pedestrian safety concerns will increase.

Full SW Seneca Street Build-Out

The full build-out of SW Seneca Street would provide a signal at SW Martinazzi Avenue and bike lanes and sidewalks on both sides of the roadway for the entire length of the roadway. The signal will provide for the best traffic operations of all alternatives evaluated and will provide for a safe pedestrian crossing at SW Martinazzi Avenue. The roadway can and will be designed with additional pedestrian safety measures east of SW Martinazzi Avenue. The new roadway will also be in compliance with all American with Disabilities Act (ADA) requirements.

Narrower SW Seneca Street

This alternative proposes SW Seneca Street as a narrower street with a skewed alignment to save the Council Chambers. It provides a signal at SW Martinazzi Avenue to help with the traffic congestion and pedestrian safety crossing across SW Martinazzi Avenue. However, it has only two lanes, which is less than currently exists, and the skewed angle makes turning movements more difficult and creates site distance issues. It does provide sidewalks the entire length of the street, but no bike lanes are provided. The roadway can and will be designed with additional pedestrian safety measures east of SW Martinazzi Avenue. The new roadway will also be completely ADA compliant.

Close Driveway at SW Martinazzi Avenue

Closing the driveway at SW Martinazzi Avenue means that all access to City services and the Library will be through the adjacent development. This option will require negotiations with the adjacent property owner to allow City access through their site and permission to eliminate the access easement which benefits that property owner. In order to make this option feasible, the

intersection at SW Nyberg Street and SW Martinazzi Avenue will have to be reconfigured to allow left turns from southbound SW Martinazzi Avenue onto SW Nyberg Street. This scenario meets the City's minimum standards, but it does not operate as well as the SW Seneca Street full build-out option. Additionally, this alternative does not provide improvements for pedestrian safety or connectivity for bicycles and pedestrians.

Close Driveway at Property Line

Closing the driveway at the property line provides for direct access for City services and the Library, but provides for very poor on-site circulation. This option will require negotiations with the adjacent property owner to allow City access through their site for the parking lot behind the Library and to eliminate the existing access easement which benefits that property owner. In order to make this option feasible, the intersection at SW Nyberg Street and SW Martinazzi Avenue will have to be reconfigured to allow left turns from southbound SW Martinazzi Avenue onto SW Nyberg Street. This scenario meets the City's minimum standards, but it does not operate as well as the SW Seneca Street full build-out option. Additionally, this alternative does not provide improvements for pedestrian safety or connectivity for bicycles and pedestrians.

Right In/Right Out and Left In

A pork chop/median can be installed at the intersection of the driveway and SW Martinazzi Avenue to prohibit left turns out of the driveway. This option can provide for safer vehicular movements strictly because it eliminates several conflict points. This scenario meets the City's minimum standards, but it does not operate as well as the SW Seneca Street full build-out option. This alternative does not provide improvements for pedestrian safety or connectivity for bicycles and pedestrians. This option could also have legal implications in regards to the existing access easement granted to the adjacent property owner.

Right In/Right Out

A median can be installed on SW Martinazzi Avenue which allows for a right in/right out only at the driveway. This option can provide for safer vehicular movements strictly because it eliminates several conflict points. In order to make this option feasible, the intersection at SW Nyberg Street and SW Martinazzi Avenue will have to be reconfigured to allow left turns from southbound SW Martinazzi Avenue onto SW Nyberg Street. This scenario does not meet the City's minimum standards. This alternative does not provide improvements for pedestrian safety or connectivity for bicycles and pedestrians. This option could also have legal implications in regards to the existing access easement granted to the adjacent property owner.

Dual Signals

The dual signals would involve installing signals at the driveway and at SW Seneca Street on SW Martinazzi Avenue. These signals will work as one signal; however, coordination with the other signals on SW Martinazzi Avenue will be challenging. This alternative performs second-best from a traffic operations perspective, but it does not perform as well as the SW Seneca Street full build-out option. This option will not add bike lanes or sidewalks to the downtown core.

RECOMMENDATION:

Staff respectfully recommends to Council to consider the traffic analysis presented and provide further direction on their preferred alternative.

Attachments: A. Seneca Street Analysis
B. PowerPoint



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Memorandum

Date: December 31, 2013
To: Kaaren Hofmann/City of Tualatin
From: Carl Springer, PE, Tegan Enloe, PE and Courtney Furman
Subject: Nyberg River TIA: Alternative SW Martinazzi Ave Options

P#12163-000

The Nyberg Rivers Development in Tualatin, Oregon, is expected to generate an increase in traffic along the perimeter roads of SW Martinazzi Avenue and SW Nyberg Road. These increases impact future operations and roadway improvements outlined in the City's Transportation System Plan. Eight different alternatives under consideration for SW Martinazzi Avenue were analyzed to better understand how these impacts might be mitigated. These alternatives include:

- Re-align Opposite to Seneca St, New Signal
- Close at Martinazzi – Install Southbound Left (SBL) at Nyberg
- Close at Property Line – Install SBL at Nyberg
- Prohibit Left-turn Egress
- Right in, Right out at City Driveway – Install SBL at Nyberg
- Install Two Traffic Signals
- Existing Configuration
- Seneca St Full Build, New Signal

Figure 1 identifies the intersections reviewed as part of this study. Operational results are summarized in Table 1. The study intersection numbering convention is based off the April 2013 Traffic Impact Analysis submitted for Nyberg Rivers.

Review of the eight scenarios shows all but two alternatives are able to meet minimum operating standards within the City of Tualatin. These two, "Right in, Right out at City Driveway -Install SBL at Nyberg" and "Existing Configuration", fail to meet at the intersection of SW Boones Ferry Rd/SW Martinazzi Avenue and SW Martinazzi Avenue/City Access Driveway, respectively.

The "Seneca St Full Build, New Signal" or "Install Two Traffic Signals" alternatives represent the best mitigation options for the following key reasons:

- Meets required operational standards
- Provide a signalized crossing for pedestrian traffic at Seneca St.
- Does not have any legal impacts associated with adjacent property's easement

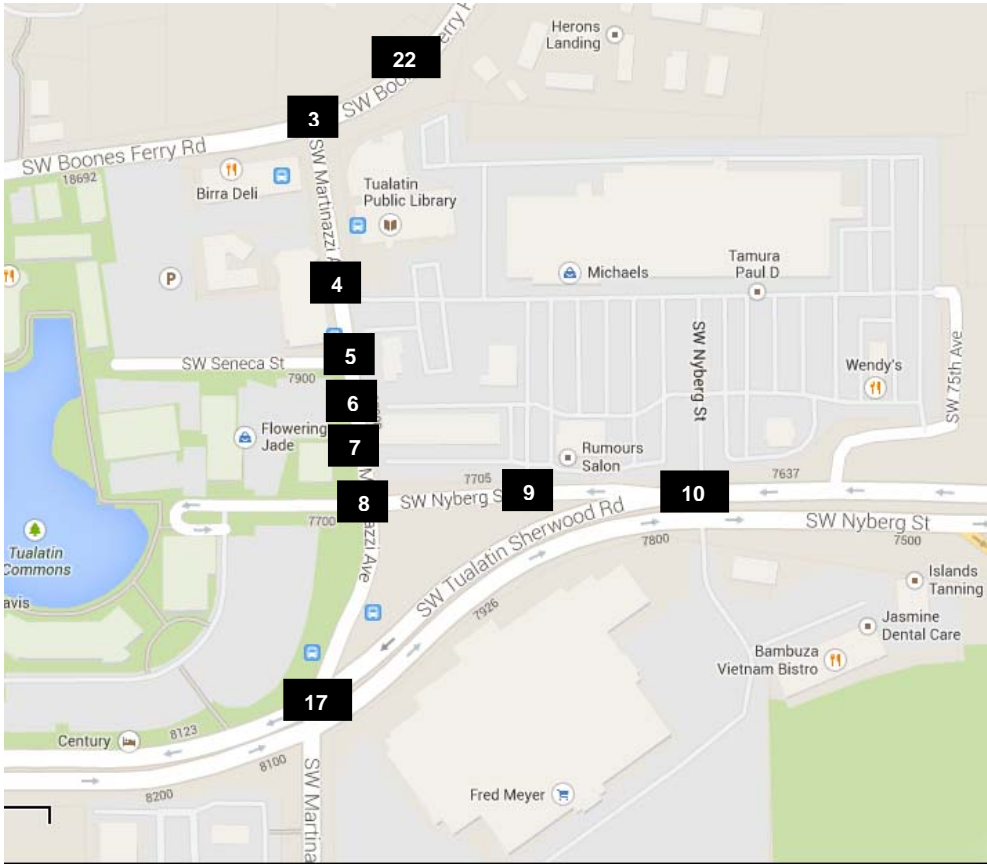


Figure 1: Study Area Intersections

The intersection numbers are from the original 2013 TIA.

Table 1: Performance Results of Alternatives To City Hall Driveway Connection To SW Martinazzi Avenue (Level of Service / Volume to Capacity Ratio) for the PM Peak Hour

Intersection No. / Street Names	Minimum Operating Standard	Re-align Opposite to Seneca St., New Signal (Option B3)	Close at Martinazzi – install SBL at Nyberg (Option B1a)	Close at Property Line - install SBL at Nyberg (Option B1b)	Prohibit Left-turn egress (Option B4b)	Right in, Right out at City Driveway -install SBL at Nyberg (Option B4a)	Install Two Traffic Signals (Option B7)	Seneca St full build, New Signal (April 2013 TIA)	Existing Configuration (April 2013 TIA volumes, DKS Analysis)
3 SW Boones Ferry Rd/ SW Martinazzi Ave	0.99	D / 0.99	D/ 0.99	D / 0.96	D / 0.95	D / 1.00	D / 0.97	D / 0.96	D / 0.96
4 SW Martinazzi Ave/ City Access Driveway	E	-	-	C / 0.34	C / 0.38	C / 0.38	C / 0.74	N/A	F / 0.80 ¹
5 SW Martinazzi Ave/ SW Seneca St	E	A / 0.54	C / 0.37	C / 0.36	C / 0.33	C / 0.36	C / 0.68	B / 0.68	E / 0.54
8 SW Nyberg Rd/ SW Martinazzi Ave	0.99	C / 0.69	D / 0.86	E / 0.88	C / 0.69	D / 0.84	C / 0.69	B / 0.49	B / 0.49
9 SW Nyberg Rd/ Site Driveway 3	E	B / 0.18	B / 0.40	B / 0.25	B / 0.28	B / 0.21	B / 0.18	B / 0.19	B / 0.19
10 SW Tualatin-Sherwood Rd/Site Driveway 4	0.99	C / 0.87	C / 0.87	C / 0.87	C / 0.87	C / 0.87	C / 0.87	C / 0.83	C / 0.83
17 SW Tualatin-Sherwood Rd/ SW Martinazzi Ave	0.99	D / 0.97	D / 0.99	D / 0.98	D / 0.97	D / 0.97	D / 0.97	D / 0.89	D / 0.89
22 SW Boones Ferry Rd/ Street "A"	E	C / 0.05	D / 0.35	C / 0.09	C / 0.05	C / 0.03	C / 0.05	D / 0.23	D / 0.23

Notes:

Bolded and shaded values exceed the minimum operating standard

¹ Values provided in the April 2013 TIA assumed a two-stage crossing. The values displayed in this table assuming a one-stage crossing.

Table 2: Operational Results, Trade-offs and Preliminary Costs

Driveway Access Option	Pros	Cons	Preliminary Cost Estimate
Re-align Driveway Opposite to Seneca St., Install New Traffic Signal	<p>General</p> <ul style="list-style-type: none"> Provides access to development from Martinazzi Ave, and removes need for as many trips to access via Nyberg St. Meets minimum operating standards 	<ul style="list-style-type: none"> Skew angle of sides streets limits safe sight distance May be difficult to coordinate signal operations with adjoining signals Loss of existing parking (approx. 5 spaces) 	\$850,000
	<p>Pedestrian</p> <ul style="list-style-type: none"> Creates a signalized crossing to support pedestrian movements between Boones Ferry Rd and Nyberg St. Provides shorter crossing distance for pedestrians between City parking lots 		
Close at Martinazzi – install SBL at Nyberg	<p>General</p> <ul style="list-style-type: none"> Meets minimum operating standards 	<ul style="list-style-type: none"> No direct access to City buildings; trips are required to traverse through development parking lot. Legal considerations associated with adjacent property’s easement. 	\$35,000
	<p>Pedestrian</p> <ul style="list-style-type: none"> Reduces conflicts for pedestrians crossing City Driveway 	<ul style="list-style-type: none"> No pedestrian signal for crossing SW Martinazzi 	
Close at Nyberg Rivers – install SBL at Nyberg	<p>General</p> <ul style="list-style-type: none"> Provides direct access to City buildings for trips destined there. Meets minimum operating standards 	<ul style="list-style-type: none"> Legal considerations associated with adjacent property’s easement. Poor circulation Less customer friendly design 	\$35,000
	<p>Pedestrian</p>	<ul style="list-style-type: none"> Does not provide controlled pedestrian crossing near Seneca St 	

Prohibit Left-turn egress	<p>General</p> <ul style="list-style-type: none"> Provides direct access to City buildings for trips destined there. Provides access to development from Martinazzi Ave, and removes need for as many trips to access via Nyberg St. Meets minimum operating standards 	<ul style="list-style-type: none"> Does not provide safe pedestrian crossing near Seneca Poor circulation Legal considerations associated with adjacent property's easement. 	\$5,000
	<p>Pedestrian</p>	<ul style="list-style-type: none"> Does not provide controlled pedestrian crossing near Seneca St 	
Right in, Right out at City Driveway -install SBL at Nyberg	<p>General</p> <ul style="list-style-type: none"> Provides direct access to City buildings for trips destined there. Provides access to development from Martinazzi Ave. 	<ul style="list-style-type: none"> Minimal southbound left turn access to site from Martinazzi Ave. Does not separate City traffic from site traffic in parking lot. Does not meet operating standards at SW Boones Ferry Rd / SW Martinazzi Ave. Legal considerations associated with adjacent property's easement. 	\$30,000
	<p>Pedestrian</p>	<ul style="list-style-type: none"> Does not provide controlled pedestrian crossing near Seneca St 	
Install Two Traffic Signals	<p>General</p> <ul style="list-style-type: none"> Provides access to development from Martinazzi Ave, and removes need for as many trips to access via Nyberg St. 	<ul style="list-style-type: none"> May be difficult to coordinate signals on Martinazzi Ave, which is ideal for closely placed signals such as this. Cost 	\$550,000
	<p>Pedestrian</p>	<ul style="list-style-type: none"> Adds a signalized pedestrian crossing between Boones Ferry Rd and Nyberg St. Provides shorter crossing distance 	
Seneca St full build, New	<p>General</p>	<ul style="list-style-type: none"> May be difficult to coordinate signal 	\$1,050,000

Signal (April 2013 TIA)	<ul style="list-style-type: none"> Provides access to development from Martinazzi Ave. Meets operating standards 	<ul style="list-style-type: none"> operations with adjoining signals Cost 	
<hr/>			
Pedestrian			
<ul style="list-style-type: none"> Adds controlled pedestrian crossing to Martinazzi Avenue 			
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Existing Configuration (April 2013 TIA)	General	<ul style="list-style-type: none"> Does not meet operating standards at SW Martinazzi Ave / City Driveway 	N/A
<hr/>			
<ul style="list-style-type: none"> Provides access 			
Pedestrian			
<ul style="list-style-type: none"> Does not provide controlled pedestrian crossing near Seneca St 			

Appendix

Narrower Seneca Street with Signal

Close Driveway at Martinazzi Avenue

Close Driveway at Property Line

Prohit Left Turn Egress

Right In/Right Out

Dual Signals

Full Seneca Street from Kittelson's TIA

Narrower Seneca Street with Signal

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Rd



















12/16/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	675	185	440	930	335	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1571
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1571
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	195	463	979	353	426
RTOR Reduction (vph)	0	64	0	0	0	34
Lane Group Flow (vph)	711	131	463	979	353	392
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	NA	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	42.3	42.3	32.2	79.5	24.1	56.3
Effective Green, g (s)	42.8	42.8	32.7	80.0	24.6	57.3
Actuated g/C Ratio	0.38	0.38	0.29	0.70	0.22	0.50
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	701	602	514	1299	383	854
v/s Ratio Prot	c0.38	0.08	c0.26	0.53	c0.20	0.13
v/s Ratio Perm						0.12
v/c Ratio	1.01	0.22	0.90	0.75	0.92	0.46
Uniform Delay, d1	35.4	24.0	38.9	10.6	43.6	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.6	0.2	18.8	2.5	27.2	0.4
Delay (s)	73.0	24.2	57.7	13.1	70.8	18.5
Level of Service	E	C	E	B	E	B
Approach Delay (s)	62.5			27.4	42.2	
Approach LOS	E			C	D	
Intersection Summary						
HCM 2000 Control Delay			41.3		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.95			
Actuated Cycle Length (s)			113.6		Sum of lost time (s)	13.5
Intersection Capacity Utilization			89.7%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

5: Martinazzi Ave & Seneca St

12/19/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	0	80	50	0	155	85	545	90	190	385	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.91			0.90		1.00	0.98		1.00	0.98	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1665			1652		1800	1839		1770	1829	
Flt Permitted		0.84			0.92		0.46	1.00		0.30	1.00	
Satd. Flow (perm)		1419			1531		863	1839		562	1829	
Peak-hour factor, PHF	0.91	0.92	0.91	0.92	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91
Adj. Flow (vph)	44	0	88	54	0	168	93	599	98	207	423	55
RTOR Reduction (vph)	0	71	0	0	135	0	0	10	0	0	8	0
Lane Group Flow (vph)	0	61	0	0	87	0	93	687	0	207	470	0
Confl. Peds. (#/hr)	26		16				5					5
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	1%	2%	2%	2%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.4			6.4		21.0	21.0		21.0	21.0	
Effective Green, g (s)		6.9			6.9		21.5	21.5		21.5	21.5	
Actuated g/C Ratio		0.19			0.19		0.61	0.61		0.61	0.61	
Clearance Time (s)		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	
Lane Grp Cap (vph)		276			298		524	1116		341	1110	
v/s Ratio Prot								c0.37			0.26	
v/s Ratio Perm		0.04			c0.06		0.11			0.37		
v/c Ratio		0.22			0.29		0.18	0.62		0.61	0.42	
Uniform Delay, d1		12.0			12.2		3.1	4.4		4.3	3.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			0.5		0.2	1.0		3.0	0.3	
Delay (s)		12.4			12.7		3.2	5.4		7.4	3.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		12.4			12.7			5.1			5.0	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			6.5				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			35.4				Sum of lost time (s)			7.0		
Intersection Capacity Utilization			69.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Intersection Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	5	30	685	5	10	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	33	745	5	11	549

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1043	747	0
Stage 1	747	-	-
Stage 2	296	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	239	412	-
Stage 1	467	-	-
Stage 2	729	-	-
Time blocked-Platoon, %			
Mov Capacity-1 Maneuver	235	412	-
Mov Capacity-2 Maneuver	235	-	-
Stage 1	467	-	-
Stage 2	716	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0.3
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	859	-
HCM Lane V/C Ratio	-	-	0.102	0.013	-
HCM Control Delay (s)	-	-	15.8	9.245	0.1
HCM Lane LOS			C	A	A
HCM 95th %tile Q(veh)	-	-	0.339	0.038	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	680	0	0	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	739	0	0	549

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1013	739	0
Stage 1	739	-	-
Stage 2	274	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	250	416	-
Stage 1	471	-	-
Stage 2	748	-	-
Time blocked-Platoon, %			
Mov Capacity-1 Maneuver	250	416	-
Mov Capacity-2 Maneuver	250	-	-
Stage 1	471	-	-
Stage 2	748	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	867	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	13.9	0	-
HCM Lane LOS			B	A	
HCM 95th %tile Q(veh)	-	-	0.08	0	-























Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis

8: Martinazzi Ave & Nyberg St

12/16/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	30	10	100	355	55	335	25	315	25	0	495	10	
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			4.0		
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95		
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00			1.00		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00		
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.99			1.00		
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00		
Satd. Flow (prot)	1805	1626		1698	1728	1526	1679	1855			3562		
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.44	1.00			1.00		
Satd. Flow (perm)	1805	1626		1698	1728	1526	785	1855			3562		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	33	11	110	390	60	368	27	346	27	0	544	11	
RTOR Reduction (vph)	0	101	0	0	0	292	0	3	0	0	2	0	
Lane Group Flow (vph)	33	20	0	222	228	76	27	370	0	0	553	0	
Confl. Peds. (#/hr)	10					10	6		19	19		6	
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%	
Turn Type	Split	NA		Split	NA	Perm	Perm	NA			NA		
Protected Phases	8	8		4	4			6			2		
Permitted Phases						4	6						
Actuated Green, G (s)	4.6	4.6		11.9	11.9	11.9	12.1	12.1			13.6		
Effective Green, g (s)	5.1	5.1		12.4	12.4	12.4	12.6	12.6			14.1		
Actuated g/C Ratio	0.08	0.08		0.21	0.21	0.21	0.21	0.21			0.23		
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5			4.5		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0			5.0		
Lane Grp Cap (vph)	152	137		349	355	314	164	388			834		
v/s Ratio Prot	c0.02	0.01		0.13	c0.13			c0.20			c0.16		
v/s Ratio Perm						0.05	0.03						
v/c Ratio	0.22	0.15		0.64	0.64	0.24	0.16	0.95			0.66		
Uniform Delay, d1	25.7	25.5		21.8	21.9	20.0	19.5	23.5			20.9		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00		
Incremental Delay, d2	0.5	0.4		3.3	3.5	0.3	1.0	34.2			2.6		
Delay (s)	26.2	25.9		25.1	25.4	20.3	20.5	57.7			23.5		
Level of Service	C	C		C	C	C	C	E			C		
Approach Delay (s)		26.0			23.0			55.2			23.5		
Approach LOS		C			C			E			C		
Intersection Summary													
HCM 2000 Control Delay			30.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			60.2									Sum of lost time (s)	16.0
Intersection Capacity Utilization			56.7%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

Intersection

Intersection Delay, s/veh 1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	35	0	650	50	0	95
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	40	0	739	57	0	108

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	403
Stage 1	-	-	-
Stage 2	-	-	0
Follow-up Headway	2.2	-	3.3
Pot Capacity-1 Maneuver	835	-	603
Stage 1	-	-	424
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	832	-	600
Mov Capacity-2 Maneuver	-	-	327
Stage 1	-	-	424
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.5	0	12.3
HCM LOS			B





























Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.048	-	-	-	0.18
HCM Control Delay (s)	9.544	-	-	-	12.3
HCM Lane LOS	A				B
HCM 95th %tile Q(veh)	0.15	-	-	-	0.651

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis
 10: Tualatin Sherwood Rd & Site Driveway 4

























12/16/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  					 		
Volume (vph)	100	1900	40	230	1695	215	35	10	235	325	25	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0	
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1627	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1627	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	1939	41	235	1730	219	36	10	240	332	26	112
RTOR Reduction (vph)	0	1	0	0	0	107	0	0	0	0	97	0
Lane Group Flow (vph)	102	1979	0	235	1730	112	0	46	240	332	41	0
Confl. Peds. (#/hr)			2			8						15
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	18	4	4	
Permitted Phases						6						
Actuated Green, G (s)	14.0	61.2		16.0	63.2	63.2		8.6	24.6	16.7	16.7	
Effective Green, g (s)	14.5	61.7		16.5	63.7	63.7		9.1	25.6	17.2	17.2	
Actuated g/C Ratio	0.12	0.49		0.13	0.51	0.51		0.07	0.20	0.14	0.14	
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5	
Lane Grp Cap (vph)	209	2023		462	2541	787		130	327	481	223	
v/s Ratio Prot	0.06	c0.48		0.07	0.35			0.03	c0.15	c0.09	0.03	
v/s Ratio Perm						0.07						
v/c Ratio	0.49	0.98		0.51	0.68	0.14		0.35	0.73	0.69	0.19	
Uniform Delay, d1	51.8	31.0		50.5	23.0	16.2		55.2	46.5	51.4	47.7	
Progression Factor	0.88	0.54		1.04	0.86	1.08		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	9.3		0.4	1.0	0.2		1.2	7.8	3.9	0.3	
Delay (s)	46.4	25.9		53.0	20.7	17.7		56.4	54.3	55.3	48.0	
Level of Service	D	C		D	C	B		E	D	E	D	
Approach Delay (s)		26.9			23.9			54.7			53.1	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)		20.5			
Intersection Capacity Utilization			81.4%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/16/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	55	1515	85	0	1145	0	95	310	335	195	665	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3496	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3496	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	1612	90	0	1218	0	101	330	356	207	707	96
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	98	0	10	0
Lane Group Flow (vph)	59	1699	0	0	1218	0	101	330	258	207	793	0
Confl. Peds. (#/hr)			4			2			3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	65.4			53.2		9.9	24.0	24.0	18.6	32.7	
Effective Green, g (s)	7.7	65.9			53.7		10.4	24.5	24.5	19.1	33.2	
Actuated g/C Ratio	0.06	0.53			0.43		0.08	0.20	0.20	0.15	0.27	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1817			1476		147	365	308	273	928	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.18		0.12	c0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.56	0.94			0.83		0.69	0.90	0.84	0.76	0.86	
Uniform Delay, d1	57.0	27.6			31.5		55.7	49.1	48.3	50.7	43.6	
Progression Factor	1.21	0.74			1.09		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	8.4			4.3		12.5	24.4	17.0	11.4	7.5	
Delay (s)	72.3	28.9			38.6		68.3	73.5	65.3	62.2	51.1	
Level of Service	E	C			D		E	E	E	E	D	
Approach Delay (s)		30.3			38.6			69.1			53.4	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			43.7				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			125.0			Sum of lost time (s)			20.0			
Intersection Capacity Utilization			89.7%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Intersection Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1075	10	0	1375	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1168	11	0	1495	0	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1179
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.218
Pot Capacity-1 Maneuver	-	-	592
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	592
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	21.2
HCM LOS			C

Minor Lane / Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	233	-	-	592	-
HCM Lane V/C Ratio	0.047	-	-	-	-
HCM Control Delay (s)	21.2	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.146	-	-	0	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Close Driveway at Martinazzi Avenue

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Road

12/20/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	740	125	420	930	355	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	779	132	442	979	374	347
RTOR Reduction (vph)	0	42	0	0	0	52
Lane Group Flow (vph)	779	90	442	979	374	295
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	Prot	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	50.4	50.4	29.0	84.4	25.0	54.0
Effective Green, g (s)	50.9	50.9	29.5	84.9	25.5	55.0
Actuated g/C Ratio	0.43	0.43	0.25	0.71	0.21	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	794	681	441	1311	378	781
v/s Ratio Prot	c0.42	0.06	c0.25	0.53	c0.21	0.09
v/s Ratio Perm						0.09
v/c Ratio	0.98	0.13	1.00	0.75	0.99	0.38
Uniform Delay, d1	33.8	20.8	45.0	10.6	46.8	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.2	0.1	43.4	2.4	43.0	0.3
Delay (s)	60.9	20.9	88.4	13.0	89.8	21.3
Level of Service	E	C	F	B	F	C
Approach Delay (s)	55.1			36.4	56.8	
Approach LOS	E			D	E	
Intersection Summary						
HCM 2000 Control Delay			46.8		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.99			
Actuated Cycle Length (s)			119.4		Sum of lost time (s)	13.5
Intersection Capacity Utilization			93.1%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	80	85	640	495	50
Conflicting Peds, #/hr	26	16	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	44	88	93	703	544	55

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1487	602	625
Stage 1	597	-	-
Stage 2	890	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	138	503	966
Stage 1	554	-	-
Stage 2	404	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	111	490	962
Mov Cap-2 Maneuver	235	-	-
Stage 1	542	-	-
Stage 2	332	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.7	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	962	-	360	-	-
HCM Lane V/C Ratio	0.097	-	0.366	-	-
HCM Control Delay (s)	9.1	0	20.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.6	-	-

Intersection

Int Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	20	45	675	20	40	535
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	49	734	22	43	582

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1123	745	0 0 755 0
Stage 1	745	-	- - - -
Stage 2	378	-	- - - -
Critical Hdwy	6.63	6.23	- - 4.12 -
Critical Hdwy Stg 1	5.43	-	- - - -
Critical Hdwy Stg 2	5.83	-	- - - -
Follow-up Hdwy	3.519	3.319	- - 2.218 -
Pot Cap-1 Maneuver	213	413	- - 855 -
Stage 1	468	-	- - - -
Stage 2	663	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	197	413	- - 855 -
Mov Cap-2 Maneuver	197	-	- - - -
Stage 1	468	-	- - - -
Stage 2	614	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	20.1	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	309	855	-
HCM Lane V/C Ratio	-	-	0.229	0.051	-
HCM Control Delay (s)	-	-	20.1	9.4	0.3
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0.2	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	680	0	0	555
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	739	0	0	603

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1041	739	0
Stage 1	739	-	-
Stage 2	302	-	-
Critical Hdwy	6.63	6.23	4.12
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.83	-	-
Follow-up Hdwy	3.519	3.319	2.218
Pot Cap-1 Maneuver	240	416	867
Stage 1	471	-	-
Stage 2	724	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	240	416	867
Mov Cap-2 Maneuver	240	-	-
Stage 1	471	-	-
Stage 2	724	-	-






















Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	867	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	13.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM Signalized Intersection Capacity Analysis

8: Nyberg St & Martinazzi Ave

12/20/2013

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Volume (vph)	30	10	100	390	55	415	25	240	115	35	515	10		
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			4.0			
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95			
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	0.98			1.00			
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.95			1.00			
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00			
Satd. Flow (prot)	1805	1626		1698	1726	1522	1679	1762			3555			
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.42	1.00			0.60			
Satd. Flow (perm)	1805	1626		1698	1726	1522	740	1762			2155			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
Adj. Flow (vph)	33	11	110	429	60	456	27	264	126	38	566	11		
RTOR Reduction (vph)	0	102	0	0	0	363	0	20	0	0	1	0		
Lane Group Flow (vph)	33	19	0	245	244	93	27	370	0	0	614	0		
Confl. Peds. (#/hr)	10					10	6		19	19		6		
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%		
Turn Type	Split	NA		Split	NA	Perm	Perm	NA		Perm	NA			
Protected Phases	8	8		4	4			6				2		
Permitted Phases						4	6			2				
Actuated Green, G (s)	4.6	4.6		13.5	13.5	13.5	11.8	11.8			21.1			
Effective Green, g (s)	5.1	5.1		14.0	14.0	14.0	12.3	12.3			21.6			
Actuated g/C Ratio	0.07	0.07		0.20	0.20	0.20	0.18	0.18			0.31			
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5			4.5			
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0			5.0			
Lane Grp Cap (vph)	133	120		344	350	308	131	314			674			
v/s Ratio Prot	c0.02	0.01		c0.14	0.14			c0.21						
v/s Ratio Perm						0.06	0.04				c0.28			
v/c Ratio	0.25	0.16		0.71	0.70	0.30	0.21	1.18			0.91			
Uniform Delay, d1	30.1	29.9		25.6	25.5	23.3	24.2	28.4			22.8			
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Incremental Delay, d2	0.7	0.5		6.4	5.5	0.4	1.6	108.7			17.3			
Delay (s)	30.9	30.4		32.0	31.0	23.7	25.8	137.0			40.1			
Level of Service	C	C		C	C	C	C	F			D			
Approach Delay (s)		30.5			27.8			129.8			40.1			
Approach LOS		C			C			F			D			
Intersection Summary														
HCM 2000 Control Delay			51.5									HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio			0.86											
Actuated Cycle Length (s)			69.0								16.0		Sum of lost time (s)	
Intersection Capacity Utilization			64.8%										ICU Level of Service	C
Analysis Period (min)			15											
c Critical Lane Group														

Intersection

Int Delay, s/veh 4.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	135	0	650	50	0	210
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	153	0	739	57	0	239

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	767
Stage 1	-	-	767
Stage 2	-	-	0
Critical Hdwy	4.1	-	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	835	-	343
Stage 1	-	-	424
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	832	-	280
Mov Cap-2 Maneuver	-	-	280
Stage 1	-	-	424
Stage 2	-	-	-





























Approach	EB	WB	SB
HCM Control Delay, s	10.3	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.184	-	-	-	0.398
HCM Control Delay (s)	10.3	-	-	-	14.9
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.9

HCM Signalized Intersection Capacity Analysis

10: Tualatin Sherwood Rd & Site Driveway 4

























12/20/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		 	  					 			
Volume (vph)	160	1900	40	230	1695	215	35	10	235	325	25	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0		
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00		
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.86		
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1596		
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1596		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	163	1939	41	235	1730	219	36	10	240	332	26	250	
RTOR Reduction (vph)	0	1	0	0	0	107	0	0	0	0	216	0	
Lane Group Flow (vph)	163	1979	0	235	1730	112	0	46	240	332	60	0	
Confl. Peds. (#/hr)			2			8						15	
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%	
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA		
Protected Phases	5	2		1	6		8	8	18	4	4		
Permitted Phases						6							
Actuated Green, G (s)	13.7	61.5		15.7	63.5	63.5		8.6	24.3	16.7	16.7		
Effective Green, g (s)	14.2	62.0		16.2	64.0	64.0		9.1	25.3	17.2	17.2		
Actuated g/C Ratio	0.11	0.50		0.13	0.51	0.51		0.07	0.20	0.14	0.14		
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5		
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5		
Lane Grp Cap (vph)	205	2033		453	2553	791		130	323	481	219		
v/s Ratio Prot	0.09	c0.48		0.07	0.35			0.03	c0.15	c0.09	0.04		
v/s Ratio Perm						0.07							
v/c Ratio	0.80	0.97		0.52	0.68	0.14		0.35	0.74	0.69	0.28		
Uniform Delay, d1	54.0	30.7		50.8	22.8	16.0		55.2	46.8	51.4	48.3		
Progression Factor	0.88	0.53		1.04	0.86	1.07		1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.2	7.2		0.5	1.0	0.2		1.2	8.5	3.9	0.5		
Delay (s)	54.6	23.4		53.4	20.5	17.5		56.4	55.3	55.3	48.8		
Level of Service	D	C		D	C	B		E	E	E	D		
Approach Delay (s)		25.8			23.8			55.4			52.3		
Approach LOS		C			C			E			D		
Intersection Summary													
HCM 2000 Control Delay			29.7									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			125.0									Sum of lost time (s)	20.5
Intersection Capacity Utilization			86.6%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/20/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	50	1515	85	0	1145	0	95	325	335	260	655	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3491	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3491	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1612	90	0	1218	0	101	346	356	277	697	101
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	97	0	10	0
Lane Group Flow (vph)	53	1699	0	0	1218	0	101	346	259	277	788	0
Confl. Peds. (#/hr)			4				2		3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	61.4			49.2		9.9	24.7	24.7	21.9	36.7	
Effective Green, g (s)	7.7	61.9			49.7		10.4	25.2	25.2	22.4	37.2	
Actuated g/C Ratio	0.06	0.50			0.40		0.08	0.20	0.20	0.18	0.30	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1706			1366		147	375	317	320	1038	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.19		c0.15	0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.50	1.00			0.89		0.69	0.92	0.82	0.87	0.76	
Uniform Delay, d1	56.8	31.4			35.1		55.7	48.9	47.7	49.8	39.8	
Progression Factor	1.17	0.78			1.03		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	18.0			7.2		12.5	27.4	14.1	20.9	2.9	
Delay (s)	67.4	42.4			43.4		68.3	76.4	61.8	70.7	42.7	
Level of Service	E	D			D		E	E	E	E	D	
Approach Delay (s)		43.2			43.4			68.9			49.9	
Approach LOS		D			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			49.0				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			93.3%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Int Delay, s/veh 0.9

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1000	75	0	1355	0	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1087	82	0	1473	0	87

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1168
Stage 1	-	-	1128
Stage 2	-	-	736
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.43
Critical Hdwy Stg 2	-	-	5.83
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	598
Stage 1	-	-	308
Stage 2	-	-	436
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	598
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	196
Stage 2	-	-	308
Stage 2	-	-	436

Approach	EB	WB	NW
HCM Control Delay, s	0	0	27.2
HCM LOS			D

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	-	-	598	-
HCM Lane V/C Ratio	0.351	-	-	-	-
HCM Control Delay (s)	27.2	-	-	0	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	1.5	-	-	0	-

Close Driveway at Property Line

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Rd

12/19/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	700	165	420	930	340	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1569
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1569
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	737	174	442	979	358	405
RTOR Reduction (vph)	0	59	0	0	0	55
Lane Group Flow (vph)	737	115	442	979	358	350
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	NA	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	47.3	47.3	29.8	82.1	24.4	54.2
Effective Green, g (s)	47.8	47.8	30.3	82.6	24.9	55.2
Actuated g/C Ratio	0.41	0.41	0.26	0.71	0.21	0.47
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	764	656	464	1308	378	804
v/s Ratio Prot	c0.40	0.07	c0.25	0.53	c0.20	0.11
v/s Ratio Perm						0.11
v/c Ratio	0.96	0.18	0.95	0.75	0.95	0.44
Uniform Delay, d1	33.5	21.8	42.4	10.5	45.2	20.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.0	0.1	29.9	2.4	32.6	0.4
Delay (s)	57.5	22.0	72.3	12.9	77.7	20.7
Level of Service	E	C	E	B	E	C
Approach Delay (s)	50.7			31.4	47.4	
Approach LOS	D			C	D	
Intersection Summary						
HCM 2000 Control Delay			41.0		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.96			
Actuated Cycle Length (s)			116.5		Sum of lost time (s)	13.5
Intersection Capacity Utilization			90.2%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Intersection

Intersection Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	100	625	25	60	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	109	679	27	65	571

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1394	693	0
Stage 1	693	-	-
Stage 2	701	-	-
Follow-up Headway	3.518	3.318	-
Pot Capacity-1 Maneuver	156	443	-
Stage 1	496	-	-
Stage 2	492	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	139	443	-
Mov Capacity-2 Maneuver	276	-	-
Stage 1	496	-	-
Stage 2	439	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.8	0	1
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	891	-
HCM Lane V/C Ratio	-	-	0.344	0.073	-
HCM Control Delay (s)	-	-	18.8	9.359	0
HCM Lane LOS			C	A	A
HCM 95th %tile Q(veh)	-	-	1.503	0.236	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	80	85	610	500	50
Conflicting Peds, #/hr	26	16	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	44	88	93	670	549	55

Major/Minor	Minor2	Major1			Major2	
Conflicting Flow All	1460	608	630	0	-	0
Stage 1	603	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Follow-up Headway	3.5	3.3	2.2	-	-	-
Pot Capacity-1 Maneuver	144	499	962	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	116	486	958	-	-	-
Mov Capacity-2 Maneuver	242	-	-	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	346	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.4	1.1	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	958	-	364	-	-
HCM Lane V/C Ratio	0.098	-	0.362	-	-
HCM Control Delay (s)	9.163	0	20.4	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.323	-	1.614	-	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	55	635	20	25	555
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	60	690	22	27	603

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1057	701	0
Stage 1	701	-	-
Stage 2	356	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	234	438	-
Stage 1	491	-	-
Stage 2	681	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	223	438	-
Mov Capacity-2 Maneuver	223	-	-
Stage 1	491	-	-
Stage 2	650	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.4	0	0.6
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	337	888	-
HCM Lane V/C Ratio	-	-	0.258	0.031	-
HCM Control Delay (s)	-	-	19.4	9.182	0.2
HCM Lane LOS			C	A	A
HCM 95th %tile Q(veh)	-	-	1.011	0.095	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	645	0	0	575
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	701	0	0	625

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1014	701	0
Stage 1	701	-	-
Stage 2	313	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	249	438	-
Stage 1	491	-	-
Stage 2	715	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	249	438	-
Mov Capacity-2 Maneuver	249	-	-
Stage 1	491	-	-
Stage 2	715	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	438	896	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s)	-	-	13.4	0	-
HCM Lane LOS			B	A	
HCM 95th %tile Q(veh)	-	-	0.076	0	-






















Notes

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HCM Signalized Intersection Capacity Analysis

8: Martinazzi Ave & Nyberg St

12/19/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	30	10	100	375	55	345	25	270	90	40	525	10	
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			4.0		
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95		
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	0.99			1.00		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00		
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.96			1.00		
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00		
Satd. Flow (prot)	1805	1626		1698	1727	1522	1679	1789			3554		
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.41	1.00			0.59		
Satd. Flow (perm)	1805	1626		1698	1727	1522	728	1789			2093		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	33	11	110	412	60	379	27	297	99	44	577	11	
RTOR Reduction (vph)	0	102	0	0	0	305	0	14	0	0	1	0	
Lane Group Flow (vph)	33	19	0	235	237	74	27	382	0	0	631	0	
Confl. Peds. (#/hr)	10					10	6		19	19		6	
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%	
Turn Type	Split	NA		Split	NA	Perm	Perm	NA		Perm	NA		
Protected Phases	8	8		4	4			6				2	
Permitted Phases						4	6			2			
Actuated Green, G (s)	4.6	4.6		12.9	12.9	12.9	11.8	11.8				21.0	
Effective Green, g (s)	5.1	5.1		13.4	13.4	13.4	12.3	12.3				21.5	
Actuated g/C Ratio	0.07	0.07		0.20	0.20	0.20	0.18	0.18				0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5				4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0				5.0	
Lane Grp Cap (vph)	134	121		333	338	298	131	322				658	
v/s Ratio Prot	c0.02	0.01		c0.14	0.14			c0.21					
v/s Ratio Perm						0.05	0.04					c0.30	
v/c Ratio	0.25	0.16		0.71	0.70	0.25	0.21	1.19				0.96	
Uniform Delay, d1	29.8	29.6		25.6	25.6	23.2	23.8	28.0				23.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00				1.00	
Incremental Delay, d2	0.7	0.4		6.2	6.0	0.3	1.6	110.9				25.4	
Delay (s)	30.5	30.0		31.8	31.6	23.5	25.5	138.9				48.4	
Level of Service	C	C		C	C	C	C	F				D	
Approach Delay (s)		30.1			28.0			131.6				48.4	
Approach LOS		C			C			F				D	
Intersection Summary													
HCM 2000 Control Delay			55.7									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			68.3									Sum of lost time (s)	16.0
Intersection Capacity Utilization			64.6%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Intersection

Intersection Delay, s/veh 3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	140	0	650	50	0	130
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	159	0	739	57	0	148

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	403
Stage 1	-	-	-
Stage 2	-	-	0
Follow-up Headway	2.2	-	3.3
Pot Capacity-1 Maneuver	835	-	603
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	832	-	600
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	10.3	0	12.9
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.191	-	-	-	0.246
HCM Control Delay (s)	10.347	-	-	-	12.9
HCM Lane LOS	B				B
HCM 95th %tile Q(veh)	0.703	-	-	-	0.963























Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis

10: Tualatin Sherwood Rd & Site Driveway 4

























12/19/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	135	1900	40	230	1695	215	35	10	235	320	25	110	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0		
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00		
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.88		
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	138	1939	41	235	1730	219	36	10	240	327	26	112	
RTOR Reduction (vph)	0	1	0	0	0	107	0	0	0	0	97	0	
Lane Group Flow (vph)	138	1979	0	235	1730	112	0	46	240	327	41	0	
Confl. Peds. (#/hr)			2			8						15	
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%	
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA		
Protected Phases	5	2		1	6		8	8	18	4	4		
Permitted Phases						6							
Actuated Green, G (s)	13.9	61.4		15.9	63.4	63.4		8.6	24.5	16.6	16.6		
Effective Green, g (s)	14.4	61.9		16.4	63.9	63.9		9.1	25.5	17.1	17.1		
Actuated g/C Ratio	0.12	0.50		0.13	0.51	0.51		0.07	0.20	0.14	0.14		
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5		
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5		
Lane Grp Cap (vph)	207	2030		459	2549	789		130	326	479	222		
v/s Ratio Prot	0.08	c0.48		0.07	0.35			0.03	c0.15	c0.09	0.03		
v/s Ratio Perm						0.07							
v/c Ratio	0.67	0.97		0.51	0.68	0.14		0.35	0.74	0.68	0.19		
Uniform Delay, d1	53.0	30.8		50.6	22.9	16.1		55.2	46.6	51.4	47.8		
Progression Factor	0.87	0.53		1.04	0.86	1.08		1.00	1.00	1.00	1.00		
Incremental Delay, d2	2.9	8.0		0.5	1.0	0.2		1.2	7.9	3.7	0.3		
Delay (s)	49.2	24.4		53.2	20.6	17.6		56.4	54.5	55.0	48.1		
Level of Service	D	C		D	C	B		E	D	E	D		
Approach Delay (s)		26.0			23.8			54.8			53.0		
Approach LOS		C			C			D			D		
Intersection Summary													
HCM 2000 Control Delay			29.2									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			125.0									Sum of lost time (s)	20.5
Intersection Capacity Utilization			81.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/19/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	50	1515	85	0	1145	0	95	335	335	230	680	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3498	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3498	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1612	90	0	1218	0	101	356	356	245	723	96
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	97	0	9	0
Lane Group Flow (vph)	53	1699	0	0	1218	0	101	356	259	245	810	0
Confl. Peds. (#/hr)			4			2			3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	62.7			50.5		9.9	25.2	25.2	20.1	35.4	
Effective Green, g (s)	7.7	63.2			51.0		10.4	25.7	25.7	20.6	35.9	
Actuated g/C Ratio	0.06	0.51			0.41		0.08	0.21	0.21	0.16	0.29	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1742			1402		147	383	323	294	1004	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.19		0.14	c0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.50	0.98			0.87		0.69	0.93	0.80	0.83	0.81	
Uniform Delay, d1	56.8	30.1			33.9		55.7	48.8	47.2	50.5	41.3	
Progression Factor	1.18	0.77			1.04		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	13.7			6.1		12.5	28.1	12.7	18.0	4.6	
Delay (s)	68.3	36.9			41.6		68.3	76.9	59.9	68.5	45.9	
Level of Service	E	D			D		E	E	E	E	D	
Approach Delay (s)		37.8			41.6			68.4			51.1	
Approach LOS		D			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			46.8				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			91.6%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Intersection Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1055	35	0	1355	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1147	38	0	1473	0	22

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1166
Stage 1	-	-	1166
Stage 2	-	-	736
Follow-up Headway	-	2.218	3.319
Pot Capacity-1 Maneuver	-	589	235
Stage 1	-	-	295
Stage 2	-	-	436
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	589	235
Mov Capacity-2 Maneuver	-	-	190
Stage 1	-	-	295
Stage 2	-	-	436

Approach	EB	WB	NW
HCM Control Delay, s	0	0	21.9
HCM LOS			C

Minor Lane / Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	235	-	-	589	-
HCM Lane V/C Ratio	0.093	-	-	-	-
HCM Control Delay (s)	21.9	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.302	-	-	0	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Prohibit Left Turn Egress

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Rd

12/16/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	675	185	440	930	335	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1571
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1571
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	195	463	979	353	426
RTOR Reduction (vph)	0	64	0	0	0	34
Lane Group Flow (vph)	711	131	463	979	353	392
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	NA	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	42.3	42.3	32.2	79.5	24.1	56.3
Effective Green, g (s)	42.8	42.8	32.7	80.0	24.6	57.3
Actuated g/C Ratio	0.38	0.38	0.29	0.70	0.22	0.50
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	701	602	514	1299	383	854
v/s Ratio Prot	c0.38	0.08	c0.26	0.53	c0.20	0.13
v/s Ratio Perm						0.12
v/c Ratio	1.01	0.22	0.90	0.75	0.92	0.46
Uniform Delay, d1	35.4	24.0	38.9	10.6	43.6	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.6	0.2	18.8	2.5	27.2	0.4
Delay (s)	73.0	24.2	57.7	13.1	70.8	18.5
Level of Service	E	C	E	B	E	B
Approach Delay (s)	62.5			27.4	42.2	
Approach LOS	E			C	D	
Intersection Summary						
HCM 2000 Control Delay			41.3		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.95			
Actuated Cycle Length (s)			113.6		Sum of lost time (s)	13.5
Intersection Capacity Utilization			89.7%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Intersection

Intersection Delay, s/veh 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	155	585	90	190	435
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	168	636	98	207	473

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1571	685	0
Stage 1	685	-	-
Stage 2	886	-	-
Follow-up Headway	3.518	3.318	-
Pot Capacity-1 Maneuver	122	448	-
Stage 1	500	-	-
Stage 2	403	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	83	448	-
Mov Capacity-2 Maneuver	195	-	-
Stage 1	500	-	-
Stage 2	273	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	3.2
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	448	871	-
HCM Lane V/C Ratio	-	-	0.376	0.237	-
HCM Control Delay (s)	-	-	17.8	10.413	0
HCM Lane LOS			C	B	A
HCM 95th %tile Q(veh)	-	-	1.723	0.922	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	80	85	635	385	50
Conflicting Peds, #/hr	26	16	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	44	88	93	698	423	55

Major/Minor	Minor2	Major1			Major2	
Conflicting Flow All	1362	482	504	0	-	0
Stage 1	477	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Follow-up Headway	3.5	3.3	2.2	-	-	-
Pot Capacity-1 Maneuver	165	588	1071	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	136	573	1067	-	-	-
Mov Capacity-2 Maneuver	256	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	342	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	1	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1067	-	406	-	-
HCM Lane V/C Ratio	0.088	-	0.325	-	-
HCM Control Delay (s)	8.697	0	18.1	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.287	-	1.387	-	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	5	30	685	5	10	455
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	33	745	5	11	495

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1016	747	0
Stage 1	747	-	-
Stage 2	269	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	248	412	-
Stage 1	467	-	-
Stage 2	753	-	-
Time blocked-Platoon, %			
Mov Capacity-1 Maneuver	244	412	-
Mov Capacity-2 Maneuver	244	-	-
Stage 1	467	-	-
Stage 2	739	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0.3
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	375	859	-
HCM Lane V/C Ratio	-	-	0.101	0.013	-
HCM Control Delay (s)	-	-	15.7	9.245	0.1
HCM Lane LOS			C	A	A
HCM 95th %tile Q(veh)	-	-	0.336	0.038	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	680	0	0	455
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	739	0	0	495

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	986	739	0
Stage 1	739	-	-
Stage 2	247	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	259	416	-
Stage 1	471	-	-
Stage 2	772	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	259	416	-
Mov Capacity-2 Maneuver	259	-	-
Stage 1	471	-	-
Stage 2	772	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	867	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	13.9	0	-
HCM Lane LOS			B	A	
HCM 95th %tile Q(veh)	-	-	0.08	0	-























Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis

8: Martinazzi Ave & Nyberg St

12/16/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	30	10	100	415	55	335	25	315	25	0	445	10	
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			4.0		
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95		
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00			1.00		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00		
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.99			1.00		
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00		
Satd. Flow (prot)	1805	1626		1698	1725	1525	1679	1855			3561		
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.47	1.00			1.00		
Satd. Flow (perm)	1805	1626		1698	1725	1525	828	1855			3561		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	33	11	110	456	60	368	27	346	27	0	489	11	
RTOR Reduction (vph)	0	101	0	0	0	287	0	3	0	0	2	0	
Lane Group Flow (vph)	33	20	0	255	261	81	27	370	0	0	498	0	
Confl. Peds. (#/hr)	10					10	6		19	19		6	
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%	
Turn Type	Split	NA		Split	NA	Perm	Perm	NA			NA		
Protected Phases	8	8		4	4			6			2		
Permitted Phases						4	6						
Actuated Green, G (s)	4.6	4.6		13.0	13.0	13.0	12.1	12.1			13.3		
Effective Green, g (s)	5.1	5.1		13.5	13.5	13.5	12.6	12.6			13.8		
Actuated g/C Ratio	0.08	0.08		0.22	0.22	0.22	0.21	0.21			0.23		
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5			4.5		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0			5.0		
Lane Grp Cap (vph)	150	135		375	381	337	171	383			805		
v/s Ratio Prot	c0.02	0.01		0.15	c0.15			c0.20			c0.14		
v/s Ratio Perm						0.05	0.03						
v/c Ratio	0.22	0.15		0.68	0.69	0.24	0.16	0.97			0.62		
Uniform Delay, d1	26.1	25.9		21.8	21.8	19.5	19.8	24.0			21.2		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00		
Incremental Delay, d2	0.5	0.4		4.6	4.6	0.3	0.9	37.2			2.0		
Delay (s)	26.6	26.3		26.4	26.4	19.8	20.8	61.2			23.3		
Level of Service	C	C		C	C	B	C	E			C		
Approach Delay (s)		26.4			23.6			58.5			23.3		
Approach LOS		C			C			E			C		
Intersection Summary													
HCM 2000 Control Delay			31.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			61.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			56.7%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

Intersection

Intersection Delay, s/veh 2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	35	0	650	50	0	145
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	40	0	739	57	0	165

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	403
Stage 1	-	-	-
Stage 2	-	-	0
Follow-up Headway	2.2	-	3.3
Pot Capacity-1 Maneuver	835	-	603
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	832	-	600
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.5	0	13.3
HCM LOS			B



























Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.048	-	-	-	0.275
HCM Control Delay (s)	9.544	-	-	-	13.3
HCM Lane LOS	A				B
HCM 95th %tile Q(veh)	0.15	-	-	-	1.113

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis
 10: Tualatin Sherwood Rd & Site Driveway 4

























12/16/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 					 		
Volume (vph)	100	1900	40	230	1695	215	35	10	235	325	25	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0	
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1627	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1627	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	1939	41	235	1730	219	36	10	240	332	26	112
RTOR Reduction (vph)	0	1	0	0	0	107	0	0	0	0	97	0
Lane Group Flow (vph)	102	1979	0	235	1730	112	0	46	240	332	41	0
Confl. Peds. (#/hr)			2			8						15
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	18	4	4	
Permitted Phases						6						
Actuated Green, G (s)	14.0	61.2		16.0	63.2	63.2		8.6	24.6	16.7	16.7	
Effective Green, g (s)	14.5	61.7		16.5	63.7	63.7		9.1	25.6	17.2	17.2	
Actuated g/C Ratio	0.12	0.49		0.13	0.51	0.51		0.07	0.20	0.14	0.14	
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5	
Lane Grp Cap (vph)	209	2023		462	2541	787		130	327	481	223	
v/s Ratio Prot	0.06	c0.48		0.07	0.35			0.03	c0.15	c0.09	0.03	
v/s Ratio Perm						0.07						
v/c Ratio	0.49	0.98		0.51	0.68	0.14		0.35	0.73	0.69	0.19	
Uniform Delay, d1	51.8	31.0		50.5	23.0	16.2		55.2	46.5	51.4	47.7	
Progression Factor	0.88	0.54		1.04	0.86	1.08		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	9.7		0.4	1.0	0.2		1.2	7.8	3.9	0.3	
Delay (s)	46.4	26.4		53.0	20.7	17.7		56.4	54.3	55.3	48.0	
Level of Service	D	C		D	C	B		E	D	E	D	
Approach Delay (s)		27.4			23.9			54.7			53.1	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)		20.5			
Intersection Capacity Utilization			81.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/16/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	55	1515	85	0	1145	0	95	310	335	195	675	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3497	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3497	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	1612	90	0	1218	0	101	330	356	207	718	96
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	98	0	9	0
Lane Group Flow (vph)	59	1699	0	0	1218	0	101	330	258	207	805	0
Confl. Peds. (#/hr)			4			2			3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	65.2			53.0		9.9	24.0	24.0	18.8	32.9	
Effective Green, g (s)	7.7	65.7			53.5		10.4	24.5	24.5	19.3	33.4	
Actuated g/C Ratio	0.06	0.53			0.43		0.08	0.20	0.20	0.15	0.27	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1811			1471		147	365	308	275	934	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.18		0.12	c0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.56	0.94			0.83		0.69	0.90	0.84	0.75	0.86	
Uniform Delay, d1	57.0	27.8			31.7		55.7	49.1	48.3	50.6	43.6	
Progression Factor	1.21	0.75			1.08		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	8.7			4.4		12.5	24.4	17.0	11.1	8.0	
Delay (s)	72.2	29.4			38.8		68.3	73.5	65.3	61.6	51.6	
Level of Service	E	C			D		E	E	E	E	D	
Approach Delay (s)		30.8			38.8			69.1			53.6	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			44.0				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			89.7%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Intersection Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1075	10	0	1375	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1168	11	0	1495	0	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1179
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.218
Pot Capacity-1 Maneuver	-	-	592
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	592
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	21.2
HCM LOS			C

Minor Lane / Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	233	-	-	592	-
HCM Lane V/C Ratio	0.047	-	-	-	-
HCM Control Delay (s)	21.2	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.146	-	-	0	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Right In/Right Out

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Rd

12/19/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	760	105	435	930	335	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1570
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1570
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	111	458	979	353	426
RTOR Reduction (vph)	0	34	0	0	0	52
Lane Group Flow (vph)	800	77	458	979	353	374
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	Prot	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	51.6	51.6	30.0	86.6	23.0	53.0
Effective Green, g (s)	52.1	52.1	30.5	87.1	23.5	54.0
Actuated g/C Ratio	0.44	0.44	0.26	0.73	0.20	0.45
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	811	696	455	1343	347	767
v/s Ratio Prot	c0.43	0.05	c0.26	0.53	c0.20	0.12
v/s Ratio Perm						0.11
v/c Ratio	0.99	0.11	1.01	0.73	1.02	0.49
Uniform Delay, d1	33.4	20.0	44.5	9.4	48.0	23.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.0	0.1	43.8	2.0	52.8	0.5
Delay (s)	61.4	20.1	88.4	11.4	100.8	23.6
Level of Service	E	C	F	B	F	C
Approach Delay (s)	56.3			36.0	58.6	
Approach LOS	E			D	E	
Intersection Summary						
HCM 2000 Control Delay			47.5		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			1.00			
Actuated Cycle Length (s)			119.6		Sum of lost time (s)	13.5
Intersection Capacity Utilization			93.9%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	155	585	90	0	540
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	168	636	98	0	587

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1272	685	734
Stage 1	685	-	-
Stage 2	587	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	185	448	871
Stage 1	500	-	-
Stage 2	556	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	185	448	871
Mov Cap-2 Maneuver	324	-	-
Stage 1	500	-	-
Stage 2	556	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	448	871	-
HCM Lane V/C Ratio	-	-	0.376	-	-
HCM Control Delay (s)	-	-	17.8	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0	-

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	80	85	635	490	50
Conflicting Peds, #/hr	26	16	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	44	88	93	698	538	55

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	1477	597	619	0
Stage 1	592	-	-	-
Stage 2	885	-	-	-
Critical Hdwy	6.4	6.2	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-
Pot Cap-1 Maneuver	140	507	971	-
Stage 1	557	-	-	-
Stage 2	407	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	113	494	967	-
Mov Cap-2 Maneuver	237	-	-	-
Stage 1	545	-	-	-
Stage 2	336	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	967	-	363	-	-
HCM Lane V/C Ratio	0.097	-	0.363	-	-
HCM Control Delay (s)	9.1	0	20.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.6	-	-

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	40	30	685	5	45	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	33	745	5	49	571

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1130	747	0 0 750 0
Stage 1	747	-	- - - -
Stage 2	383	-	- - - -
Critical Hdwy	6.63	6.23	- - 4.12 -
Critical Hdwy Stg 1	5.43	-	- - - -
Critical Hdwy Stg 2	5.83	-	- - - -
Follow-up Hdwy	3.519	3.319	- - 2.218 -
Pot Cap-1 Maneuver	211	412	- - 859 -
Stage 1	467	-	- - - -
Stage 2	660	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	193	412	- - 859 -
Mov Cap-2 Maneuver	193	-	- - - -
Stage 1	467	-	- - - -
Stage 2	605	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	25.6	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	859	-
HCM Lane V/C Ratio	-	-	0.304	0.057	-
HCM Control Delay (s)	-	-	25.6	9.4	0.3
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	680	0	0	560
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	739	0	0	609

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1043	739	0
Stage 1	739	-	-
Stage 2	304	-	-
Critical Hdwy	6.63	6.23	4.12
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.83	-	-
Follow-up Hdwy	3.519	3.319	2.218
Pot Cap-1 Maneuver	239	416	867
Stage 1	471	-	-
Stage 2	723	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	239	416	867
Mov Cap-2 Maneuver	239	-	-
Stage 1	471	-	-
Stage 2	723	-	-






















Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	867	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	13.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM Signalized Intersection Capacity Analysis

8: Martinazzi Ave & Nyberg St

12/19/2013

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Volume (vph)	30	10	100	370	55	335	25	315	25	35	520	10		
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			4.0			
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95			
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00			1.00			
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.99			1.00			
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00			
Satd. Flow (prot)	1805	1626		1698	1727	1522	1679	1854			3555			
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.42	1.00			0.61			
Satd. Flow (perm)	1805	1626		1698	1727	1522	737	1854			2159			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
Adj. Flow (vph)	33	11	110	407	60	368	27	346	27	38	571	11		
RTOR Reduction (vph)	0	102	0	0	0	297	0	3	0	0	1	0		
Lane Group Flow (vph)	33	19	0	232	235	71	27	370	0	0	619	0		
Confl. Peds. (#/hr)	10					10	6		19	19		6		
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%		
Turn Type	Split	NA		Split	NA	Perm	Perm	NA		Perm	NA			
Protected Phases	8	8		4	4			6			2			
Permitted Phases						4	6			2				
Actuated Green, G (s)	4.6	4.6		12.7	12.7	12.7	11.8	11.8			21.0			
Effective Green, g (s)	5.1	5.1		13.2	13.2	13.2	12.3	12.3			21.5			
Actuated g/C Ratio	0.07	0.07		0.19	0.19	0.19	0.18	0.18			0.32			
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5			4.5			
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0			5.0			
Lane Grp Cap (vph)	135	121		329	334	295	133	334			681			
v/s Ratio Prot	c0.02	0.01		c0.14	0.14			c0.20						
v/s Ratio Perm						0.05	0.04				c0.29			
v/c Ratio	0.24	0.16		0.71	0.70	0.24	0.20	1.11			0.91			
Uniform Delay, d1	29.7	29.5		25.6	25.6	23.2	23.7	27.9			22.4			
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Incremental Delay, d2	0.7	0.4		6.2	6.1	0.3	1.6	81.2			16.8			
Delay (s)	30.4	29.9		31.9	31.7	23.5	25.3	109.1			39.1			
Level of Service	C	C		C	C	C	C	F			D			
Approach Delay (s)		30.0			28.2			103.4			39.1			
Approach LOS		C			C			F			D			
Intersection Summary														
HCM 2000 Control Delay			46.7									HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio			0.84											
Actuated Cycle Length (s)			68.1								16.0			
Intersection Capacity Utilization			62.3%										ICU Level of Service	B
Analysis Period (min)			15											
c Critical Lane Group														

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	70	0	650	50	0	110
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	80	0	739	57	0	125



























Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	767
Stage 1	-	-	767
Stage 2	-	-	0
Critical Hdwy	4.1	-	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	835	-	343
Stage 1	-	-	424
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	832	-	310
Mov Cap-2 Maneuver	-	-	310
Stage 1	-	-	424
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.8	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.096	-	-	-	0.208
HCM Control Delay (s)	9.8	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8

HCM Signalized Intersection Capacity Analysis
 10: Tualatin Sherwood Rd & Site Driveway 4

























12/19/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 		 	 					 			
Volume (vph)	135	1900	40	230	1695	215	35	10	235	330	25	110	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0		
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00		
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.88		
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	138	1939	41	235	1730	219	36	10	240	337	26	112	
RTOR Reduction (vph)	0	1	0	0	0	108	0	0	0	0	96	0	
Lane Group Flow (vph)	138	1979	0	235	1730	111	0	46	240	337	42	0	
Confl. Peds. (#/hr)			2			8						15	
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%	
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA		
Protected Phases	5	2		1	6		8	8	18	4	4		
Permitted Phases						6							
Actuated Green, G (s)	13.9	61.1		15.9	63.1	63.1		8.6	24.5	16.9	16.9		
Effective Green, g (s)	14.4	61.6		16.4	63.6	63.6		9.1	25.5	17.4	17.4		
Actuated g/C Ratio	0.12	0.49		0.13	0.51	0.51		0.07	0.20	0.14	0.14		
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5		
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5		
Lane Grp Cap (vph)	207	2020		459	2537	786		130	326	487	226		
v/s Ratio Prot	0.08	c0.48		0.07	0.35			0.03	c0.15	c0.10	0.03		
v/s Ratio Perm						0.07							
v/c Ratio	0.67	0.98		0.51	0.68	0.14		0.35	0.74	0.69	0.18		
Uniform Delay, d1	53.0	31.1		50.6	23.1	16.3		55.2	46.6	51.2	47.5		
Progression Factor	0.89	0.55		1.04	0.86	1.08		1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.2	9.3		0.5	1.0	0.2		1.2	7.9	3.9	0.3		
Delay (s)	50.2	26.5		53.2	20.8	17.7		56.4	54.5	55.1	47.8		
Level of Service	D	C		D	C	B		E	D	E	D		
Approach Delay (s)		28.0			24.0			54.8			53.0		
Approach LOS		C			C			D			D		
Intersection Summary													
HCM 2000 Control Delay			30.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			125.0									Sum of lost time (s)	20.5
Intersection Capacity Utilization			81.5%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/19/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	50	1505	85	0	1145	0	95	310	335	230	665	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3496	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3496	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1601	90	0	1218	0	101	330	356	245	707	96
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	98	0	9	0
Lane Group Flow (vph)	53	1688	0	0	1218	0	101	330	258	245	794	0
Confl. Peds. (#/hr)			4			2			3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	63.8			51.6		9.9	24.0	24.0	20.2	34.3	
Effective Green, g (s)	7.7	64.3			52.1		10.4	24.5	24.5	20.7	34.8	
Actuated g/C Ratio	0.06	0.51			0.42		0.08	0.20	0.20	0.17	0.28	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1773			1432		147	365	308	295	973	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.18		0.14	c0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.50	0.95			0.85		0.69	0.90	0.84	0.83	0.82	
Uniform Delay, d1	56.8	28.9			32.9		55.7	49.1	48.3	50.5	42.1	
Progression Factor	1.20	0.75			1.07		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	10.2			5.3		12.5	24.4	17.0	17.7	5.1	
Delay (s)	69.2	32.0			40.5		68.3	73.5	65.3	68.1	47.2	
Level of Service	E	C			D		E	E	E	E	D	
Approach Delay (s)		33.2			40.5			69.1			52.1	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			45.1				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			125.0			Sum of lost time (s)			20.0			
Intersection Capacity Utilization			91.4%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1075	95	0	1370	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1168	103	0	1489	0	5

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1272
Stage 1	-	-	1220
Stage 2	-	-	745
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.43
Critical Hdwy Stg 2	-	-	5.83
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	546
Stage 1	-	-	278
Stage 2	-	-	431
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	546
Mov Cap-2 Maneuver	-	-	181
Stage 1	-	-	278
Stage 2	-	-	431

Approach	EB	WB	NW
HCM Control Delay, s	0	0	21.9
HCM LOS			C

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	219	-	-	546	-
HCM Lane V/C Ratio	0.025	-	-	-	-
HCM Control Delay (s)	21.9	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Dual Signals

HCM Signalized Intersection Capacity Analysis

3: Martinazzi Ave & Boones Ferry Rd











12/16/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Volume (vph)	675	185	440	930	335	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1599	1787	1845	1770	1572
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1599	1787	1845	1770	1572
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	195	463	979	353	426
RTOR Reduction (vph)	0	81	0	0	0	47
Lane Group Flow (vph)	711	114	463	979	353	379
Confl. Peds. (#/hr)		7	7		7	8
Heavy Vehicles (%)	2%	1%	1%	3%	2%	1%
Turn Type	NA	Prot	Prot	NA	NA	pm+ov
Protected Phases	2	2	1	6	8	1
Permitted Phases					8	8
Actuated Green, G (s)	38.0	38.0	26.0	69.0	20.5	46.5
Effective Green, g (s)	38.5	38.5	26.5	69.5	21.0	47.5
Actuated g/C Ratio	0.39	0.39	0.27	0.70	0.21	0.48
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	720	618	475	1288	373	821
v/s Ratio Prot	c0.38	0.07	c0.26	0.53	c0.20	0.12
v/s Ratio Perm						0.12
v/c Ratio	0.99	0.18	0.97	0.76	0.95	0.46
Uniform Delay, d1	30.3	20.1	36.2	9.6	38.7	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.1	0.1	34.5	2.7	32.7	0.4
Delay (s)	60.4	20.3	70.7	12.3	71.4	17.8
Level of Service	E	C	E	B	E	B
Approach Delay (s)	51.7			31.1	42.1	
Approach LOS	D			C	D	
Intersection Summary						
HCM 2000 Control Delay			39.8		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.97			
Actuated Cycle Length (s)			99.5		Sum of lost time (s)	13.5
Intersection Capacity Utilization			89.7%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

4: Martinazzi Ave & City Access Driveway

12/16/2013

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	50	155	585	90	190	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		5.0		5.0	3.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.90		0.98		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1652		1829		1770	1863
Flt Permitted	0.99		1.00		0.11	1.00
Satd. Flow (perm)	1652		1829		201	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	168	636	98	207	473
RTOR Reduction (vph)	127	0	4	0	0	0
Lane Group Flow (vph)	95	0	730	0	207	473
Turn Type	NA		NA		pm+pt	NA
Protected Phases	3		9 2		1	6
Permitted Phases					6	
Actuated Green, G (s)	9.6		65.1		47.3	47.3
Effective Green, g (s)	10.1		65.6		47.8	47.8
Actuated g/C Ratio	0.10		0.66		0.48	0.48
Clearance Time (s)	4.0				5.5	4.0
Vehicle Extension (s)	3.0				3.0	3.0
Lane Grp Cap (vph)	166		1199		265	890
v/s Ratio Prot	c0.06		c0.40		c0.08	0.25
v/s Ratio Perm					c0.29	
v/c Ratio	0.57		0.61		0.78	0.53
Uniform Delay, d1	42.9		9.9		39.9	18.3
Progression Factor	1.00		1.08		1.00	1.00
Incremental Delay, d2	4.7		0.4		13.9	0.6
Delay (s)	47.6		11.0		53.8	18.9
Level of Service	D		B		D	B
Approach Delay (s)	47.6		11.0			29.5
Approach LOS	D		B			C
Intersection Summary						
HCM 2000 Control Delay			23.7		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	19.0
Intersection Capacity Utilization			70.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

5: Martinazzi Ave & Seneca St

12/16/2013



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	40	80	85	635	435	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5	5.0	3.5	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frbp, ped/bikes	0.98		1.00	1.00	1.00	
Flpb, ped/bikes	0.98		1.00	1.00	1.00	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1628		1805	1881	1834	
Flt Permitted	0.98		0.24	1.00	1.00	
Satd. Flow (perm)	1628		462	1881	1834	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	44	88	93	698	478	55
RTOR Reduction (vph)	66	0	0	0	5	0
Lane Group Flow (vph)	66	0	93	698	528	0
Confl. Peds. (#/hr)	26	16	5			5
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%
Turn Type	NA		pm+pt	NA	NA	
Protected Phases			5	2	6 13	
Permitted Phases	4		2			
Actuated Green, G (s)	20.7		40.4	40.4	60.9	
Effective Green, g (s)	21.2		40.9	40.9	61.4	
Actuated g/C Ratio	0.21		0.41	0.41	0.61	
Clearance Time (s)	4.0		4.0	5.5		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	345		281	769	1126	
v/s Ratio Prot			0.02	c0.37	c0.29	
v/s Ratio Perm	c0.04		0.11			
v/c Ratio	0.19		0.33	0.91	0.47	
Uniform Delay, d1	32.4		19.9	27.8	10.5	
Progression Factor	1.00		1.00	1.00	0.06	
Incremental Delay, d2	0.3		0.7	16.5	0.3	
Delay (s)	32.6		20.6	44.3	0.9	
Level of Service	C		C	D	A	
Approach Delay (s)	32.6			41.5	0.9	
Approach LOS	C			D	A	
Intersection Summary						
HCM 2000 Control Delay			25.8		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	20.0
Intersection Capacity Utilization			49.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Intersection

Intersection Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	5	30	685	5	10	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	33	745	5	11	549

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1043	747	0
Stage 1	747	-	-
Stage 2	296	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	239	412	-
Stage 1	467	-	-
Stage 2	729	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	235	412	-
Mov Capacity-2 Maneuver	235	-	-
Stage 1	467	-	-
Stage 2	716	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0.3
HCM LOS	C		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	859	-
HCM Lane V/C Ratio	-	-	0.102	0.013	-
HCM Control Delay (s)	-	-	15.8	9.245	0.1
HCM Lane LOS			C	A	A
HCM 95th %tile Q(veh)	-	-	0.339	0.038	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection

Intersection Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	680	0	0	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	739	0	0	549

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1013	739	0
Stage 1	739	-	-
Stage 2	274	-	-
Follow-up Headway	3.519	3.319	-
Pot Capacity-1 Maneuver	250	416	-
Stage 1	471	-	-
Stage 2	748	-	-
Time blocked-Platoon, %			-
Mov Capacity-1 Maneuver	250	416	-
Mov Capacity-2 Maneuver	250	-	-
Stage 1	471	-	-
Stage 2	748	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	867	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	13.9	0	-
HCM Lane LOS			B	A	
HCM 95th %tile Q(veh)	-	-	0.08	0	-






















Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis

8: Martinazzi Ave & Nyberg St

12/16/2013

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Volume (vph)	30	10	100	360	55	335	25	315	25	0	495	10		
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			4.0			
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	1.00			0.95			
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00			1.00			
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Frt	1.00	0.86		1.00	1.00	0.85	1.00	0.99			1.00			
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00			1.00			
Satd. Flow (prot)	1805	1626		1698	1728	1526	1679	1855			3562			
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.44	1.00			1.00			
Satd. Flow (perm)	1805	1626		1698	1728	1526	785	1855			3562			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
Adj. Flow (vph)	33	11	110	396	60	368	27	346	27	0	544	11		
RTOR Reduction (vph)	0	101	0	0	0	292	0	3	0	0	2	0		
Lane Group Flow (vph)	33	20	0	226	230	76	27	370	0	0	553	0		
Confl. Peds. (#/hr)	10					10	6		19	19		6		
Heavy Vehicles (%)	0%	0%	1%	1%	0%	2%	7%	1%	0%	0%	1%	0%		
Turn Type	Split	NA		Split	NA	Perm	Perm	NA			NA			
Protected Phases	8	8		4	4			6			2			
Permitted Phases						4	6							
Actuated Green, G (s)	4.6	4.6		11.9	11.9	11.9	12.1	12.1			13.6			
Effective Green, g (s)	5.1	5.1		12.4	12.4	12.4	12.6	12.6			14.1			
Actuated g/C Ratio	0.08	0.08		0.21	0.21	0.21	0.21	0.21			0.23			
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5			4.5			
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	5.0	5.0			5.0			
Lane Grp Cap (vph)	152	137		349	355	314	164	388			834			
v/s Ratio Prot	c0.02	0.01		0.13	c0.13			c0.20			c0.16			
v/s Ratio Perm						0.05	0.03							
v/c Ratio	0.22	0.15		0.65	0.65	0.24	0.16	0.95			0.66			
Uniform Delay, d1	25.7	25.5		21.9	21.9	20.0	19.5	23.5			20.9			
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00			
Incremental Delay, d2	0.5	0.4		3.6	3.6	0.3	1.0	34.2			2.6			
Delay (s)	26.2	25.9		25.5	25.5	20.3	20.5	57.7			23.5			
Level of Service	C	C		C	C	C	C	E			C			
Approach Delay (s)		26.0			23.2			55.2			23.5			
Approach LOS		C			C			E			C			
Intersection Summary														
HCM 2000 Control Delay			30.1									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.69											
Actuated Cycle Length (s)			60.2								16.0			
Intersection Capacity Utilization			56.7%										ICU Level of Service	B
Analysis Period (min)			15											
c Critical Lane Group														

Intersection

Intersection Delay, s/veh 1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	35	0	650	50	0	95
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	40	0	739	57	0	108

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	795	0	403
Stage 1	-	-	-
Stage 2	-	-	0
Follow-up Headway	2.2	-	3.3
Pot Capacity-1 Maneuver	835	-	603
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	832	-	600
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.5	0	12.3
HCM LOS			B





























Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	600
HCM Lane V/C Ratio	0.048	-	-	-	0.18
HCM Control Delay (s)	9.544	-	-	-	12.3
HCM Lane LOS	A				B
HCM 95th %tile Q(veh)	0.15	-	-	-	0.651

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis
 10: Tualatin Sherwood Rd & Site Driveway 4

























12/16/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		 	  					 			
Volume (vph)	100	1900	40	230	1695	215	35	10	235	325	25	110	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0		5.0	4.5	5.0	5.0		
Lane Util. Factor	1.00	*0.75		0.97	0.91	1.00		1.00	1.00	0.97	1.00		
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96		1.00	1.00	1.00	0.97		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.88		
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (prot)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00		
Satd. Flow (perm)	1805	4100		3502	4988	1545		1787	1599	3502	1627		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	102	1939	41	235	1730	219	36	10	240	332	26	112	
RTOR Reduction (vph)	0	1	0	0	0	107	0	0	0	0	97	0	
Lane Group Flow (vph)	102	1979	0	235	1730	112	0	46	240	332	41	0	
Confl. Peds. (#/hr)			2			8						15	
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	3%	0%	1%	0%	0%	0%	
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	pt+ov	Split	NA		
Protected Phases	5	2		1	6		8	8	18	4	4		
Permitted Phases						6							
Actuated Green, G (s)	14.0	61.2		16.0	63.2	63.2		8.6	24.6	16.7	16.7		
Effective Green, g (s)	14.5	61.7		16.5	63.7	63.7		9.1	25.6	17.2	17.2		
Actuated g/C Ratio	0.12	0.49		0.13	0.51	0.51		0.07	0.20	0.14	0.14		
Clearance Time (s)	5.0	6.5		5.0	6.5	6.5		5.5		5.5	5.5		
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0		2.5		2.5	2.5		
Lane Grp Cap (vph)	209	2023		462	2541	787		130	327	481	223		
v/s Ratio Prot	0.06	c0.48		0.07	0.35			0.03	c0.15	c0.09	0.03		
v/s Ratio Perm						0.07							
v/c Ratio	0.49	0.98		0.51	0.68	0.14		0.35	0.73	0.69	0.19		
Uniform Delay, d1	51.8	31.0		50.5	23.0	16.2		55.2	46.5	51.4	47.7		
Progression Factor	0.88	0.54		1.04	0.86	1.08		1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.6	9.8		0.4	1.0	0.2		1.2	7.8	3.9	0.3		
Delay (s)	46.4	26.5		53.0	20.7	17.7		56.4	54.3	55.3	48.0		
Level of Service	D	C		D	C	B		E	D	E	D		
Approach Delay (s)		27.5			23.9			54.7			53.1		
Approach LOS		C			C			D			D		
Intersection Summary													
HCM 2000 Control Delay			29.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			125.0									Sum of lost time (s)	20.5
Intersection Capacity Utilization			81.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

17: Martinazzi Ave & Tualatin Sherwood Rd

12/16/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Volume (vph)	55	1515	85	0	1145	0	95	310	325	195	670	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5			5.5		4.5	5.5	5.5	4.5	5.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3447			3438		1770	1863	1574	1787	3497	
Flt Permitted	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3447			3438		1770	1863	1574	1787	3497	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	1612	90	0	1218	0	101	330	346	207	713	96
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	98	0	10	0
Lane Group Flow (vph)	59	1699	0	0	1218	0	101	330	248	207	799	0
Confl. Peds. (#/hr)			4			2			3			16
Heavy Vehicles (%)	5%	4%	0%	0%	5%	0%	2%	2%	1%	1%	1%	1%
Turn Type	Prot	NA			NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2			6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	7.2	65.3			53.1		9.9	24.0	24.0	18.7	32.8	
Effective Green, g (s)	7.7	65.8			53.6		10.4	24.5	24.5	19.2	33.3	
Actuated g/C Ratio	0.06	0.53			0.43		0.08	0.20	0.20	0.15	0.27	
Clearance Time (s)	5.0	6.0			6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	2.0	3.5			3.5		3.0	2.0	2.0	3.0	2.0	
Lane Grp Cap (vph)	105	1814			1474		147	365	308	274	931	
v/s Ratio Prot	0.03	c0.49			0.35		0.06	c0.18		0.12	c0.23	
v/s Ratio Perm									0.16			
v/c Ratio	0.56	0.94			0.83		0.69	0.90	0.80	0.76	0.86	
Uniform Delay, d1	57.0	27.7			31.6		55.7	49.1	48.0	50.7	43.6	
Progression Factor	1.21	0.74			1.09		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	8.5			4.4		12.5	24.4	13.4	11.2	7.7	
Delay (s)	72.3	29.1			38.7		68.3	73.5	61.4	61.9	51.3	
Level of Service	E	C			D		E	E	E	E	D	
Approach Delay (s)		30.6			38.7			67.4			53.4	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			43.5				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			89.1%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection

Intersection Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1075	10	0	1375	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1168	11	0	1495	0	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1179
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.218
Pot Capacity-1 Maneuver	-	-	592
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	592
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	21.2
HCM LOS			C

Minor Lane / Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	233	-	-	592	-
HCM Lane V/C Ratio	0.047	-	-	-	-
HCM Control Delay (s)	21.2	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.146	-	-	0	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Signalized Intersection Capacity Analysis

5: Seneca St & Martinazzi Ave

4/15/2013

	↖	→	↗	↖	←	↗	↖	↑	↗	↘	↓	↘
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	↖
Volume (vph)	40	0	80	53	0	163	85	516	99	202	376	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			3.5	3.5	3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	0.97			1.00	0.97	1.00	1.00		1.00	1.00	
Fipb, ped/bikes	0.96	1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.85			1.00	0.85	1.00	0.98		1.00	0.98	
FIt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1739	1573			1747	1540	1802	1825		1769	1828	
FIt Permitted	0.72	1.00			0.70	1.00	0.47	1.00		0.20	1.00	
Satd. Flow (perm)	1317	1573			1287	1540	895	1825		370	1828	
Peak-hour factor, PHF	0.91	0.92	0.91	0.92	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91
Adj. Flow (vph)	44	0	88	58	0	177	93	567	108	220	413	55
RTOR Reduction (vph)	0	76	0	0	0	127	0	9	0	0	6	0
Lane Group Flow (vph)	44	12	0	0	58	50	93	667	0	220	462	0
Confl. Peds. (#/hr)	26		16	16		26	5		5	5		5
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	1%	2%	2%	2%	0%
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	5.9	5.9			5.9	12.8	27.8	23.8		33.6	26.7	
Effective Green, g (s)	6.4	6.4			6.4	13.8	28.8	24.3		34.6	27.2	
Actuated g/C Ratio	0.13	0.13			0.13	0.28	0.59	0.50		0.71	0.56	
Clearance Time (s)	4.0	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	3.0	
Lane Grp Cap (vph)	173	207			169	548	614	913		476	1023	
v/s Ratio Prot		0.01				0.01	0.01	c0.37		c0.07	0.25	
v/s Ratio Perm	0.03				c0.05	0.02	0.08			0.26		
v/c Ratio	0.25	0.06			0.34	0.09	0.15	0.73		0.46	0.45	
Uniform Delay, d1	19.0	18.5			19.2	12.8	4.3	9.6		5.1	6.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1			1.2	0.1	0.1	3.0		0.7	0.3	
Delay (s)	19.7	18.6			20.4	12.9	4.4	12.6		5.8	6.6	
Level of Service	B	B			C	B	A	B		A	A	
Approach Delay (s)		19.0			14.7			11.6			6.4	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM Average Control Delay		10.6										
HCM Volume to Capacity ratio		0.68										
Actuated Cycle Length (s)		48.6										
Intersection Capacity Utilization		66.2%						14.0				
Analysis Period (min)		15										
c Critical Lane Group												

Seneca Street Analysis

Tualatin City Council
Work Session

January 13, 2014





What is Level Of Service (LOS)?

LOS	Description	Average Delay
A	Most vehicles arrive during the green signal indication and many do not stop at all.	≤10 sec
B	Many vehicles arrive during the green signal indication and more vehicles stop than for a LOS A, causing higher levels of average delay.	10-20 sec
C	Individual cycle failures may begin to appear. The number of vehicles stopping is more significant at this level, although many still pass through the intersection without stopping. Most vehicles clear on 1 cycle.	20-35 sec
D	The influence of congestion becomes more noticeable. Longer delays may result from high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more noticeable. Most stopped vehicles still clear on 1 cycle.	35-55 sec
E	Drivers are likely to begin to be frustrated at these delays (though driver expectation plays an important role as some drivers are much more willing to tolerate longer delays during peak periods than other drivers). These high delay values generally (but not always) indicate high volume/capacity ratios. Individual cycle failures are frequent occurrences. Most vehicles that do not clear on the first cycle are able to clear on 2nd cycle.	55-80 sec
F	This condition is typically very frustrating to most drivers. It often occurs when the demand at intersection exceeds the capacity. Depending on the severity of the congestion, many vehicles may wait 3-4 cycles to clear the intersection.	>80 sec





What is Volume/Capacity (v/c) Ratio?

- Typically between 0.00 and 1.00
- A lower ratio indicates smooth operations and minimal delays.
- A number close to or over 1.00 means the average car will wait thru several signal cycles.





City's Standard

- Minimum LOS = D in most areas of the City*
- Minimum LOS = E in Town Center*
- Washington County & ODOT use v/c ratio (minimum = .99)

*the minimum standard is set in the TSP and Development Code



Existing Configuration



Cost: N/A

Mobility: Does NOT Meet Standards

- Does not improve traffic mobility in the downtown
- Does not improve pedestrian and bike safety or connectivity
- There are no impacts to City parking and buildings

Seneca Full Build Out

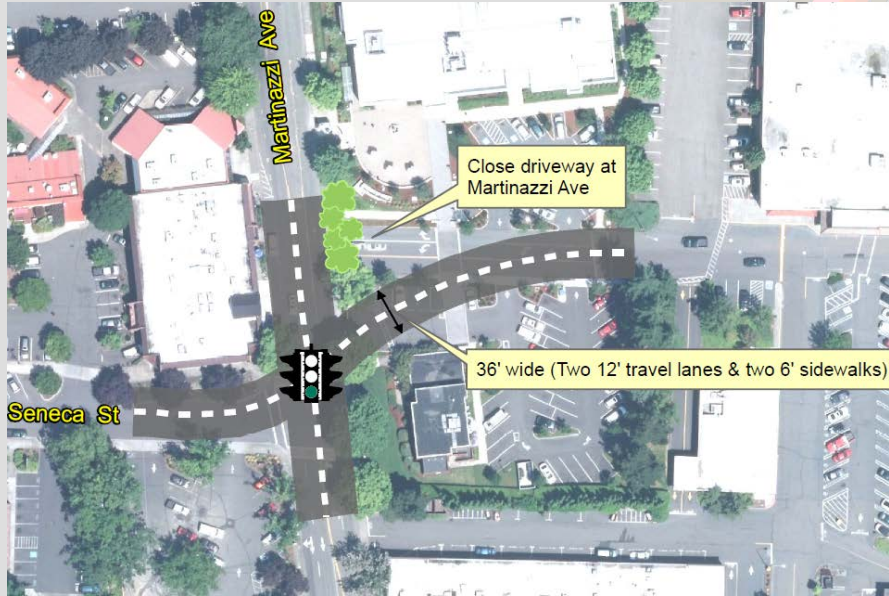


Cost: \$1,050,000

Mobility: Meets Standards

- Provides for pedestrian safety at Martinazzi
- Improves bicycle and pedestrian connectivity
- Improves overall mobility in downtown
- Displaces Council Building and there is a loss of City parking
- Maximizes circulation for City property and Nyberg Rivers

Narrower & Angled Seneca Street



- Less lanes than existing configuration & full build out
- Does not improve traffic conditions or mobility in downtown
- Skewed angle of the road creates concern for sight distance and turning movements
- Bike lanes are not provided on Seneca Street
- Impacts to City parking but preserves the Council Building

Cost: \$850,000

Mobility: Meets Standards

Close Driveway at Martinazzi Ave.



Cost: \$35,000

Mobility: Meets Standards

- Removes conflicts with pedestrians at city access
- Does not improve vehicle, pedestrian or bicycle mobility in downtown
- No impacts to City parking and buildings
- Eliminates direct access to Library and City Services
- Routes City traffic through Nyberg Rivers
- Legal considerations with easement
- Does not provide any pedestrian safety improvements at Martinazzi Avenue

Close Driveway to Nyberg Rivers

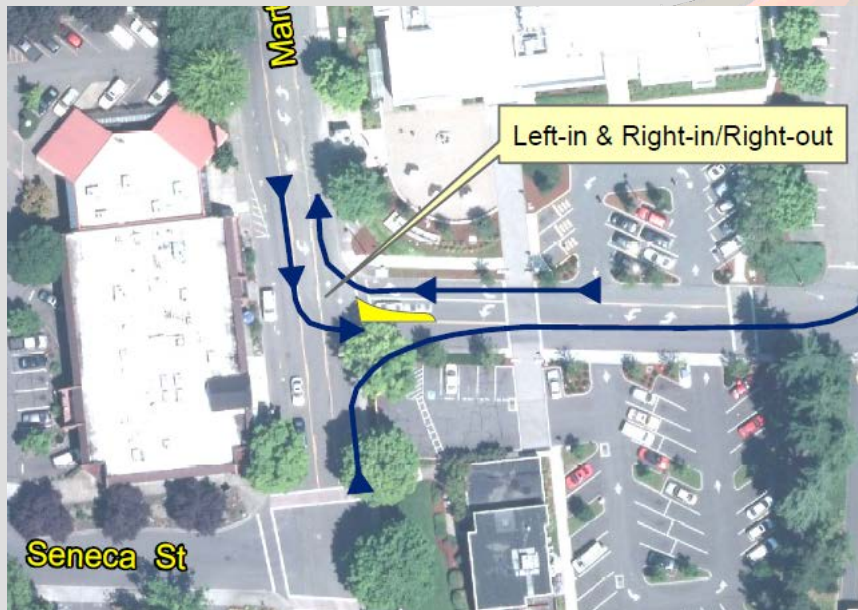


Cost: \$35,000

Mobility: Meets Standards

- Cuts off Martinazzi access to the City's back parking lot providing poor site circulation
- Does not improve pedestrian and bicycle connectivity
- Does not improve traffic conditions in downtown
- No impacts to City parking and buildings
- No pedestrian safety improvements provided
- Legal considerations with easement

Right In/Right Out & Left In

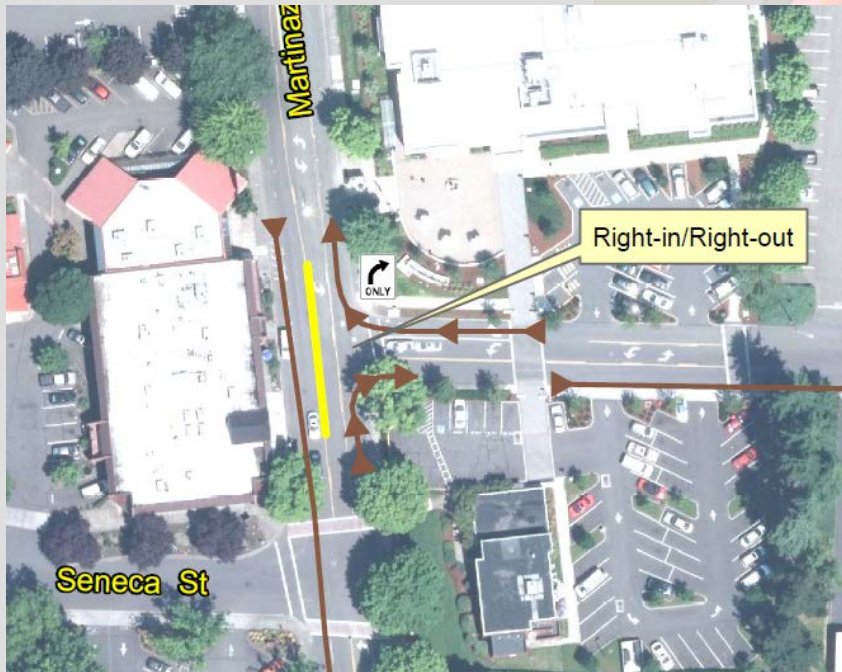


- There are no impacts to City parking and buildings
- Reduced circulation for City property
- Legal considerations with easement
- No pedestrian safety improvements
- No improvements to bicycle or pedestrian connectivity
- This configuration improves traffic but does not provide the same benefits as the full Seneca build out

Cost: \$5,000

Mobility: Meets Standards

Right In/Right Out



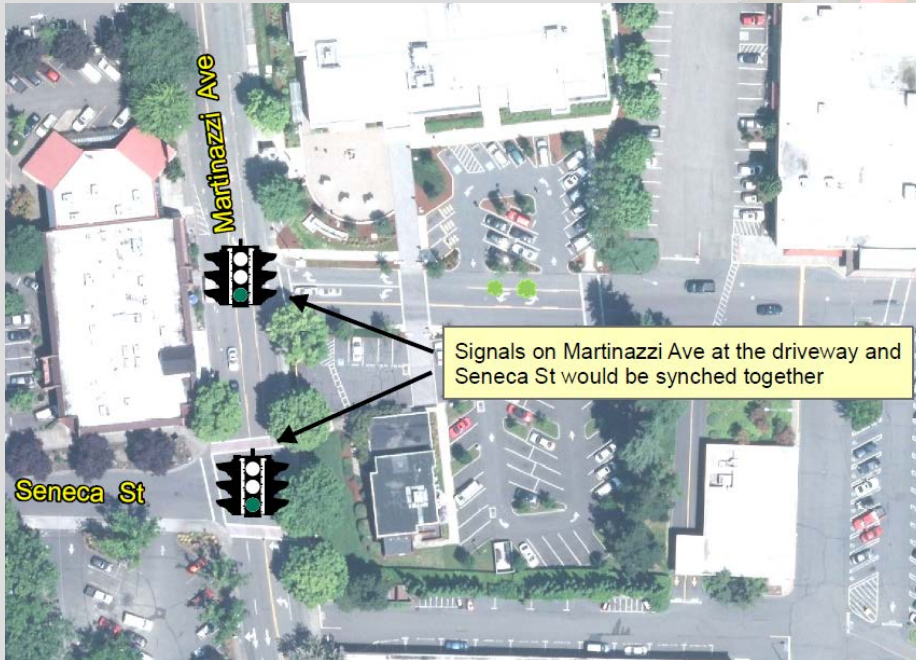
Cost: \$30,000

Mobility: Does NOT Meet Standards

January 13, 2014

- There are no impacts to City parking and buildings
- Reduced circulation for City property
- Legal considerations with easement
- No pedestrian safety improvements
- Doesn't improve bicycle or pedestrian connectivity
- Makes downtown traffic worse¹¹— doesn't meet stds

Dual Signals



Cost: \$550,000

Mobility: Meets Standards

- Makes crossing Martinazzi Avenue safer for pedestrians
- There are no impacts to City parking and buildings
- Signal coordination will be challenging
- Does not improve traffic conditions in downtown
- Does not improve bicycle or pedestrian connectivity



Summary

Option	Improves traffic in Downtown	Saves Council Building	Provides for Pedestrian Safety	Provides Bicycle and Pedestrian Connectivity	No Legal Considerations with Easement	Cost
Existing		★			★	NA
Seneca St Full-Build	★		★	★	★	\$1,050,000
Narrower Seneca St		★	★		★	\$850,000
Close Driveway at Martinazzi Ave		★	★			\$35,000
Close Driveway to Nyberg Rivers		★				\$35,000
Right In/Right Out & Left In		★				\$5,000
Right In/Right Out		★				\$30,000
Dual Signals		★	★		★	\$550,000





MEMORANDUM

CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council

THROUGH: Sherilyn Lombos

FROM: Sean Brady, City Attorney

DATE: 01/13/2014

SUBJECT: Options for Prohibiting Medical Marijuana Dispensaries

ISSUE BEFORE THE COUNCIL:

On December 9, 2013, the City Council requested staff return at the next Work Session with policy options for not allowing medical marijuana dispensaries in Tualatin as a possible interim measure to allow the Council time to gather input from the community and review the final rules adopted by the State of Oregon for regulating dispensaries.

DISCUSSION:

At the December 9, 2013 City Council Work Session, staff briefed Council on the activity regarding House Bill (HB) 3460, which authorized the Oregon Health Authority (OHA) to establish procedures to license and regulate medical marijuana dispensaries. The OHA appointed a Rules Advisory Committee to advise the agency as the rules for dispensaries are drafted. The rules are expected to be in place by January 31, 2014, allowing time for the OHA to have a process in place to begin receiving applications for medical marijuana dispensaries on March 3, 2014.

At the December 9, 2013 City Council Work Session, Council expressed interest in regulating dispensaries in Tualatin. Council requested staff present information on adopting an ordinance that would not allow medical marijuana dispensaries to operate in Tualatin as an interim measure. Options were requested to give Council additional time to determine: the impacts of rules adopted by the State of Oregon; gather public input; gauge the impact on the community; and consider policy options for implementation of a final policy decision.

The Council directed staff to review a variety of options for not allowing medical marijuana dispensaries and to provide information on the timeline for adoption. Staff has reviewed many options and will present more detailed information at the January 13, 2014 City Council Work Session. The three options presented as interim measures include:

1. A zoning ordinance that does not allow medical marijuana dispensaries to operate;
2. A business license ordinance that does not allow medical marijuana dispensaries to operate; and
3. A municipal code ordinance that does not allow medical marijuana dispensaries to operate



MEDICAL MARIJUANA DISPENSARIES WORK SESSION

January 13, 2014

Sean T. Brady

City Attorney

Background

- December 9th City Council Work Session
 - Discussion of House Bill (HB) 3460
 - State to License Medical Marijuana Dispensaries
 - Oregon Health Authority (OHA) to establish Rules
 - OHA appointed a rules advisory committee to advise the agency as the rules for dispensaries are drafted.
 - The rules are expected to be final by January 31, 2014
 - Applications for medical marijuana dispensaries on March 3, 2014.



HB 3460

- Dispensary License from the State:
 - Be Located in one of the following land use areas or zones:
 - Commercial
 - Industrial
 - Mixed-use
 - Agricultural
 - Not located within 1,000 feet of:
 - Elementary school
 - Secondary school
 - Career school attended primarily by minors
 - Another medical marijuana facility



Outcomes of Dec 9 Work Session

- Council interest in regulating dispensaries
- Council interest in not allowing dispensaries in Tualatin as an interim measure
- Council desires to act before state issues licenses
- After Council acts on interim measure, Council will examine longer-term solution
 - Review impacts of rules adopted by the state
 - Gather public input
 - Gauge impact on community
 - Consider policy options
- Council requested staff to return to the next Work Session with policy options for not allowing medical marijuana dispensaries in Tualatin as an interim measure



Options for Not Allowing Dispensaries in Tualatin

- Zoning Ordinance
- Business License
- Other Municipal Code Changes



Zoning Ordinance

- Elements
 - Defines Medical Marijuana Dispensary
 - Does not allow Medical Marijuana Dispensary Uses in any zone
- Examples
 - City of Riverside, California
 - found valid by California Supreme Court
- Timeline for Enactment
 - Approximately 3 months



Business License

- Common Method in Oregon
 - Comply with Local, State, and Federal Law
 - Medford and Gresham two most notable
 - Could Require Compliance with Controlled Substances Act Only
 - Other Cities considering this option
- Timing
 - Approximately two meetings plus 30 days effective date, unless emergency clause provides it is effective immediately



Municipal Code

- Elements
 - Defines medical marijuana dispensaries and does not allow it as a business
 - Recognizes that the City Zoning Code does not define marijuana dispensaries as a permitted use
 - Prohibits City Employees from interpreting the zoning code in a manner that allows marijuana dispensaries as a use
- Example
 - City of Los Angeles
- Timing
 - Approximately two meetings plus 30 days effective date, unless emergency clause provides it is effective immediately



Decision Points

- ❑ Does Council want to not allow dispensaries?
- ❑ If yes, is this temporary/is there a sunset clause?
- ❑ If temporary, what date does it sunset?
- ❑ Which option does Council choose to not allow dispensaries?



Discussion/Questions



ZONING OPTION

1. Ordinance Example – City of Riverside California
2. Timeline for Zoning Option

Material processing facility (MPF)	A facility where source separated (presorted) recyclable materials are further sorted and separated, then bulked or converted for reprocessing, by hand or by use of machinery.
Material recovery facility (MRF)	A solid waste facility where mixed municipal solid waste is sorted or separated, by hand or by use of machinery, for the purpose of recovering recyclable materials.
Medical marijuana dispensary	A facility where marijuana is made available for medical purposes in accordance with Health and Safety Code Section 11362.5 (Proposition 215).
Message center sign, electronic	See <u>sign, electronic message center</u> .
Message commercial	A message on a sign that pertains primarily to the economic interests of the sign sponsor and/or the viewing audience. Such messages typically concern proposals for economic transactions and/or the engagement of professional services. (Contrast: non-commercial messages.)
Message non-commercial	A message displayed on a sign that does not qualify as commercial. By way of example only and not limitation, such messages typically concern debatable matters of public concern, such as expression on religion, politics and social commentary. (Contrast: commercial message.)
Microbrewery	See <u>brewery, microbrewery</u> .
Mini-mart	See <u>store, mini-mart</u> .
Mini-warehouse	See <u>commercial storage</u> .
Mixed use development	A single building containing more than one type of land use or a single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified complementary whole, and functionally integrated to the use of shared vehicular and pedestrian access and parking areas. <i>See definitions in the General Plan, Design Guidelines and Downtown Specific Plan.</i>
Mobile home	A State licensed moveable or transportable vehicle, other than a motor vehicle, designed as a permanent structure of not less than two hundred fifty square feet in area intended for occupancy by one family, and having no foundation other than jacks, piers, wheels or skirtings. <i>See definition in the General Plan.</i>
Mobile home, building line	A line parallel with the front mobile home space line or access drive and distance therefrom the depth of the required front yard.

Chapter 19.150**BASE ZONES PERMITTED LAND USES**

- 19.150.010 Purpose.**
- 19.150.020 Permitted Land Uses.**
- 19.150.030 Special or Unusual Uses.**

19.150.010 Purpose.

This Section establishes land use regulations for all base zones listed in this Article consistent with the stated intent and purpose of each zone. (Ord. 6966 §1, 2007)

19.150.020 Permitted Land Uses.

Table 19.150.020 A (Permitted Uses Table), Table 19.150.020 B (Incidental Uses Table) and Table 19.150.020 C (Temporary Uses Table) in Chapter 19.150 (Base Zones Permitted Land Uses) identify permitted uses, permitted accessory uses, permitted temporary uses, and uses permitted subject to the approval of a minor conditional use permit (Chapter 19.730 – Minor Conditional Use Permit), or conditional use permit (Chapter 19.760 – Conditional Use Permit), or uses requiring some other permit. Table 19.150.020 A also identifies those uses that are specifically prohibited. Uses not listed in Tables are prohibited unless the Zoning Administrator, pursuant to Chapter 19.060 (Interpretation of Code), determines that the use is similar and no more detrimental than a listed permitted or conditional use. Any use which is prohibited by state and/or federal law is also strictly prohibited. (Ord. 7110 §§2, 3, 4, 2011; Ord. 7109 §§4, 5, 2010; Ord. 7072 §1, 2010; Ord. 7064 §9, 2010; Ord. 6966 §1, 2007)

19.150.030 Special or Unusual Uses.

At the discretion of the Community Development Director or his/her designee, a Conditional Use Permit may be considered for a unique or unusual combination of uses or special facilities similar to and not more detrimental than other uses in a particular zone. (Ord. 7235 §6, 2013; Ord. 6966 §1, 2007)

Article V – PERMITTED USES TABLE

19.150.020 (A)

This table identifies permitted uses and uses requiring approval of other permits by zoning designation. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Uses Table and the Temporary Uses Table.

Use	Zones																				Location of Required Standards in the Municipal Code	
	Residential Zones							Office & Commercial Zones					Mixed Use Zones			Industrial Zones				Other Zones		
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	GG	CRC'	MUN	MU-V'	MU-U'	BMP	I	AI	AIR	PF	RWY	DSP	
Artist Studio (Including Photo)	X	X	X	X	X	X	X	P	P	P	SP	P	SP	SP	X	X	X	X	X	X		For parking see Offices – Business, and Professional under 19.550
Assemblies of People – Entertainment – Not Including Adult-Oriented Businesses (e.g., Theater – Live Performance, Motion Picture, Auditoriums, Banquet Halls, Nightclubs, etc.)	X	X	X	X	X	X	X	X	C	C	C	C	C	C	X	X	X	X	X	X		19.250 – Assemblies of People – Entertainment 5.24 – Dance Halls & Public Dances
Assemblies of People – Non-Entertainment (e.g., Places of Worship, Fraternal, Service Organizations, Conference Facilities, etc.)	X	X	C	C	C	C	X	C	C	C	C	C	C	C	C	C	X	X	X	X		19.255 – Assemblies of People – Non-Entertainment 5.24 – Dance Halls & Public Dances 5.60 – Bingo
A. Storefront	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	X	X		
Assisted Living (Residential Care Facility)	X	X	X	X	C	C	X	C	C	C	X	X	X	X	X	X	X	X	X	X		19.260 – Assisted Living 5.65 – Corralcassett Transport Vehicles
Astrology and Fortune-telling (Occults)	X	X	X	X	X	X	X	P	P	P	SP	P	SP	SP	X	X	X	X	X	X		9.42 – Fortunetelling & Occult Arts For parking see Offices – Business, and Professional under 19.550
Auction House (Indoor)	X	X	X	X	X	X	X	X	C	C	X	X	X	X	C	C	X	X	X	X		For parking see Assemblies of People under 19.550
Auxiliary Dwelling Unit																						See Incidental Uses Table
Ball Bonds Office	X	X	X	X	X	X	X	MC	MC	MC	X	X	X	X	X	X	X	X	X	X		19.265 – Ball Bonds Establishments For parking see Offices – Business, and Professional under 19.550
Bakery – Retail	X	X	X	X	X	X	X	X	P	P	SP	P	SP	SP	X	X	X	X	X	X		For parking see Retail Sales under 19.550
Bakery – Wholesale	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	X	X	X		For parking see Manufacturing under 19.550
Banks and Financial Institutions/Services, Including Brokerages	X	X	X	X	X	X	X	P	P	P	SP	P	SP	SP	P	X	X	X	X	X		

** = For CRC, MUN and MU-V Zones a Site Plan Review Permit (Chapter 19.777) is required for any new or existing buildings or structures.
 P = Permitted
 RCP = Regulating Center Permit, Chapter 19.779
 DCP - Day Care Permit – Large Family, Chapter 19.855
 FRD = Planned Residential Development Permit, Chapter 19.791
 sq. ft. = Square Feet

MC = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.793
 X = Prohibited
 SP = Site Plan Review Permit, Chapter 19.777

Article V – PERMITTED USES TABLE

19.150.020 (A)

This table identifies permitted uses and uses requiring approval of other permits by zoning designation. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Use Table and the Temporary Use Table.

Use	Zones																					Location of Required Standards in the Municipal Code
	Residential Zones							Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones			
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC*	MU-N	MU-V*	MU-U*	BMP	I	AI	AIR	PF	RWY	DSP	
Catering Establishments	X	X	X	X	X	X	X	C	P	P	SP	P	SP	SP	P	P	X	P	X	X		6.03 – Regulation of Food Establishments and Food Facilities 6.09 – Regulation of Food Handlers
Cemeteries, Mortuaries & Ancillary Uses A. Crematoriums	X	X	C	C	C	X	X	X	C	C	X	X	X	X	X	C	C	C	X	X		
Check Cashing	X	X	X	X	X	X	X	X	MC	MC	X	X	X	X	X	X	X	X	X	X		19.260 – Check Cashing Establishments For parking see Banks and Financial Service under 19.550
Commercial Storage Facilities (Link/Warehouse) ³																						19.190 – Commercial Storage Overlay Zone
Contractor's Storage Yard	X	X	X	X	X	X	X	X	X	C	X	X	X	X	X	P	X	X	X	X		19.285 – Contractor Storage Yard
Day Care Centers – Child or Adult	X	X	O	C	C	O	X	C	C	C	C	C	C	C	C	X	X	X	X	X		19.290 – Day Care Centers – Child
Day Care Homes – Large Family																						See Incidental Uses Table
Day Care Homes – Small Family																						See Incidental Uses Table
Drive-Thru Lanes																						See Incidental Uses Table
Drug Store or Pharmacy – A. 2,000 sq. ft. or less B. More than 2,000 sq. ft.	X	X	X	X	X	X	X	MC	P	P	SP	P	SP	SP	X	X	X	X	X	X		
Entertainment																						See Incidental Uses Table
Equipment (Large) Sales and Rental	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MC	MC	MC	X	X		19.300 – Equipment (Large) Sales and Rental
Equipment (Small) Sales and Rental	X	X	X	X	X	X	X	X	X	C	X	X	X	X	X	MC	MC	MC	X	X		
Farmers' Markets – Certified	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	MC	X	X	X	X	X	X		19.305 – Farmers' Markets – Certified

³ Commercial Storage Facilities are permitted in all zones with the Commercial Storage Overlay Zone (Chapter 19.19).

* = For CEC, MU-U and MU-V Zones a Site Plan Review Permit (Chapter 19.77) is required for any new or additions/changes to existing buildings or structures.
 P = Permitted
 C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.76
 OUP = Temporary Use Permit, Chapter 19.74
 sq. ft. = Square Feet

MC = Subject to the granting of Minor Conditional Use Permit (MCUP), Chapter 19.76
 X = Permitted
 SP = Site Plan Review Permit, Chapter 19.77

RIVERSIDE MUNICIPAL CODE
Article V – PERMITTED USES TABLE

RIVERSIDE, CALIFORNIA
19.150.020 (A)

This table identifies permitted uses as follows: requiring approval of other permits by zoning designation. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Use Table and the Temporary Use Table.

Use	Zones																			Location of Required Standards in the Municipal Code	
	Residential Zones						Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones			
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC*	MU-H	MU-V*	MU-U*	BMP	I	AI	AIR	PF		RVY
Hotel Hotel/Motel - Long-term Stay Motel	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	C C C	C C C	C C C	X X X	C C C	C C C	X X X	X X X	X X X	X X X	X X X	X X X	5.32 – Transfer Occupancy Tax 9.55 – Limitation on Continuous and Cumulative Occupancy of Transient Hotels and Motels 19.330 – Hotel/Motel, Long-Term Stay
Kennels																					See Boarding of Cats and Dogs/Kennels 19.270 – Boarding of Cats and Dogs/Kennels
Laboratories – Research	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	
Laundry, Commercial (Cleaning Plants, Industrial Launderies, Carpet and Upholstery Cleaners)	X	X	X	X	X	X	X	X	X	P	X	X	X	X	X	P	P	X	X	X	
Live/Work Unit	X	X	X	X	X	X	X	X	X	X	X	P	SP	SP	X	X	X	X	X	X	See Live/Work Units "A Guide For Developers And Property Owners" 19.335 – Live/Work Units
Lumber Yard and Building Materials – Wholesale	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	X	X	X	X	X	See Incidental Uses Table for Outdoor Display
Manufactured Dwellings ⁴	P	P	P	P	P	X	X	X	X	X	X	P	X	X	X	X	X	X	X	X	19.850 – Fast Housing 19.100 – Residential Zones 19.340 – Manufactured Dwellings
Manufacturing (Indoors)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	
Medical Marijuana Dispensary	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Prohibited Use
Medical Services – Office, Medical/Dental Offices, Laboratory, Urgent/Express Care, and Optometric	X	X	X	X	X	X	X	P	P	P	SP	P	SP	SP	MC	MC	MC	MC	X	X	5.62 – Massage
Medical Services – Hospital	X	X	X	X	X	X	X	C	C	C	C	X	X	X	X	X	X	X	X	X	

⁴Manufactured Dwellings are only permitted in zones where single family residences are permitted.

* As Per CRC, MU-U and MU-V Zones a Site Plan Review Permit (Chapter 19.777) is required for any new or additional changes to existing buildings or structures.
P = Permitted
C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.759
RCP = Recycling Center Permit, Chapter 19.833
DCP = Day Care Permit – Large Family, Chapter 19.865
FRD = Planned Residential Development Permit, Chapter 19.783

MC = Subject to the granting of Minor Conditional Use Permit (MCUP), Chapter 19.753
X = Prohibited
SP = Site Plan Review Permit, Chapter 19.772

RIVERSIDE MUNICIPAL CODE
Article V – PERMITTED USES TABLE

RIVERSIDE, CALIFORNIA
19.150.020 (A)

This table identifies permitted uses and uses requiring approval of other permits by zoning designation. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Uses Table and the Temporary Uses Table.

Use	Zones																				Location of Required Standards in the Municipal Code	
	Residential Zones							Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones			
	RC**	RA-S**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC	MU-H	MU-V	MU-U	BWP	I	AI	AIR	PF	RVT		DSP
Pet Store (Sales and Grooming, No Boarding)	X	X	X	X	X	X	X	X	P	P	SP	MC	MC	MC	X	X	X	X	X	X		For parking see Retail Sales – 19.580
Planned Residential Development	PRD	X	PRD	PRD	PRD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		19.789 – Planned Residential Development Permit
Plant Nurseries – Retail	X	X	X	X	C	X	X	X	P	P	X	C	X	X	X	X	X	X	X	X		19.360 – Plant Nurseries – Retail 19.505 – Outdoor Display and Sales
Plant Nurseries – Wholesale	X	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Play Areas Incidental to Restaurants																						See Incidental Uses Table
Public Use of Public Property ¹	C	C	C	C	C	C	X	C	C	C	C	C	C	C	C	C	C	C	C	C		19.365 – Public Use of Public Property
Publishing and Printing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X		For parking see Manufacturing – 19.589
Rail Transit Station	X	X	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
Recreational Facilities – Commercial																						§ 28 – Poolrooms 19.370 – Recreational Facilities – Commercial (Billiard Parlors and Pool Halls)
A. Billiard Parlors and Pool Halls	X	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	X	X	X	X	X	X		
B. Bowling Alleys	X	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	X	X	X	X	X	X	X		
C. Skate Facility	X	X	X	X	X	X	X	X	C	C	MC	MC	MC	X	X	X	X	X	X	X		
D. Amusement Parks	X	X	X	X	X	X	X	X	C	C	C	C	C	X	X	X	X	X	X	X		
E. Golf Courses and Driving Ranges	C	C	C	C	C	X	X	X	C	C	C	X	X	X	X	X	X	C	X	X		
F. Health and Fitness																						
1,400 sq. ft. or less	X	X	X	X	X	X	X	X	P	P	SP	MC	MC	MC	MC	MC	MC	MC	X	X		
2 more than 4000 sq. ft.	X	X	X	X	X	X	X	X	C	C	C	C	C	X	X	X	X	X	X	X		
G. Other Indoor or Outdoor Facilities	X	X	X	X	X	X	X	X	C	C	C	C	C	X	X	X	X	X	X	X		
Recycling Center – Paper, Glass, Plastics, Aluminum and Nonferrous Metals	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C	X	X	X	X		19.375 – Recycling Center – Paper, Glass, Plastics, Aluminum and Other Nonferrous Metals

¹ Refer to Chapter 19.640.119 for PDES Projects.

* = For CEC, MU-U and MU-V Zones a Site Plan Review Permit (Chapter 19.777) is required for any new or a addition/changes to existing buildings or structures.
P = Permit
RCP = Recycling Center Permit, Chapter 19.770
DCP Dry Care Permit – Large Family, Chapter 19.550
FRD = Planned Residential Development Permit, Chapter 19.789
sq. ft. = Square Feet
C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.760
TUP = Temporary Use Permit, Chapter 19.730

MC = Subject to the granting of a Minor Conditional Use Permit (MCUP), Chapter 19.735
X = Prohibited
SP = Site Plan Review Permit, Chapter 19.777

Article V – PERMITTED USES TABLE

19.150.020 (A)

This table identifies permitted uses and uses requiring approval of other permits by zoning designation. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Uses Table and the Temporary Uses Table.

Use	Zones																				Location of Required Standards in the Municipal Code	
	Residential Zones							Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones			
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC*	MU-H	MU-V	MU-U*	BMP	I	AI	AIR	PF	RWY		DSP
Schools:																						19.395 – Schools
A. College, Community College, University and Professional (Public & Private)	X	X	X	X	C	X	X	C	C	C	C	X	C	C	C	X	X	C	C	X		
B. Public & Private (Nursery & Grades K-12)	X	X	C	C	C	X	X	C	C	C	C	C	C	C	X	X	X	X	C	X		
C. Vocational and Technical																						
1. Total Enrollment 20 persons or less or a total size of 2,000 sq. ft. or less	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	X	X		
2. Total Enrollment more than 20 persons or a total size greater than 2,000 sq. ft.	X	X	X	X	X	X	X	C	C	C	C	C	C	C	C	C	C	C	X	X		
D. Specialty Non-degree (Dance and Martial Arts)	X	X	X	X	X	X	X	X	P	P	SP	P	SP	SP	X	X	X	X	X	X		
Second Dwelling Unit																						See Incidental Uses Table
Shelters, Homeless (2 to 6 occupants)	X	X	MO	MO	MO	X	X	MC	MC	MC	X	X	X	X	X	X	X	X	X	X		19.400 – Shelters – Emergency Shelter, Supportive Housing and Transitional Housing Development
A. Emergency Shelter																						
B. Supportive Housing																						
C. Transitional Housing and Transitional Housing Development																						
Shelters, Homeless - (more than 6 occupants)	X	X	C	C	C	X	X	C	C	C	X	X	X	X	X	C	X	X	X	X		19.400 – Shelters – Emergency Shelter, Supportive Housing and Transitional and Transitional Housing Development
A. Emergency Shelter																						
B. Supportive Housing																						
C. Transitional Housing and Transitional Housing Development																						
Shopping Centers- Regional																						
A. Up to 5 Acres	X	X	X	X	X	X	X	X	P	P	X	X	SP	SP	X	X	X	X	X	X		
B. More than 5 Acres	X	X	X	X	X	X	X	X	SP	SP	SP	X	SP	SP	X	X	X	X	X	X		
Showroom	X	X	X	X	X	X	X	X	P	P	P	P	P	P	P	P	P	P	X	X		
Single-family Dwelling – Detached	P	P	P	P	P	X	X	X	X	X	X	P	X	X	X	X	X	X	X	X		Chapter 19.650 – Fair Housing

* Permitted in the R-3-4000 Zone only with a Planned Residential Development (PRD) Permit, Chapter 19.783.

** For CBC, MUM and MU-V Zones a Site Plan Review Permit (Chapter 19.773) is required for any new or additional changes to existing buildings or structures.
 P = Permitted
 MCP = Recycling Center Permit, Chapter 19.873
 DCP/DJ Case Permit – Large Family, Chapter 19.869
 PRD = Planned Residential Development Permit, Chapter 19.783
 C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.759
 TUP = Temporary Use Permit, Chapter 19.743
 sq. ft. = Square Feet

MC = Subject to the granting of a Minor Conditional Use Permit (MCUP), Chapter 19.759
 X = Permitted
 SP = Site Plan Review Permit, Chapter 19.773

Article V -- PERMITTED USES TABLE

This table identifies permitted uses and uses requiring approval of other permits by zoning classification. In addition to these uses, other incidental and temporary uses may also be permitted as noted in the Incidental Use Table and the Temporary Use Table.

Use	Zones																				Location of Required Standards in the Municipal Code	
	Residential Zones							Office & Commercial Zones					Mixed Use Zones			Industrial Zones				Other Zones		
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC*	MU-N	MU-P	MU-U*	BMP	I	AI	AIR	PF	RVY		DSP
Vehicle Repair Facilities – Major (Outdoor – fully screened)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MC	X	X	X	X		19.420 – Vehicle Repair Facilities
Vehicle Repair Facilities – Minor (Indoor)	X	X	X	X	X	X	X	X	C	C	C	X	X	X	C	P	X	X	X	X		19.420 – Vehicle Repair Facilities
Vehicle Repair Facilities – Minor (Outdoor – fully screened)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MC	X	X	X	X	X		19.420 – Vehicle Repair Facilities
Vehicle Sales, Rental and Leasing – New and Used (No Outdoor Display)																						See Retail Sales in This Table
Vehicle Sales, Rental and Leasing – New and Used (Outdoor Display)	X	X	X	X	X	X	X	X	X	C	C	X	X	X	X	X	X	X	X	X		
Vehicle Wash Facilities	X	X	X	X	X	X	X	X	C	C	C	X	X	X	X	X	X	X	X	X		19.425 – Vehicle Wash Facilities
Vehicle Wholesale Business A. Indoor (less than 5,000 sq. ft.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	X	X	X	X		19.427 – Vehicle Wholesale Business
B. Outdoor & Indoor (in excess of 5,000 sq. ft.)	X	X	X	X	X	X	X	X	X	X	X	X	X	C	C	X	X	X	X	X		
Veterinary Services: A. Offices and Small Animal Hospitals (short term boarding)	X	X	X	X	X	X	X	X	C	C	C	X	C	C	X	C	C	X	X	X		19.430 – Veterinary Services
B. Incidental to a Pet Shop	X	X	X	X	X	X	X	X	MC	MC	MC	X	MC	MC	X	X	X	X	X	X		
Warehousing & Wholesale Distribution Centers: 400,000 sq. ft. or less Greater than 400,000 sq. ft.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X		
Wireless Telecommunication Facilities and Related Support Structures															MC	MC	MC	MC	X	X		19.530 – Wireless Telecommunications Facilities and Related Support Structures

(Ord. 7185 §2, 2012; Ord. 7158 §1, 2012; Ord. 7151 §1, 2012; Ord. 7110 §§2, 3, 4, 2011; Ord. 7109 §§4, 5, 2010; Ord. 7072 §1, 2010; Ord. 7064 §9, 2010; Ord. 6966 §1, 2007)

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** For CRC, MU-U and MU-V Zones a Site Plan Review Permit (Chapter 19.773) is required for any new or additional changes to existing buildings or structures.
P = Permitted
RCP = Existing Under Permit, Chapter 19.479
DUP = Day Care Permit - Large Family, Chapter 19.553
FSD = Planned Residential Development Permit, Chapter 19.781

sq. ft. = Square Feet

C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.760
TUP = Temporary Use Permit, Chapter 19.740

MC = Subject to the granting of a Minor Conditional Use Permit (MCU), Chapter 19.731
X = Prohibited
SP = Site Plan Review Permit, Chapter 19.779

Article V – INCIDENTAL USES TABLE

19.150.020 (B)

This table identifies uses which are generally only permitted as an incidental use to some other permitted use on the property.

Use	Zones																				Location of Required Standards in the Municipal Code		
	Residential Zones							Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones				
	RC**	RA-S**	RR	RE	R-1	R-2	R-4	O	CR	CG	CRC	MU-N	MU-V	MU-U	BMP	I	AI	AIR	PF	RWY	DSP		
Entertainment	X	X	X	X	X	X	X	X	P	P	P	P	P	P	X	X	X	X	X	X	X		See Article X (Definitions)
Fuel Systems – Private (Above Ground Tanks)	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	19.450 – Fueling Systems – Private (Above Ground Tanks)
Home Occupations	X	X	P	P	P	P	P	X	X	X	X	P	P	P	X	X	X	X	X	X	X	X	19.455 – Home Occupations
Mining/Mineral Extraction	X	X	G	G	G	G	G	X	C	C	X	X	X	X	X	C	X	X	X	X	X	X	19.490 – Mining/Mineral Extraction
Outdoor Dining (only)	X	X	X	X	X	X	X	P	P	P	IP	P	P	P	P	X	X	P	X	X	X	X	Restaurants – See Permitted Uses Table 19.495 – Outdoor Dining and Food Preparation (Permanent)
Outdoor Dining and Food Preparation (Permanent)	X	X	X	X	X	X	X	MC	MC	MC	MC	MC	MC	MC	MC	X	X	MC	X	X	X	X	19.495 – Outdoor Dining and Food Preparation (Permanent)
Outdoor Display of Incidental Plant Materials	X	X	X	X	X	X	X	X	P	P	SP	P	SP	SP	X	X	X	X	X	X	X	X	19.500 – Outdoor Display of Incidental Plant Materials
Outdoor Display and Sales ⁴	X	X	X	X	X	X	X	X	X	P	X	X	X	X	X	X	X	X	X	X	X	X	19.505 – Outdoor Display and Sales
Outdoor Storage	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	X	19.510 – Outdoor Storage
Play Areas Incidental to Restaurants	X	X	X	X	X	X	X	X	C	C	C	X	X	X	X	X	X	X	X	X	X	X	19.515 – Play Areas Incidental to Restaurants
Rental of Rooms 2 or fewer	P	P	P	P	P	X	X	X	X	X	X	P	X	X	X	X	X	X	X	X	X	X	19.100 – Residential Zones 19.620 – Rental of Rooms
Rental of Rooms 3 or 4	P	P	RRP	RRP	RRP	X	X	X	X	X	X	RRP	X	X	X	X	X	X	X	X	X	X	19.100 – Residential Zones 19.620 – Rental of Rooms 19.625 – Room Rental Permit
Second Dwelling Units A. If all required standards cannot be met	X	X	X	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19.525 – Second Dwelling Units
Vehicle Repair - Personal	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19.527 – Vehicle Repair - Personal

⁴ Outdoor Sales and Display are permitted with a TUP see 19.740.

⁵ Example: Vehicle and large equipment sales.

* = For CRC, MU-U and MU-V Zones a Site Plan Review (Chapter 19.770) is required for any new or additions changes to existing buildings or structures.
 P = Permitted
 C = Subject to the granting of a Conditional Use Permit (CUP), Chapter 19.760
 TUP = Temporary Use Permit, Chapter 19.740
 sq. ft. = Square Feet
 RRP = Room Rental Permit
 MC = Subject to the granting of Minor Conditional Use Permit (MCUP), Chapter 19.750
 X = Permitted
 SP = Site Plan Review Permit, Chapter 19.770

Article V – TEMPORARY USES TABLE 19.150.020 (C)

This table lists uses that are temporary in nature.

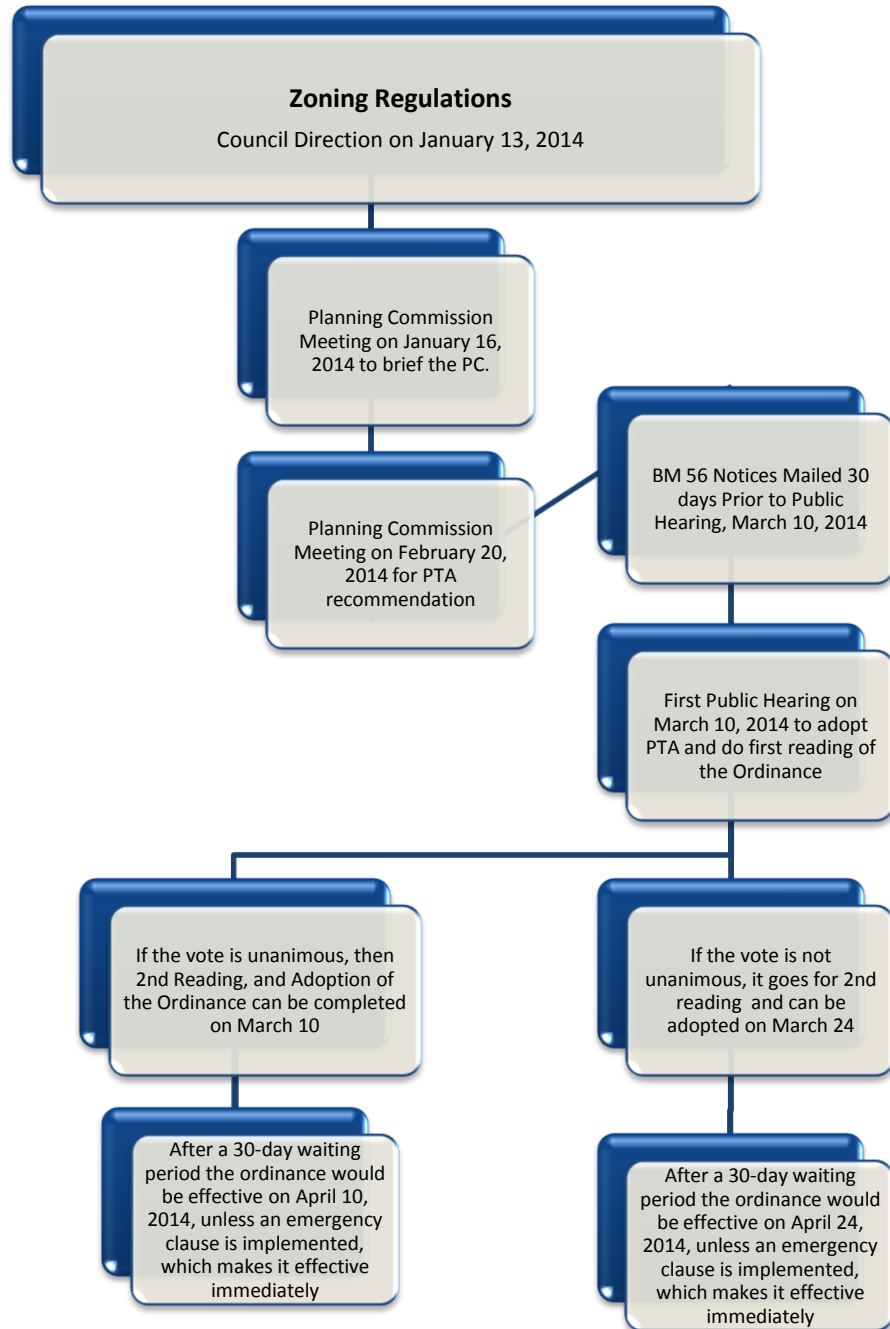
Use	Zones																				Location of Required Standards in the Municipal Code
	Residential Zones							Office & Commercial Zones				Mixed Use Zones			Industrial Zones				Other Zones		
	RC**	RA-5**	RR	RE	R-1	R-3	R-4	O	CR	CG	CRC*	MU-N	MU-V	MU-U	BMP	I	AI	AIR	PF	RWY	
Car Show	X	X	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	
Caretaker Living Quarters – Temporary During Construction	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	X	19.485 – Caretaker Living Quarters
Christmas Tree and Pumpkin Sales (Seasonal)	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	
Circus or Carnival (With or Without Tent)	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	X	X	X	TUP	TUP	TUP	TUP	TUP	X	
Dwelling Unit (Motor Home, RV, Camper, etc.)	TUP ¹	TUP	TUP	TUP	TUP	X	X	X	X	X	X	TUP	X	X	X	X	X	X	X	X	
Entertainment (Trial Basis Only)	X	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	TUP	TUP	X	X	X	X	X	X	
Fair, Concert, Exhibit or Similar Uses	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP ¹	TUP	TUP	TUP	TUP	X	TUP	TUP	TUP	TUP	TUP	TUP	TUP	X	
Fruit Stand	X	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	TUP	TUP	X	X	X	X	X	X	
Mobile Medical Units for Humans	X	X	X	X	X	X	X	X	TUP	TUP	TUP	X	TUP	TUP	X	TUP	X	X	X	X	
Non-Commercial Tent Meetings	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	
Outdoor Preparation of Food (Temporary)	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	X	X	TUP	X	X	19.495 – Out Dining and Food Preparation
Outdoor Sales event in conjunction with a Permanent Land Use (Parking lot sale)	X	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	TUP	TUP	X	X	X	X	X	X	
Outdoor Sales event not in conjunction with a Permanent Land Use (Parking lot sale)	X	X	X	X	X	X	X	X	TUP	TUP	TUP	TUP	TUP	TUP	X	X	X	X	X	X	
Special Events (Running Events, Parades, Block Parties etc.)																					Special Event Permits are administered by the Arts and Cultural Affairs pursuant to 2.28
Subdivision Sales Trailer and/or Office During Construction	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	TUP	X	

¹ All also having active minor conditional use permits or conditional use permits, private schools, Assembly of People, etc. For Exceptions, see Chapters 19.100.030 (A) – RA-5 Permitted Uses and 19.100.030 (B) Industrial Use Table

* – For CRC, MU-U and MU-V Zones a Site Plan Review (Chapter 19.770) is required for any new or additional changes to existing buildings or structures.
 ** – For a more detailed listing of the permitted land uses in the RA-5 and RC Zones, refer to Sections 19.100.030 A (RA-5 Permitted Uses). If any conflict between this Table and Sections 19.100.030A and 19.100.030 B exists, the provisions of Sections 19.100.030A and 19.100.030 B shall apply.
 P – Permitted
 ECP – Recycling Center Permit, Chapter 13.870
 DCP – Day Care Permit - Large Family, Chapter 19.850
 PRD – Planned Residential Development Permit, Chapter 19.740
 C – Signage to the granting of a Conditional Use Permit (CUP), Chapter 19.760
 TUP – Temporary Use Permit, Chapter 19.740
 sq. ft. = Square Feet
 MOC – Subject to the granting of Minor Conditional Use Permit (MOCUP), Chapter 19.750
 X – Prohibited
 SP – Site Plan Review Permit, Chapter 19.770

Timing of Options on Medical Marijuana Dispensary Regulations

Implementation Process and Timeline – Assuming Process by Regular (not Special) Meetings



BUSINESS LICENSE OPTION

1. Example of Other City Ordinances
2. Timeline for Business License Option

Business License Ordinance, other cities

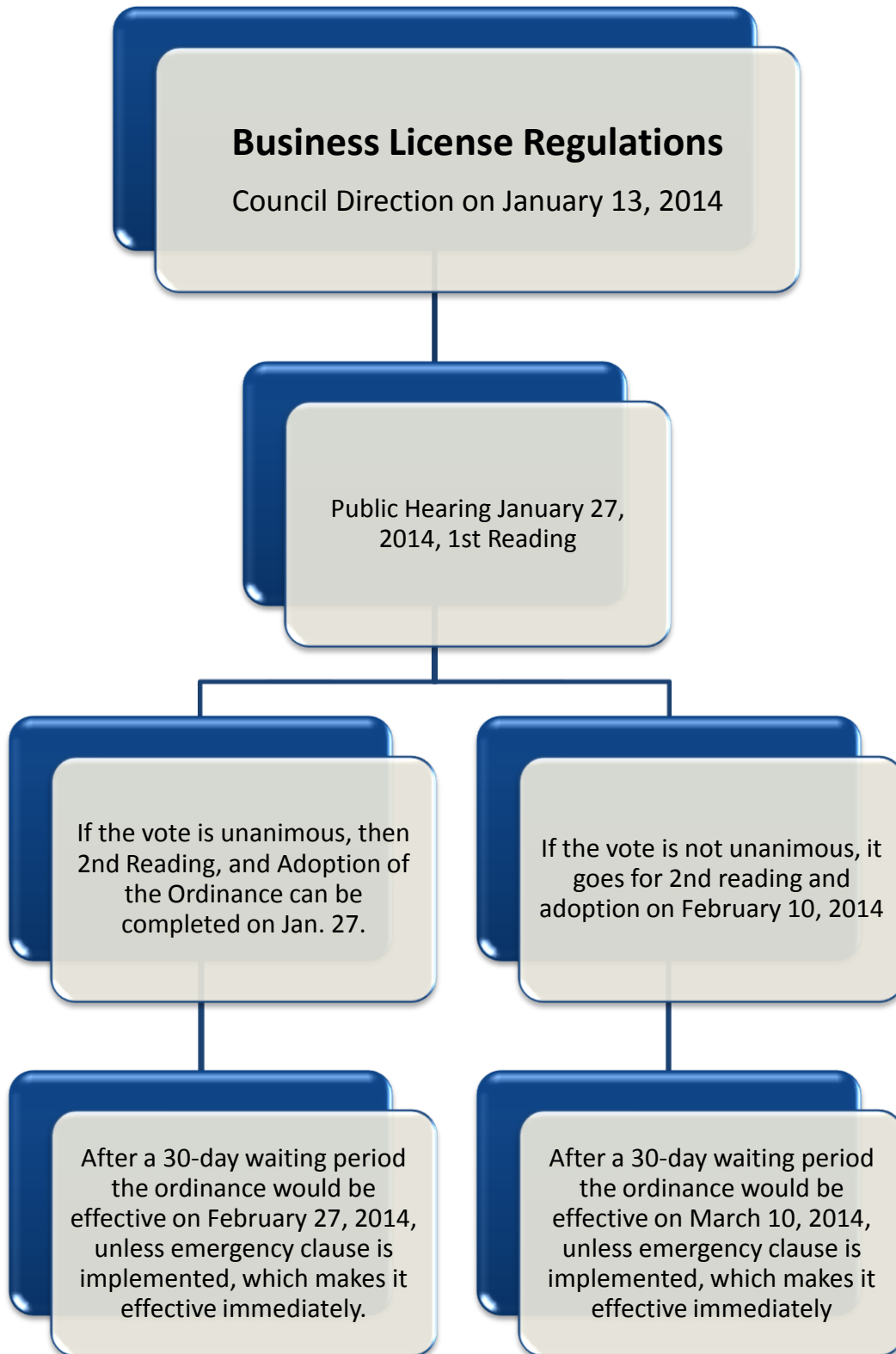
Ordinance provision allowing the city to deny or revoke a business license if a business is engaging in illegal activity or does not comply with local, state, federal law

CITY	BUSINESS LICENSE ORDINANCE PROVISION
Ashland	"Upon receipt of an application duly signed and executed as hereinabove prescribed, together with the required fee, the Finance Department shall issue a business license to any applicant desiring to conduct any lawful business activity within the City. If the City has knowledge that the applicant is engaging in, or proposes to engage in an unlawful activity, the City shall return the fee to the applicant, along with the reason for so doing, and shall refuse to issue a license." 6.04.100
Bend	"All businesses must comply with all City, State and Federal law, and the issuance of a business license does not authorize a business to operate in violation of any other laws." 7.05.060
Eugene	"The city may issue a license upon finding that the applicant has met all requirements of federal, state and county law, this code, including compliance with city zoning regulations within the urban growth boundary, and rules made pursuant to this code." 3.025(1)
Grants Pass	"The application will be denied where: 1. The activity to be taxed would not comply with City ordinances, or state or federal law."4.04.027
Gresham	"No business license shall be issued to any person to engage in a business that does not comply with federal, state or city law."
Hillsboro	"Denial of a business license is acceptable if the: 1. Proposed business is unlawful;" 5.04.060
Madras	"No license will be issued to any Applicant concerning any Business that is prohibited by federal, state, and/or local law, regulation, and/or ordinance. Each Business must be conducted and comply with applicable federal, state, and/or local laws, regulations, and/or ordinances." Ord. 849, Section 5.1
Medford	"No business license shall be issued to any person to engage in a business that does not comply with local, state or federal law. " 8.015(3).
Lake Oswego	"Any of the following may be grounds for denial of the license: a. Any false or incomplete statement made or acknowledged on the application form; provided, however, that in the event such statement is the result of excusable neglect, the applicant may resubmit an application with appropriate corrections. b. The business activity would not comply with the Lake Oswego Code and could not be made to comply through the imposition of appropriate conditions. c. A previous history of unlawful business activity by the applicant, which, if continued would be grounds for revocation of the license. d. The business activity would endanger persons or property. e. The applicant's past or present violations of law, even in the absence of conviction, presents reasonable doubt that the activity performed by the

	applicant can be performed without harm or danger to persons or property.” 20.02.080
Myrtle Creek	Denial, Revocation, or Suspension of License. The city may deny, suspend or revoke a business license upon finding that: <ul style="list-style-type: none"> (a) The licensee fails to meet the requirements of, or is doing business in violation of, any law or requirement of this chapter; or (b) The applicant has provided false or misleading material information, or has omitted disclosure of a material fact on the application, related materials, or license; or (c) The applicant’s past or present violation of a law or ordinance presents a reasonable doubt about their ability to perform the licensed activity without endangering property or the public health or safety; or (d) The information given on the application does not indicate that the applicant has the special knowledge or skill required to perform the licensed activity; or (e) There is reason to believe that the licensed activity would endanger property or the public health or safety. 5.05.080
Toledo	“Prior to approving or denying an application, the city shall cause the application to be reviewed and approved by the community planning and development department. The community planning and development department may deem further review necessary by the police department or fire department. The use listed on the application must meet all requirements of the city's fire, building, zoning and other pertinent codes. If any of those departments finds the application incomplete or in violation of city, state, or federal laws, the application may be amended to correct the violation or it may be denied.” 5.04.050

Timing of Options on Medical Marijuana Dispensary Regulations

Implementation Process and Timeline – Assuming Process by Regular (not Special) Meetings



MUNICIPAL CODE OPTION

1. Example Ordinance – modeled after City of L.A.
2. Timeline for Municipal Code Option

DRAFT MEDICAL MARIJUANA DISPENSARY ORDINANCE FOR COUNCIL
WORK SESSION

Whereas, _____;

Whereas, _____;

NOW, THEREFORE, THE CITY OF TUALAIN ORDAINS AS FOLLOWS:

Section 1. Tualatin Municipal Code Section ____ is added to Chapter ____ as follows:

TMC ____ . Purpose and Intent.

The purpose of this Section is to _____.

TMC ____ . Definitions. Except where the context specifically requires otherwise, as used in this Chapter, the following words and phrases mean:

(1) **"Building"** is any structure having a roof supported by columns or walls, for the housing, shelter or enclosure of persons, animals, chattels, or property of any kind.

(2) **"Location"** is any parcel of land, whether vacant or occupied by a building, group of buildings, or accessory buildings, and includes the buildings, structures, yards, open spaces, lot width, and lot area.

(3) **"Marijuana"** is as defined in ORS 475.005 and further shall specifically include any product that contains marijuana or a derivative of marijuana.

(4) **"Medical marijuana business"** is a medical marijuana facility licensed by the State of Oregon under ORS 475.300-475.346.

(5) **"Structure"** is anything constructed or erected which is supported directly or indirectly on the earth.

TMC ____ . Prohibited Activities. It is unlawful to establish, operate, use, or to cause or permit the establishment, operation, or use of a medical marijuana business.

TMC ____ . City Employees Have No Authority to Permit Medical Marijuana Businesses. The use of any building, structure, location, premises, or land for a medical marijuana business is not currently enumerated in the City of Tualatin Municipal or Development Code as a permitted use in any zoning district. The City Manager, and all city employees, do not have authority to determine or permit the use of any building, structure, location, premises, or land as a medical marijuana business in any zoning district.

TMC ____ . Violations.

(1) A person who violates this Chapter commits a civil infraction and shall be subject to a fine of up to \$500. Each violation, and each day that a violation continues, constitutes a separate civil infraction.

(2) The civil infraction procedures in TMC 7-1 apply to the prosecution of any violation of this Chapter.

Section 2. Severability. Each section of this ordinance, and any part thereof, is severable. If any part of this ordinance is held invalid by a court of competent jurisdiction, the remainder of this ordinance shall remain in full force and effect.

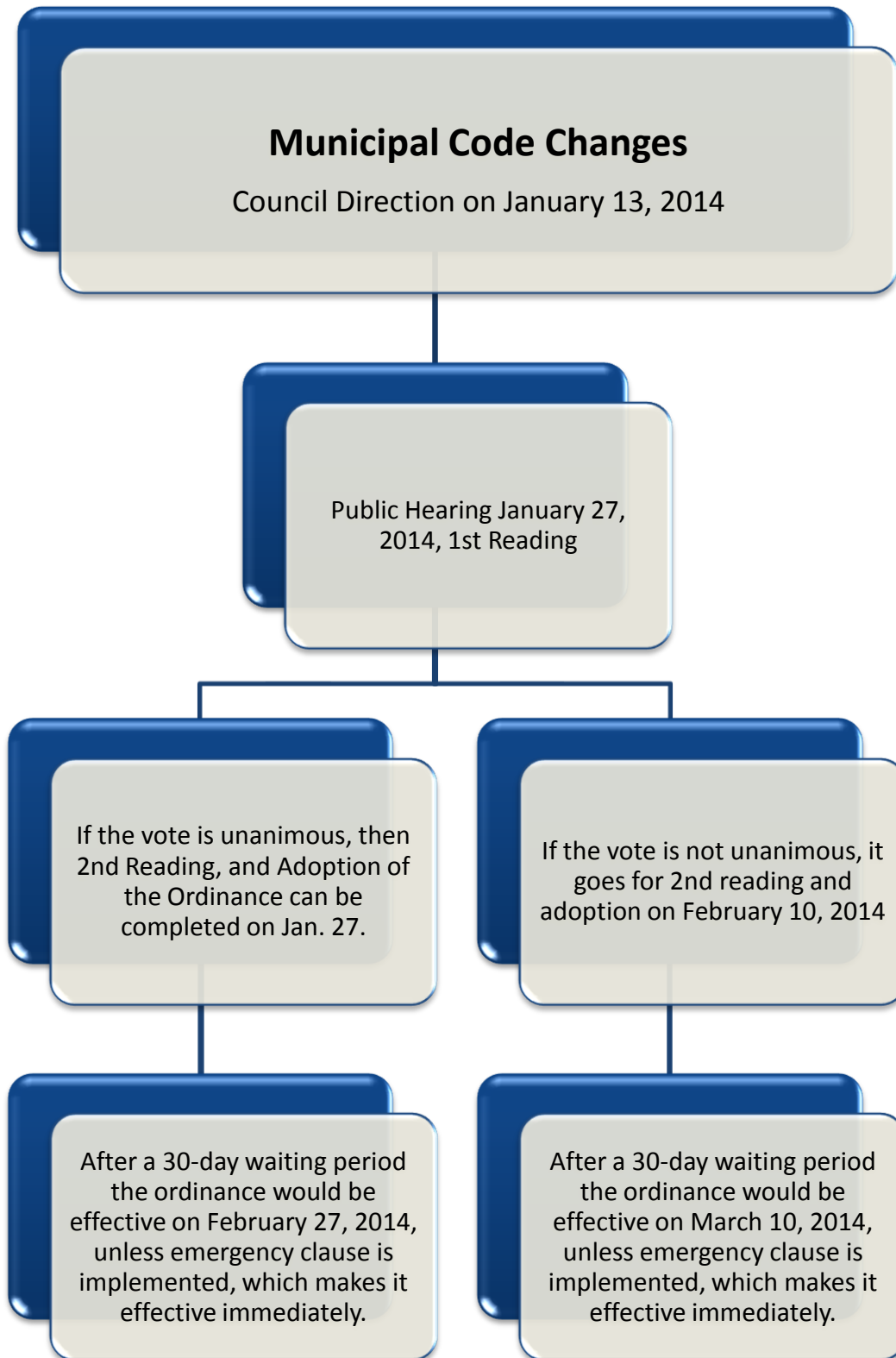
OPTION FOR SUNSET CLAUSE

Section 3. Ordinance Automatically Expires. This ordinance automatically expires and is be deemed repealed on ____ , unless sooner repealed or extended by City Council ordinance.

DRAFT

Timing of Options on Medical Marijuana Dispensary Regulations

Implementation Process and Timeline – Assuming Process by Regular (not Special) Meetings



Enrolled
House Bill 3460

Sponsored by Representative BUCKLEY, Senator PROZANSKI; Representative FREDERICK, Senator DINGFELDER

CHAPTER

AN ACT

Relating to medical marijuana; creating new provisions; amending ORS 475.302, 475.304, 475.309, 475.320, 475.323 and 475.331; limiting expenditures; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Section 2 of this 2013 Act is added to and made a part of ORS 475.300 to 475.346.

SECTION 2. (1) The Oregon Health Authority shall establish by rule a medical marijuana facility registration system to authorize the transfer of usable marijuana and immature marijuana plants from:

(a) A registry identification cardholder, the designated primary caregiver of a registry identification cardholder, or a person responsible for a marijuana grow site to the medical marijuana facility; or

(b) A medical marijuana facility to a registry identification cardholder or the designated primary caregiver of a registry identification cardholder.

(2) The registration system established under subsection (1) of this section must require a medical marijuana facility to submit an application to the authority that includes:

(a) The name of the person responsible for the medical marijuana facility;

(b) The address of the medical marijuana facility;

(c) Proof that the person responsible for the medical marijuana facility is a resident of Oregon;

(d) Documentation, as required by the authority by rule, that demonstrates the medical marijuana facility meets the qualifications for a medical marijuana facility as described in subsection (3) of this section; and

(e) Any other information that the authority considers necessary.

(3) To qualify for registration under this section, a medical marijuana facility:

(a) Must be located in an area that is zoned for commercial, industrial or mixed use or as agricultural land and may not be located at the same address as a marijuana grow site;

(b) Must be registered as a business or have filed a pending application to register as a business with the Office of the Secretary of State;

(c) Must not be located within 1,000 feet of the real property comprising a public or private elementary, secondary or career school attended primarily by minors;

(d) Must not be located within 1,000 feet of another medical marijuana facility; and

(e) Must comport with rules adopted by the authority related to:

(A) Installing a minimum security system, including a video surveillance system, alarm system and safe; and

(B) Testing for pesticides, mold and mildew and the processes by which usable marijuana and immature marijuana plants that test positive for pesticides, mold or mildew must be returned to the registry identification cardholder, the cardholder's designated primary caregiver or the cardholder's registered grower.

(4)(a) The authority shall conduct a criminal records check under ORS 181.534 of a person whose name is submitted as the person responsible for a medical marijuana facility under subsection (2) of this section.

(b) A person convicted for the manufacture or delivery of a controlled substance in Schedule I or Schedule II may not be the person responsible for a medical marijuana facility for five years from the date the person is convicted.

(c) A person convicted more than once for the manufacture or delivery of a controlled substance in Schedule I or Schedule II may not be the person responsible for a medical marijuana facility.

(5) If a person submits the application required under subsection (2) of this section, the medical marijuana facility identified in the application meets the qualifications for a medical marijuana facility described in subsection (3) of this section and the person responsible for the medical marijuana facility passes the criminal records check required under subsection (4) of this section, the authority shall register the medical marijuana facility and issue the person responsible for the medical marijuana facility proof of registration. The person responsible for the medical marijuana facility shall display the proof of registration on the premises of the medical marijuana facility at all times when usable marijuana or immature marijuana plants are being transferred as described in subsection (1) of this section.

(6)(a) A registered medical marijuana facility may receive usable marijuana or immature marijuana plants only from a registry identification cardholder, designated primary caregiver or person responsible for a marijuana grow site if the registered medical marijuana facility obtains authorization, on a form prescribed by the authority by rule and signed by a registry identification cardholder, to receive the usable marijuana or immature marijuana plants.

(b) A registered medical marijuana facility shall maintain:

(A) A copy of each authorization form described in paragraph (a) of this subsection; and

(B) Documentation of each transfer of usable marijuana or immature marijuana plants.

(7) A medical marijuana facility registered under this section may possess usable marijuana and immature marijuana plants in excess of the limits imposed on registry identification cardholders and designated primary caregivers under ORS 475.320.

(8) The authority may inspect:

(a) The premises of an applicant for a medical marijuana facility or a registered medical marijuana facility to ensure compliance with the qualifications for a medical marijuana facility described in subsection (3) of this section; and

(b) The records of a registered medical marijuana facility to ensure compliance with subsection (6)(b) of this section.

(9)(a) A registry identification cardholder or the designated primary caregiver of a registry identification cardholder may reimburse a medical marijuana facility registered under this section for the normal and customary costs of doing business, including costs related to transferring, handling, securing, insuring, testing, packaging and processing usable marijuana and immature marijuana plants and the cost of supplies, utilities and rent or mortgage.

(b) A medical marijuana facility may reimburse a person responsible for a marijuana grow site under this section for the normal and customary costs of doing business, including costs related to transferring, handling, securing, insuring, testing, packaging and processing usable marijuana and immature marijuana plants and the cost of supplies, utilities and rent or mortgage.

(10) **The authority may revoke the registration of a medical marijuana facility registered under this section for failure to comply with ORS 475.300 to 475.346 or rules adopted under ORS 475.300 to 475.346. The authority may release to the public a final order revoking a medical marijuana facility registration.**

(11) **The authority shall adopt rules to implement this section, including rules that:**

(a) **Require a medical marijuana facility registered under this section to annually renew that registration; and**

(b) **Establish fees for registering and renewing registration for a medical marijuana facility under this section.**

SECTION 3. ORS 475.302 is amended to read:

475.302. As used in ORS 475.300 to 475.346:

(1) "Attending physician" means a physician licensed under ORS chapter 677 who has primary responsibility for the care and treatment of a person diagnosed with a debilitating medical condition.

(2) "Authority" means the Oregon Health Authority.

(3) "Debilitating medical condition" means:

(a) Cancer, glaucoma, agitation due to Alzheimer's disease, positive status for human immunodeficiency virus or acquired immune deficiency syndrome, or treatment for these conditions;

(b) A medical condition or treatment for a medical condition that produces, for a specific patient, one or more of the following:

(A) Cachexia;

(B) Severe pain;

(C) Severe nausea;

(D) Seizures, including but not limited to seizures caused by epilepsy; or

(E) Persistent muscle spasms, including but not limited to spasms caused by multiple sclerosis;

or

(c) Any other medical condition or treatment for a medical condition adopted by the authority by rule or approved by the authority pursuant to a petition submitted pursuant to ORS 475.334.

(4)(a) "Delivery" has the meaning given that term in ORS 475.005.

(b) "Delivery" does not include transfer of:

(A) Marijuana by a registry identification cardholder to another registry identification cardholder if no consideration is paid for the transfer[.];

(B) **Usable marijuana or immature marijuana plants from a registry identification cardholder, the designated primary caregiver of a registry identification cardholder or a marijuana grow site to a medical marijuana facility registered under section 2 of this 2013 Act; or**

(C) **Usable marijuana or immature marijuana plants from a medical marijuana facility registered under section 2 of this 2013 Act to a registry identification cardholder or the designated primary caregiver of a registry identification cardholder.**

(5) "Designated primary caregiver" means an individual 18 years of age or older who has significant responsibility for managing the well-being of a person who has been diagnosed with a debilitating medical condition and who is designated as such on that person's application for a registry identification card or in other written notification to the authority. "Designated primary caregiver" does not include the person's attending physician.

(6) "Marijuana" has the meaning given that term in ORS 475.005.

(7) "Marijuana grow site" means a location where marijuana is produced for use by a registry identification cardholder and that is registered under the provisions of ORS 475.304.

(8) "Medical use of marijuana" means the production, possession, delivery, or administration of marijuana, or paraphernalia used to administer marijuana, as necessary for the exclusive benefit of a person to mitigate the symptoms or effects of the person's debilitating medical condition.

(9) "Production" has the meaning given that term in ORS 475.005.

(10) "Registry identification card" means a document issued by the authority that identifies a person authorized to engage in the medical use of marijuana and the person's designated primary caregiver, if any.

(11) "Usable marijuana" means the dried leaves and flowers of the plant Cannabis family Moraceae, and any mixture or preparation thereof, that are appropriate for medical use as allowed in ORS 475.300 to 475.346. "Usable marijuana" does not include the seeds, stalks and roots of the plant.

(12) "Written documentation" means a statement signed by the attending physician of a person diagnosed with a debilitating medical condition or copies of the person's relevant medical records.

SECTION 4. ORS 475.304 is amended to read:

475.304. (1) The Oregon Health Authority shall establish by rule a marijuana grow site registration system to authorize production of marijuana by a registry identification cardholder, a designated primary caregiver who grows marijuana for the cardholder or a person who is responsible for a marijuana grow site. The marijuana grow site registration system adopted must require a registry identification cardholder to submit an application to the authority that includes:

(a) The name of the person responsible for the marijuana grow site;

(b) The address of the marijuana grow site;

(c) The registry identification card number of the registry cardholder for whom the marijuana is being produced; and

(d) Any other information the authority considers necessary.

(2) The authority shall issue a marijuana grow site registration card to a registry identification cardholder who has met the requirements of subsection (1) of this section.

(3) A person who has been issued a marijuana grow site registration card under this section must display the registration card at the marijuana grow site at all times when marijuana is being produced.

(4) A marijuana grow site registration card must be obtained and posted for each registry identification cardholder for whom marijuana is being produced at a marijuana grow site.

(5) All usable marijuana, plants, seedlings and seeds associated with the production of marijuana for a registry identification cardholder by a person responsible for a marijuana grow site are the property of the registry identification cardholder and must be provided to the registry identification cardholder, **or, if the marijuana is usable marijuana or an immature marijuana plant, transferred to a medical marijuana facility registered under section 2 of this 2013 Act**, upon request.

(6)(a) The authority shall conduct a criminal records check under ORS 181.534 of any person whose name is submitted as a person responsible for a marijuana grow site.

(b) A person convicted of a Class A or Class B felony under ORS 475.752 to 475.920 for the manufacture or delivery of a controlled substance in Schedule I or Schedule II may not be issued a marijuana grow site registration card or produce marijuana for a registry identification cardholder for five years from the date of conviction.

(c) A person convicted more than once of a Class A or Class B felony under ORS 475.752 to 475.920 for the manufacture or delivery of a controlled substance in Schedule I or Schedule II may not be issued a marijuana grow site registration card or produce marijuana for a registry identification cardholder.

(7) A registry identification cardholder or the designated primary caregiver of the cardholder may reimburse the person responsible for a marijuana grow site for the costs of supplies and utilities associated with the production of marijuana for the registry identification cardholder. No other costs associated with the production of marijuana for the registry identification cardholder, including the cost of labor, may be reimbursed.

(8) The authority may adopt rules imposing a fee in an amount established by the authority for registration of a marijuana grow site under this section.

SECTION 5. ORS 475.309 is amended to read:

475.309. (1) Except as provided in ORS 475.316, 475.320 and 475.342, a person engaged in or assisting in the medical use of marijuana is excepted from the criminal laws of the state for possession, delivery or production of marijuana, aiding and abetting another in the possession, delivery or production of marijuana or any other criminal offense in which possession, delivery or production of marijuana is an element if the following conditions have been satisfied:

(a)(A) The person holds a registry identification card issued pursuant to this section, has applied for a registry identification card pursuant to subsection (9) of this section, is the designated primary caregiver of the cardholder or applicant, or is the person responsible for a marijuana grow site that is producing marijuana for the cardholder and is registered under ORS 475.304; and

~~[(b)]~~ (B) The person who has a debilitating medical condition, the person's primary caregiver and the person responsible for a marijuana grow site that is producing marijuana for the cardholder and is registered under ORS 475.304 are collectively in possession of, delivering or producing marijuana for medical use in amounts allowed under ORS 475.320[.]; **or**

(b) The person is responsible for or employed by a medical marijuana facility registered under section 2 of this 2013 Act and does not commit any of the acts described in this subsection anywhere other than at the medical marijuana facility.

(2) The Oregon Health Authority shall establish and maintain a program for the issuance of registry identification cards to persons who meet the requirements of this section. Except as provided in subsection (3) of this section, the authority shall issue a registry identification card to any person who pays a fee in the amount established by the authority and provides the following:

(a) Valid, written documentation from the person's attending physician stating that the person has been diagnosed with a debilitating medical condition and that the medical use of marijuana may mitigate the symptoms or effects of the person's debilitating medical condition;

(b) The name, address and date of birth of the person;

(c) The name, address and telephone number of the person's attending physician;

(d) The name and address of the person's designated primary caregiver, if the person has designated a primary caregiver at the time of application; and

(e) A written statement that indicates whether the marijuana used by the cardholder will be produced at a location where the cardholder or designated primary caregiver is present or at another location.

(3) The authority shall issue a registry identification card to a person who is under 18 years of age if the person submits the materials required under subsection (2) of this section, and the custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age signs a written statement that:

(a) The attending physician of the person under 18 years of age has explained to that person and to the custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age the possible risks and benefits of the medical use of marijuana;

(b) The custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age consents to the use of marijuana by the person under 18 years of age for medical purposes;

(c) The custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age agrees to serve as the designated primary caregiver for the person under 18 years of age; and

(d) The custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age agrees to control the acquisition of marijuana and the dosage and frequency of use by the person under 18 years of age.

(4) A person applying for a registry identification card pursuant to this section may submit the information required in this section to a county health department for transmittal to the authority. A county health department that receives the information pursuant to this subsection shall transmit the information to the authority within five days of receipt of the information. Information received by a county health department pursuant to this subsection shall be confidential and not subject to disclosure, except as required to transmit the information to the authority.

(5)(a) The authority shall verify the information contained in an application submitted pursuant to this section and shall approve or deny an application within thirty days of receipt of the application.

(b) In addition to the authority granted to the authority under ORS 475.316 to deny an application, the authority may deny an application for the following reasons:

(A) The applicant did not provide the information required pursuant to this section to establish the applicant's debilitating medical condition and to document the applicant's consultation with an attending physician regarding the medical use of marijuana in connection with such condition, as provided in subsections (2) and (3) of this section;

(B) The authority determines that the information provided was falsified; or

(C) The applicant has been prohibited by a court order from obtaining a registry identification card.

(c) Denial of a registry identification card shall be considered a final authority action, subject to judicial review. Only the person whose application has been denied, or, in the case of a person under the age of 18 years of age whose application has been denied, the person's parent or legal guardian, shall have standing to contest the authority's action.

(d) Any person whose application has been denied may not reapply for six months from the date of the denial, unless so authorized by the authority or a court of competent jurisdiction.

(6)(a) If the authority has verified the information submitted pursuant to subsections (2) and (3) of this section and none of the reasons for denial listed in subsection (5)(b) of this section is applicable, the authority shall issue a serially numbered registry identification card within five days of verification of the information. The registry identification card shall state:

(A) The cardholder's name, address and date of birth;

(B) The date of issuance and expiration date of the registry identification card;

(C) The name and address of the person's designated primary caregiver, if any;

(D) Whether the marijuana used by the cardholder will be produced at a location where the cardholder or designated primary caregiver is present or at another location; and

(E) Any other information that the authority may specify by rule.

(b) When the person to whom the authority has issued a registry identification card pursuant to this section has specified a designated primary caregiver, the authority shall issue an identification card to the designated primary caregiver. The primary caregiver's registry identification card shall contain the information provided in paragraph (a) of this subsection.

(7)(a) A person who possesses a registry identification card shall:

(A) Notify the authority of any change in the person's name, address, attending physician or designated primary caregiver.

(B) If applicable, notify the designated primary caregiver of the cardholder, [and] the person responsible for the marijuana grow site that produces marijuana for the cardholder **and any person responsible for a medical marijuana facility that transfers usable marijuana or immature marijuana plants to the cardholder under section 2 of this 2013 Act** of any change in status including, but not limited to:

(i) The assignment of another individual as the designated primary caregiver of the cardholder;

(ii) The assignment of another individual as the person responsible for a marijuana grow site producing marijuana for the cardholder; or

(iii) The end of the eligibility of the cardholder to hold a valid registry identification card.

(C) Annually submit to the authority:

(i) Updated written documentation from the cardholder's attending physician of the person's debilitating medical condition and that the medical use of marijuana may mitigate the symptoms or effects of the person's debilitating medical condition; and

(ii) The name of the person's designated primary caregiver if a primary caregiver has been designated for the upcoming year.

(b) If a person who possesses a registry identification card fails to comply with this subsection, the card shall be deemed expired. If a registry identification card expires, the identification card of any designated primary caregiver of the cardholder shall also expire.

(8)(a) A person who possesses a registry identification card pursuant to this section and who has been diagnosed by the person's attending physician as no longer having a debilitating medical condition or whose attending physician has determined that the medical use of marijuana is contraindicated for the person's debilitating medical condition shall return the registry identification card and any other associated Oregon Medical Marijuana Program cards to the authority within 30 calendar days of notification of the diagnosis or notification of the contraindication.

(b) If, due to circumstances beyond the control of the registry identification cardholder, a cardholder is unable to obtain a second medical opinion about the cardholder's continuing eligibility to use medical marijuana before the 30-day period specified in paragraph (a) of this subsection has expired, the authority may grant the cardholder additional time to obtain a second opinion before requiring the cardholder to return the registry identification card and any associated cards.

(9) A person who has applied for a registry identification card pursuant to this section but whose application has not yet been approved or denied, and who is contacted by any law enforcement officer in connection with the person's administration, possession, delivery or production of marijuana for medical use may provide to the law enforcement officer a copy of the written documentation submitted to the authority pursuant to subsection (2) or (3) of this section and proof of the date of mailing or other transmission of the documentation to the authority. This documentation shall have the same legal effect as a registry identification card until such time as the person receives notification that the application has been approved or denied.

(10)(a) A registry identification cardholder has the primary responsibility of notifying the **designated** primary caregiver [*and*], **the** person responsible for the marijuana grow site that produces marijuana for the cardholder **and any person responsible for a medical marijuana facility that transfers usable marijuana or immature marijuana plants to the cardholder under section 2 of this 2013 Act** of any change in status of the cardholder.

(b) If the authority is notified by the cardholder that a primary caregiver or person responsible for a marijuana grow site has changed, the authority shall notify the primary caregiver or the person responsible for the marijuana grow site by mail at the address of record confirming the change in status and informing the caregiver or person **responsible for the marijuana grow site** that their card is no longer valid and must be returned to the authority.

(11) The authority shall revoke the registry identification card of a cardholder if a court has issued an order that prohibits the cardholder from participating in the medical use of marijuana or otherwise participating in the Oregon Medical Marijuana Program under ORS 475.300 to 475.346. The cardholder shall return the registry identification card to the authority within seven calendar days of notification of the revocation. If the cardholder is a patient, the patient shall return the patient's card and all other associated Oregon Medical Marijuana Program cards.

(12) The authority shall revoke the registration of a medical marijuana facility registered under section 2 of this 2013 Act if a court has issued an order that prohibits the person responsible for the medical marijuana facility from participating in the Oregon Medical Marijuana Program under ORS 475.300 to 475.346.

[(12)] (13) The authority and employees and agents of the authority acting within the course and scope of their employment are immune from any civil liability that might be incurred or imposed for the performance of or failure to perform duties required by this section.

SECTION 6. ORS 475.320 is amended to read:

475.320. (1)(a) A registry identification cardholder or the designated primary caregiver of the cardholder may possess up to six mature marijuana plants and 24 ounces of usable marijuana.

(b) Notwithstanding paragraph (a) of this subsection, if a registry identification cardholder has been convicted of a Class A or Class B felony under ORS 475.752 to 475.920 for the manufacture or delivery of a controlled substance in Schedule I or Schedule II, the registry identification

cardholder or the designated primary caregiver of the cardholder may possess one ounce of usable marijuana at any given time for a period of five years from the date of the conviction.

(2) A person authorized under ORS 475.304 to produce marijuana at a marijuana grow site:

(a) May produce marijuana for and provide marijuana:

(A) To a registry identification cardholder or *[that person's]* **a cardholder's** designated primary caregiver as authorized under this section[.]; or

(B) If the marijuana is usable marijuana or an immature marijuana plant and the registry identification cardholder authorizes the person responsible for the marijuana grow site to transfer the usable marijuana or immature marijuana plant to a medical marijuana facility registered under section 2 of this 2013 Act, to the medical marijuana facility.

(b) May possess up to six mature plants and up to 24 ounces of usable marijuana for each cardholder or caregiver for whom marijuana is being produced.

(c) May produce marijuana for no more than four registry identification cardholders or designated primary caregivers concurrently.

(d) Must obtain and display a marijuana grow site registration card issued under ORS 475.304 for each registry identification cardholder or designated primary caregiver for whom marijuana is being produced.

(e) Must provide all marijuana produced for a registry identification cardholder or designated primary caregiver to the cardholder or caregiver at the time the person responsible for a marijuana grow site ceases producing marijuana for the cardholder or caregiver.

(f) Must return the marijuana grow site registration card to the registry identification cardholder to whom the card was issued when requested to do so by the cardholder or when the person responsible for a marijuana grow site ceases producing marijuana for the cardholder or caregiver.

(3) Except as provided in subsections (1) and (2) of this section, a registry identification cardholder, the designated primary caregiver of the cardholder and the person responsible for a marijuana grow site producing marijuana for the registry identification cardholder may possess a combined total of up to six mature plants and 24 ounces of usable marijuana for that registry identification cardholder.

(4)(a) A registry identification cardholder and the designated primary caregiver of the cardholder may possess a combined total of up to 18 marijuana seedlings or starts as defined by rule of the Oregon Health Authority.

(b) A person responsible for a marijuana grow site may possess up to 18 marijuana seedlings or starts as defined by rule of the authority for each registry identification cardholder for whom the person responsible for the marijuana grow site is producing marijuana.

SECTION 7. ORS 475.323 is amended to read:

475.323. (1) Possession of a registry identification card *[or]*, designated primary caregiver identification card pursuant to ORS 475.309 **or proof of registration as a medical marijuana facility under section 2 of this 2013 Act** does not alone constitute probable cause to search the person or property of the cardholder or otherwise subject the person or property of the cardholder to inspection by any governmental agency. **However, the Oregon Health Authority may inspect a medical marijuana facility registered under section 2 of this 2013 Act at any reasonable time to determine whether the facility is in compliance with ORS 475.300 to 475.346.**

(2) Any property interest possessed, owned or used in connection with the medical use of marijuana or acts incidental to the medical use of marijuana that has been seized by state or local law enforcement officers may not be harmed, neglected, injured or destroyed while in the possession of any law enforcement agency. A law enforcement agency has no responsibility to maintain live marijuana plants lawfully seized. No such property interest may be forfeited under any provision of law providing for the forfeiture of property other than as a sentence imposed after conviction of a criminal offense. Usable marijuana and paraphernalia used to administer marijuana that was seized by any law enforcement office shall be returned immediately upon a determination by the district attorney in whose county the property was seized, or the district attorney's designee, that the per-

son from whom the marijuana or paraphernalia used to administer marijuana was seized is entitled to the protections contained in ORS 475.300 to 475.346. The determination may be evidenced, for example, by a decision not to prosecute, the dismissal of charges or acquittal.

SECTION 8. ORS 475.331 is amended to read:

475.331. (1)(a) The Oregon Health Authority shall create and maintain a list of the persons to whom the authority has issued registry identification cards, the names of any designated primary [*caregivers and the addresses of authorized marijuana grow sites.*] **caregivers, the names of persons responsible for a medical marijuana facility registered under section 2 of this 2013 Act, the addresses of authorized marijuana grow sites and the addresses of registered medical marijuana facilities.** Except as provided in subsection (2) of this section, the list shall be confidential and not subject to public disclosure.

(b) The authority shall develop a system by which authorized employees of state and local law enforcement agencies may verify at all times that: [*a person is a lawful possessor of a registry identification card or the designated primary caregiver of a lawful possessor of a registry identification card or that a location is an authorized marijuana grow site.*]

(A) A person is a lawful possessor of a registry identification card;

(B) A person is the designated primary caregiver of a lawful possessor of a registry identification card;

(C) A location is an authorized marijuana grow site;

(D) A location is a registered medical marijuana facility; or

(E) A person is the person listed as the person responsible for a registered medical marijuana facility.

(2) Names and other identifying information from the list established pursuant to subsection (1) of this section may be released to:

(a) Authorized employees of the authority as necessary to perform official duties of the authority.[: *and*]

(b) Authorized employees of state or local law enforcement agencies, **who provide to the authority adequate identification, such as a badge number or similar authentication of authority,** only as necessary to verify that: [*a person is a lawful possessor of a registry identification card or the designated primary caregiver of a lawful possessor of a registry identification card or that a location is an authorized marijuana grow site. Prior to being provided identifying information from the list, authorized employees of state or local law enforcement agencies shall provide to the authority adequate identification, such as a badge number or similar authentication of authority.*]

(A) A person is a lawful possessor of a registry identification card;

(B) A person is the designated primary caregiver of a lawful possessor of a registry identification card;

(C) A location is an authorized marijuana grow site;

(D) A location is a registered medical marijuana facility; or

(E) A person is the person listed as the person responsible for a registered medical marijuana facility.

(3) Authorized employees of state or local law enforcement agencies that obtain identifying information from the list as authorized under this section may not release or use the information for any purpose other than verification that: [*a person is a lawful possessor of a registry identification card or the designated primary caregiver of a lawful possessor of a registry identification card or that a location is an authorized marijuana grow site.*]

(a) A person is a lawful possessor of a registry identification card;

(b) A person is the designated primary caregiver of a lawful possessor of a registry identification card;

(c) A location is an authorized marijuana grow site;

(d) A location is a registered medical marijuana facility; or

(e) A person is the person listed as the person responsible for a registered medical marijuana facility.

SECTION 9. (1) Sections 1 and 2 of this 2013 Act and the amendments to ORS 475.302, 475.304, 475.309, 475.320, 475.323 and 475.331 by sections 3 to 8 of this 2013 Act become operative on March 1, 2014.

(2) The Oregon Health Authority may take any action before the operative date specified in subsection (1) of this section to enable the authority to exercise, on and after the operative date specified in subsection (1) of this section, all of the duties, functions and powers conferred on the authority by sections 1 and 2 of this 2013 Act and the amendments to ORS 475.302, 475.304, 475.309, 475.320, 475.323 and 475.331 by sections 3 to 8 of this 2013 Act.

SECTION 10. Notwithstanding any other law limiting expenditures, the amount of \$803,276 is established for the biennium beginning July 1, 2013, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by the Oregon Health Authority for administrative and operating expenses incurred in implementing section 2 of this 2013 Act and the amendments to ORS 475.302, 475.304, 475.309, 475.320, 475.323 and 475.331 by sections 3 to 8 of this 2013 Act.

SECTION 11. This 2013 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2013 Act takes effect on its passage.

Passed by House June 24, 2013

Received by Governor:

Repassed by House July 6, 2013

.....M.,....., 2013

Approved:

.....
Ramona J. Line, Chief Clerk of House

.....M.,....., 2013

.....
Tina Kotek, Speaker of House

.....
John Kitzhaber, Governor

Passed by Senate July 3, 2013

Filed in Office of Secretary of State:

.....M.,....., 2013

.....
Peter Courtney, President of Senate

.....
Kate Brown, Secretary of State

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DRAFT

**OREGON HEALTH AUTHORITY
DIVISION 8
MEDICAL MARIJUANA**

333-008-1000

Applicability

(1) A person may not establish, conduct, maintain, manage or operate a facility on or after March 1, 2014, unless the facility has been registered by the Authority under these rules.

(2) Nothing in these rules exempts a PRF, an employee of a registered facility, or a registered facility from complying with any other applicable state or local laws.

~~(3) -and R-~~ registration of a facility does not protect a PRF or employees from possible criminal prosecution under federal law.

Stat. Auth.: ORS 475.314; 475.338

Stats. Implemented: ORS 475.314

333-008-1010

Definitions

For the purposes of OAR 333-008-1000 to 333-008-1290 the following definitions apply:

- "Agricultural land" means land that is located within an exclusive farm use zone as that term is described in ORS 215.203.
- "Attended primarily by minors" means that a majority of the students are minors.
- "Authority" means the Oregon Health Authority.
- "Batch" means "a quantity of usable marijuana or a number of immature plants transferred at one time to a facility by a person authorized by a patient to transfer usable marijuana to a registered facility."
- "Career school" means any private proprietary professional, technical, business or other school instruction, organization or person that offers any instruction or training for the purpose or purported purpose of instructing, training or preparing persons for any profession at a physical location attended primarily by minors.
- "Conviction" means an adjudication of guilt upon a verdict or finding entered in a criminal proceeding in a court of competent jurisdiction
- "Designated primary caregiver" means an individual 18 years of age or older who has significant responsibility for managing the well-being of a person who has been diagnosed with a debilitating medical condition and who is designated as such on that person's application for a registry identification card or in other written notification to the Authority. "Designated primary caregiver" does not include the person's attending physician.
- "Domicile" means the place of abode of an individual where the person intends to remain and to which, if absent, the individual intends to return.
- "Edible" means a product made with marijuana that is intended for ingestion.
- "Employee" means any person, including aliens, employed for remuneration or under any contract of hire, written or oral, express or implied, by an employer. "Employee"

does not include a person who volunteers or donates services performed for no remuneration or without expectation or contemplation of remuneration as the adequate consideration for the services performed for a religious or charitable institution or a governmental entity.

- “Facility” means a medical marijuana facility.
- “Farm use” has the meaning given that term in ORS 215.203.
- “Finished product” means a product infused with marijuana that is intended for Use, ingestion or consumption other than by smoking, including but not limited to edible products, ointments, and tinctures. ~~“Finished product” is a form of usable marijuana.~~
- “Grower” has the same meaning as “person responsible for a marijuana grow site.”
- “Grow site” means a specific location registered by the Authority and used by the grower to produce marijuana for medical use by a specific patient.
- “Immature marijuana plant” means a marijuana plant that has no flowers, is less than 12 inches in height, and less than 12 inches in diameter. A seedling or start that does not meet all three criteria is a mature plant.
- “Macroscopic screening” means visual observation without the aid of magnifying lens(es).
- “Microscopic screening” means visual observation with a minimum magnification of 40x.
- “Minor” means an individual under the age of 18.
- “Oregon Medical Marijuana Program or OMMP” means the program operated and administered by OHA that registers patients, designated primary caregivers, and growers.
- ~~“OMRI listed” means any material listed or registered by the Organic Materials Review Institute (OMRI) as allowable for use in organic production, processing, and handling under the U.S. Department of Agriculture’s national organics standards, also called the National Organic Program (NOP), consistent with requirements at 7 C.F.R. Part 205.~~
- “Patient” has the same meaning as “registry identification cardholder.”
- “Person” means an individual.
- “Person responsible for a marijuana grow site” means a person who has been selected by a patient to produce medical marijuana for the patient, and who has been registered by the Authority for this purpose and has the same meaning as “grower”.
- “Person responsible for a medical marijuana facility or PRF” means an individual who owns, operates, or otherwise has legal responsibility for a facility and who meets the qualifications established in these rules and has been approved by the Authority.
- “Pesticide” means any substance or mixture of substances, intended to prevent, destroy, repel, or mitigate any pest and that includes any of the following:

- Pyrethrins
- Pyrethroids
- Bifentozate
- Abamectin,
- Imidacloprid
- Thiacloprid,
- Thiamethoxam,
- Acetamiprid
- Acequinocyl
- Spirotetramat
- Spiromesifen
- Etoxazole
- Fenoxycarb
- Spinosad
- Myclobutanil
- Trifloxystrobin
- Imazalil
- Daminozide
- Paclobutrizol
- Chloromequat Chloride
- “Primary school” means a learning institution containing any combination of grades Kindergarten - 8 or age level equivalent.
- “Random sample” means an amount of usable marijuana taken from a batch in which different fractions of the usable marijuana have an equal probability of being represented.
- “Registry identification cardholder” means a person who has been diagnosed by an attending physician with a debilitating medical condition and for whom the use of medical marijuana may mitigate the symptoms or effects of the person's debilitating medical condition, and who has been issued a registry identification card by the Authority.
- “Remuneration” means compensation resulting from the employer-employee relationship, including wages, salaries, incentive pay, sick pay, compensatory pay, bonuses, commissions, stand-by pay, and tips.
- “Resident” means an individual who has a domicile within this state.
- “Safe” means a metal receptacle with a locking mechanism capable of storing all usable marijuana at a registered facility that is rendered immobile by being securely anchored to a permanent structure of the building, or a vault.
- “Secondary school” means a learning institution containing any combination of grades 9 - 12 or age level equivalent and includes those institutions that provide junior high schools which include 9th grade.

- “Usable marijuana” has the meaning given that term is ORS 475.302 and includes “finished product”.
- “Valid testing methodology” means a validated testing methodology described in the Cannabis Inflorescence and Leaf Monograph published by the American Herbal Pharmacopoeia (AHP), incorporated by reference, or an alternative scientifically valid testing methodology described in a published national or international regulation or standard.
- “Vault” means an enclosed area that is constructed of steel-reinforced or block concrete and has a door that contains a multiple-position combination lock or the equivalent, a relocking device or equivalent, and a steel plate with a thickness of at least 1 /2 inch.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: ORS 475.314

333-008-1020

Application for Medical Marijuana Facility Registration

(1) Beginning on March 3, 2014, at 8:00 a.m. Pacific Standard Time (PST), the Authority shall begin accepting applications for the registration of a facility. An application may be submitted at any time on or after March 3, 2014, at 8:00 a.m., PST.

(2) A PRF wishing to apply to register a facility must provide to the Authority:

(a) An application on a form prescribed by the Authority;

(b) Any additional documentation required by the Authority in accordance with these rules;

(c) The applicable fee as specified in OAR 333-008-1030; and

(d) Information and The form and fingerprints required for a criminal background check in accordance with OAR 333-008-1130, along with the applicable fee.

(3) An application for the registration of a facility must be submitted by a PRF electronically via the Authority’s website, MMJDispensaries.oregon.gov. The documentation required in section (2)(b) of this rule and the information form and fingerprints described in section (2)(d) of this rule may be submitted electronically to the Authority or may be mailed but must be postmarked within five calendar days of the date the application was submitted electronically to the Authority or the application will be considered to be incomplete. Applicable fees must be paid on-line at the time of application at [insert web link].

~~(4) An application must be signed by the PRF.~~

~~(5) The Authority must review each application received to ensure the application is complete, that the required documentation has been submitted, and the fee paid. The Authority shall return an incomplete application to the person that submitted the application. A person may re-submit an application that was returned as incomplete at any time.~~

~~(5) Applications will be reviewed in the order they are received by the Authority. An application that is returned as incomplete must be treated by the Authority as if it was never received.~~

~~(6) A PRF who wishes to register more than one location must submit a separate application and application fee for each location.~~

(7) At the time of application the Authority must request that a PRF sign an authorization permitting the Authority to publish the location of the facility if the facility is registered.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: ORS 475.314

333-008-1030

Fees

- (1) The initial application fee for the registration of a facility is \$4000, \$500 of which is non-refundable.
- (2) The annual renewal fee for the registration of a facility is \$4000, \$500 of which is non-refundable.
- (3) The Authority must return the refundable portion of the application or renewal fee if:
 - (a) An application is returned to the applicant as incomplete;
 - (b) The Authority denies an application; or
 - (c) An applicant withdraws an application.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1040

Application Review

- (1) Once the Authority has determined that an application is complete it must review the application to determine compliance with ORS 475.314 and these rules.
- (2) The Authority may, in its discretion, prior to acting on an application:
 - (a) Contact the applicant and request additional documentation or information; and
 - (b) Inspect the premises of the proposed facility.
- (3) Prior to making a decision whether to approve or deny an application the Authority must:
 - (a) Ensure that the criminal background check process has been completed and review the results;
 - (b) Contact the OMMP and obtain documentation of whether the location of the facility is the same location as a registered grow site under OAR 333-008-0025;
 - (c) Review available records and information to determine whether the proposed facility is located within 1,000 feet of the real property comprising a public or private elementary, secondary or career school; and
 - (d) Review the list of registered facilities to determine whether any registered facilities are within 1,000 feet of the proposed facility.
- (4) If during the review process the Authority determines that the application or supporting documentation contains intentionally false or misleading information the Authority must return the application to the applicant as incomplete.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1050

Approval of Application

(1) If the proposed facility appears to be in compliance with ORS 475.314 and these rules, and the PRF has passed the criminal background check and is determined to reside in Oregon, the Authority must notify the applicant in writing that the application has been approved, that the facility is registered, and provide the applicant with proof of registration that includes a unique registration number.

(2) A facility that has been registered must display proof of registration in a prominent place inside the facility so that proof of registration is easily visible to individuals authorized to transfer usable marijuana and immature plants to the facility and individuals who are authorized to receive a transfer of usable marijuana and immature plants from the facility at all times when usable marijuana or immature plants are being transferred.

(3) A registered facility may not post any signs at the facility that use the Authority or the OMMP name or logo except to the extent that information is contained on the proof of registration.

(4) A facility's registration is only valid for the location indicated on the proof of registration and is only issued to the PRF that is listed on the application or subsequently approved by the Authority.

(5) A facility's registration may not be transferred to another location ~~or to a person other than the PRF that is listed on the application~~.

(6) If a proposed facility appears to be in compliance with ORS 475.314 and these rules except that the proposed facility does not yet have a security system installed and other security requirements in place, the Authority may issue a provisional registration that is valid for 60 days.

(a) In order to receive provisional registration a PRF must submit to the Authority at the time of application a floor plan of the facility that has marked and labeled all points of entry to the facility, all secure areas required by these rules and the proposed placement of all video cameras.

(b) The provisionally registered facility may not receive transfers of usable marijuana or immature plants or transfer usable marijuana or immature plants until the security system and other security requirements are in place and the Authority has approved the provisionally registered facility to begin operating.

(c) When the security system and other security requirements are in place the PRF must notify the Authority and if the Authority determines that the provisionally registered facility is in full compliance with these rules, the Authority must approve the facility for operation.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1060

Denial of Application

(1) The Authority must deny an application if:

(a) An applicant fails to provide sufficient documentation that the proposed facility meets the qualifications for a facility in these rules; or

(b) The PRF has been:

(A) Convicted for the manufacture or delivery of a controlled substance in Schedule I or Schedule II within five years from the date the application was received by the Authority; or

(B) Convicted more than once for the manufacture or delivery of a controlled substance in Schedule I or Schedule II; or

(C) Prohibited by a court from participating in the OMMP.

(2) If the Authority intends to deny an application for registration it must issue a Notice of Proposed Denial in accordance with ORS 183.411 through 183.470.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1070

Expiration and Renewal of Registration

(1) A facility's registration expires one year following the date of application approval.

(2) If a PRF wishes to renew the facility's registration, the person must submit to the Authority within 690 days of the registration's expiration:

(a) An application renewal form prescribed by the Authority;

(b) The required renewal fee;

(c) Forms required for the Authority to do a criminal background check on the PRF.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1080

Notification of Changes

(1) A PRF must notify the Authority within 10 calendar days of any of the following:

(a) The person's conviction for the manufacture or delivery of a controlled substance in Schedule I or Schedule II;

(b) The issuance of a court order that prohibits the person from participating in the OMMP;

(c) A decision to change the PRF;

(d) A decision to permanently close the facility at that location;

(e) A decision to move to a new location;

(f) A change in the person's residency; and

(g) The location of an elementary, secondary or career school attended primarily by minors within 1,000 feet of the facility.

(2) The notification required in section (1) of this rule must include a description of what has changed and any documentation necessary for the Authority to determine whether the facility is still in compliance with ORS 474.314 and these rules including but not limited to, as applicable:

(a) A copy of the criminal judgment or order;

(b) A copy of the court order prohibiting the PRF from participating in the OMMP;

(c) The location of the school that has been identified as being within 1,000 feet of the facility; or

(d) The information required in OAR 333-008-1120 and 1130 to determine the residency of the new PRF and to perform the criminal background check.

(3) Failure of the PRF to notify the Authority in accordance with this rule may result in revocation of a facility's registration.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1090 **Required Closures**

A facility may not receive transfers of usable marijuana or immature plants or transfer usable marijuana or immature plants if:

(1) The PRF is convicted for the manufacture or delivery of a controlled substance in Schedule I or Schedule II;

(2) The PRF changes and the Authority has not:

(a) Performed a criminal background check on the proposed PRF in accordance with OAR 333-008-1130;

(b) Determined whether the individual is a resident of Oregon; and

(c) Provided written approval that the new PRF meets the requirements of ORS 475.314.

(3) The PRF has been ordered by the court not to participate in the OMMP; or

(4) An elementary, secondary or career school attended primarily by minors is found to be within 1,000 of the registered facility.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1100 **Business Qualifications for Medical Marijuana Facility Registration**

(1) A facility must be registered as a business or at the time of applying to register a facility have filed a pending application to register as a business with the Office of the Secretary of State.

(2) The Authority may not approve an application until until the applicant provides proof of it has verified that the facility is registered as a business with the Office of the Secretary of State.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1110 **Locations of Medical Marijuana Facilities**

(1) In order to be registered a facility must be located in an area that is zoned by the local governing agency for commercial, industrial or mixed use or as agricultural land.

(2) Registration by the Authority is not a guarantee that a facility is permitted to operate under applicable land use or other local government laws where the facility is located.

(3) A facility may not be located:

- (a) At the same address as a registered marijuana grow site;
- (b) Within 1,000 feet of the real property comprising a public or private elementary, secondary or career school attended primarily by minors; or
- (c) Within 1,000 feet of another medical marijuana facility;

(4) In order for the Authority to ensure compliance with this rule a PRF must submit with an initial application ~~documentation from a governmental entity that shows the current zoning for the location of the proposed facility, and that if the facility is proposed to be located in agricultural land that the facility's use is an approved use within an exclusive farm use zone;~~

~~—— (b) A map of the area in which the proposed facility is located that identifies by name, all public or private elementary, secondary or career schools.~~

~~—— (c) A document that shows the addresses and contact information of all the schools referenced in subsection (b) of this section, the distances between each of the schools and the proposed facility, and a description of how the distances were determined.~~

(5) For purposes of determining the distance between a facility and a school referenced in section (3)(b) of this rule, “within 1,000 feet” means a straight line measurement in a radius extending for 1,000 feet or less in every direction from any point on the boundary line of the real property comprising an existing public or private elementary, secondary or career school primarily attended by minors.

(6) For purposes of determining the distance between a facility and another registered facility “within 1,000 feet” means a straight line measurement in a radius extending for 1,000 feet or less in every direction from any point on the boundary line of the real property comprising a registered facility.

(7) In order to be registered a facility must operate at a particular location as specified in the application and may not be mobile.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1120

Person Responsible for a Medical Marijuana Facility (PRF)

(1) A PRF must:

(a) Be a resident of Oregon. Residency may be proved by submitting to the Authority:
(A) An Oregon Driver's license, ~~or~~ Oregon identification card that includes a photograph of the person, or a military identification card that includes a photograph of the person; and

(B) Copies of utility bills, rental receipts, mortgage statements or similar documents that contain the name and address of the domicile of the PRF.

(b) Have legal authority to act on behalf of the facility; and

(c) Be responsible for ensuring the facility complies with applicable laws, if registered;

(2) A PRF may not:

(a) Have been convicted in any state for the manufacture or delivery of a controlled substance in Schedule I or Schedule II within five years from the date of application; or

(b) Have been convicted more than once in any state for the manufacture or delivery of a controlled substance in Schedule I or Schedule II .

(3) At the time of application a PRF must submit to the Authority a copy of the information described in section (1)(a)(A) and (B) of this rule ~~and must disclose whether he or she has any disqualifying convictions as described in section (2) of this rule.~~

(4) A PRF is accountable for any intentional or unintentional action of its owners, officers, managers, employees or agents, with or without the knowledge of the PRF, who violate ORS 475.314 or these rules.

(5) If a PRF no longer meets the criteria of a PRF the Authority shall inform the PRF and the owner of the facility if different that:

(a) The PRF may no longer serve in that capacity;

(b) In order to remain certified, a change of PRF form must be submitted; and

(c) The facility may not operate until the Authority has approved a new PRF.

(6) If the Authority is notified that a change of PRF is needed, the current PRF is no longer able to serve as the PRF, or the PRF has been or will be removed by the owner of a facility, the owner of the facility must submit a change of PRF form to Authority within ten business days of the notification or the Authority will begin proceedings to revoke the certification of the facility.

(7) If the PRF of record for the facility is no longer serving in that capacity the facility may not operate until a new PRF has been approved by the Authority.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1130

Criminal Background Checks

(1) A PRF must, at the time of application, provide to the Authority:

(a) A criminal background check request form, prescribed by the Authority that ~~must~~ includes but is not limited to ~~the person's~~:

(A) First, middle and last name;

(B) Any aliases;

(C) Date of birth;

(D) Driver's license information; and

(E) Address and recent residency information;

(b) Fingerprints in accordance with the instructions on the Authority's webpage, [insert web address]A fingerprint card; and.

~~(c) A fee of \$ _____.~~

(2) The Authority may request that the PRF disclose his or her Social Security Number if notice is provided that:

(a) Indicates the disclosure of the Social Security Number is voluntary; and

(b) That the Authority requests the Social Security Number solely for the purpose of positively identifying the PRF during the criminal records check process.

(3) The Authority shall conduct a criminal records check in order to determine whether the PRF has been convicted of the manufacture or delivery of a controlled substance in Schedule I or Schedule II in any state.

(4) The Authority must conduct a criminal background check in accordance with this rule on a PRF every year at the time of application renewal.

(5) If a PRF wishes to challenge the accuracy or completeness of information provided by the Department of State Police, the Federal Bureau of Investigation and agencies reporting information to the Department of State Police or Federal Bureau of Investigation, those challenges must be made through the Department of State Police, Federal Bureau of Investigation or reporting agency and not through the contested case process specified in OAR 333-008-1060(2).

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1140

Security for Registered Facilities

(1) The PRF must ensure that a registered facility complies with OAR 333-008-1140 to 333-008-1180.

(2) The PRF is responsible for the security of all usable marijuana and immature plants in the registered facility, including providing adequate safeguards against theft or diversion of usable marijuana and immature plants and records that are required to be kept.

(3) The PRF must ensure that commercial grade, non-residential door locks are installed on every external door at a registered facility prior to opening for business and used while a facility is registered.

(4) During all hours when the registered facility is open for business, the PRF must ensure that:

(a) All usable marijuana and immature plants received and all usable marijuana and immature plants available for transfer to a patient or a designated primary caregiver are kept in a locked, secure area that can only be accessed by authorized personnel.

(b) All areas where usable marijuana or immature plants are received for transfer by a registered facility are identified as a restricted access area by posting a sign not less than 12 inches wide and 12 inches long, composed of letters not less than a half inch in height that reads, "Restricted Access Area – Authorized Personnel Only.

(c) All areas where usable marijuana or immature plants are available for transfer to a patient or designated primary caregiver are:

(A) Identified as a restricted access area and clearly identified by the posting of a sign not less than 12 inches wide and 12 inches long, composed of letters not less than a half inch in height that reads "Restricted Access Area – No Minors Allowed";

(B) Supervised by the PRF or an employee of the registered facility at all times when a patient or designated primary caregiver is present; and

(C) Separate from any area where usable marijuana or immature plants are being transferred to a registered facility.

(5) During all hours when the registered facility is not open for business the PRF must ensure that:

(a) All entrances to and exits from the facility are securely locked and any keys or key codes to the facility remain in the possession of the PRF or authorized employees;

(b) All usable marijuana is kept in a safe; and

(c) All immature plants are in a locked room.

(6) The PRF must ensure that:

(a) Electronic Records are encrypted, and securely stored to prevent unauthorized access and ensure confidentiality;

(b) There is an electronic back-up system for all electronic records; and

(c) All video recordings and archived required records not stored electronically are kept in a locked storage area. Current records may be kept in a locked cupboard or desk outside the locked storage area during hours when the registered facility is open.

(7) A PRF must have detailed written policies and procedures and training for all authorized employees to ensure that the rules concerning security in OAR 333-008-1140 to 333-008-1180 are followed.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1150

Alarm System for Registered Facilities

(1) Prior to opening for business, a PRF must ensure that a registered facility has a security alarm system, installed by an alarm installation company, on all facility entry or exit points and perimeter windows.

(2) At the time of application a PRF must submit to the Authority documentation of the:

(a) Alarm system that is installed or proposed for installation;

(b) Company that installed the system or plans to install the system;

(c) Features of the system that meet the criteria of this rule.

(3) A PRF must ensure that the facility is continuously monitored by the alarm system.

(4) The security alarm system for the registered facility must:

(a) Be able to detect movement inside the registered facility;

(b) Be programmed to notify the a security company that will notify the PRF or his or her designee in the event of a breach; and

(c) Have at least two "panic buttons" located inside the registered facility that are linked with the alarm system.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1160

Video Surveillance Equipment for Registered Facilities

(1) Prior to opening for business, a PRF must install a fully operational video surveillance recording system.

- (2) At the time of application a PRF must submit to the Authority documentation of the:
 - (a) Video surveillance system that is installed or proposed for installation;
 - (b) Company or person that installed the system or plans to install the system;
 - (c) Features of the system that meet the criteria of this rule.
- (3) Video surveillance equipment must, at a minimum:
 - (a) Consist of:
 - (i) Digital or network video recorders
 - (ii) Cameras capable of meeting the requirements of OAR 333-008-1170 and this rule;
 - (iii) Video monitors;
 - (iv) Digital archiving devices; and
 - (v) A color printer capable of producing still photos;
 - (b) Be equipped with a failure notification system that provides prompt notification to the PRF or employees of any prolonged surveillance interruption or failure; and
 - (c) Have sufficient battery backup to support a minimum of one hour of recording time in the event of a power outage.
- (4) All video surveillance equipment and recordings must be stored in a locked secure area that is accessible only to the PRF, authorized employees of the registered facility and the Authority.
- ~~(5) The PRF must notify the Authority of any loss of video surveillance capability that lasts beyond~~

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1170

Required Camera Coverage and Camera Placement for Registered Facilities

- (1) A PRF must ensure that a registered facility has camera coverage for:
 - (a) All secure areas and restricted access areas described in OAR 333-008-1140;
 - (b) All point of sale areas;
 - (c) All points of entry or exit to secure and restricted access areas; and
 - (d) All points of entry to or exit from to the registered facility.
- (2) A PRF must ensure that camera placement must be is capable of identifying activity occurring within 15 feet of all points of entry to the registered facility and exit from the registered facility and shall allow for the clear and certain identification of any individual and activities on the facility premises.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1180

Video Recording Requirements for Registered Facilities

- (1) The PRF must ensure that all camera views of all secure and restricted access areas and points of entry to or exit from the registered facility are must be continuously monitored by motion sensor video equipment or similar technology recorded 24 hours a day.
- (2) A PRF must ensure that:

- (a) All surveillance recordings are kept for a minimum of 30 days and are in a format that can be easily accessed for viewing ~~by the Authority;~~
- (b) The surveillance system has the capability to produce a color still photograph from any camera image;
- (c) That the date and time is embedded on all surveillance recordings without significantly obscuring the picture;
- (d) Video recordings are archived in a format that ensures authentication of the recording as a legitimately-captured video and guarantees that no alterations of the recorded image has taken place; and
- (e) Video surveillance records and recordings are available upon request to the Authority ~~for inspection or investigation purposes for the purpose of ensuring compliance with ORS 475.314 and these rules.~~

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1190

Testing

- (1) A PRF must ensure that usable marijuana and immature plants are tested for pesticides, mold and mildew in accordance with this rule prior to the usable marijuana or immature plants being transferred to a patient or a designated primary caregiver.
- (2) A PRF must ~~have submit to the Authority written detailed~~ policies and procedures that ~~describe how the registered facility complies~~ with this rule.
- (3) Upon usable marijuana being transferred to a registered facility in accordance with OAR 333-008-1230, the PRF must ensure the usable marijuana is segregated into ~~homogenized~~ batches, ~~that each batch is and~~ placed in an individual container or bag, ~~and that with~~ a label ~~is~~ attached to the container or bag ~~batch~~ that includes at least the following information:
 - (a) A unique identifier;
 - (b) The name of the person who transferred it; and
 - (c) The date the usable marijuana was received by the registered facility.
- (4) **Sampling.** A PRF must ensure that ~~random~~ samples from each batch are taken in ~~an amount necessary to conduct the applicable test, accordance with section (5) of this rule,~~ that the samples are labeled with the batch's unique identifier, and ~~submitted for testing.~~
- (5) **Testing.** A PRF must ensure that each sample is tested for pesticides, mold, and mildew and for an analysis of the levels of **THC and CBN.**
 - ~~(a) Immature Plants. An immature plant may be tested for pesticides, mold or mildew by conducting a macroscopic or microscopic screening to determine if the plant has visible pesticide residue, mold or mildew.~~
 - ~~(b) Flowers or other usable marijuana plant material. Usable marijuana in the form of flowers of other plant material must be:
 - ~~(A) Tested for pesticides, mold and mildew using valid testing methodologies and macroscopic or microscopic screening may not be used; and.~~
 - ~~(B) Analyzed, using valid testing methodologies, to determine the levels of **THC and CBN.**~~~~

(c) Edibles, Liquids and Solid Extracts. If the usable marijuana used in the edible, liquid or solid extract has been tested in accordance with these rules and tested negative for pesticides, mold or mildew, the edible, liquid or solid extract does not need to be tested for pesticides, mold and mildew but does need to be tested for an analysis of the levels of THC and CBN.

(6) Laboratory Requirements. A PRF must ensure that all testing, except for testing of immature plants is done by a third party or in-house laboratory that:

(a) Uses valid testing methodologies; and

(b) Has a Quality System for testing of pesticides, mold and mildew that meets the:

(A) 2005 International Organization for Standardization 17025 Standard; or

(B) 2009 National Environmental Laboratory Accreditation Conference Institute TNI Standards.

(7) Macroscopic or microscopic screening of immature plants must be conducted by a person who has a minimum of a bachelor's degree in horticulture, botany, plant pathology, microbiology, or an equivalent degree but is not required to be done by a laboratory.

(8) Testing Results: A laboratory must provide testing results to the PRF signed by an official of the laboratory who can attest to the accuracy of the results, and that includes the levels of pesticides, mold or mildew detected and the levels of THC and CBN.

(a) If an immature plant has visible pesticide residue, mold or mildew it must be deemed to test positive and must be returned to the person who transferred the immature plant to the registered facility.

(b) A sample shall be deemed to test positive for mold and mildew if the sample has levels that exceed the maximum acceptable counts in the Pharmacopeia, Section 1111 (May 1, 2009), incorporated by reference.

(c) A sample shall be deemed to test positive for pesticides if it contains more than 0.01 parts per million of a pesticide.

(9) If an immature plant or sample of usable marijuana tests positive for pesticides, mold or mildew based on the standards in this rule the PRF must ensure the entire batch from which the sample was taken is returned to the person who transferred the immature plant or usable marijuana to the registered facility and must document how many or how much was returned, to whom, and the date it was returned.

(10) A registered facility may perform its own testing as long as the testing complies with this rule.

(11) The PRF may permit laboratory personnel or other persons authorized to do testing access to secure or restricted access areas of the registered facility where usable marijuana or immature plants are stored. The PRF must log the date and time in and out of all such persons.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1200

Operation of Registered Facilities

(1) A PRF must ensure that a registered facility does not permit:

~~(a) A person to enter into an area of a registered facility where usable marijuana or immature plants are present unless the registered facility has documented that the person is a patient, caregiver or grower currently registered with OMMP.~~

~~(b) A minor to be present in any area of a registered facility where usable marijuana or immature plants are present anywhere on the premises of the registered facility, even if the minor is a patient or an employee; and~~ or

~~(c) Consumption, ingestion, inhalation or topical application or use of usable marijuana anywhere on the premises of the registered facility, except that an employee of a registered facility who is a patient may consume usable marijuana during their work shift as necessary for his or her medical condition, in a closed room not visible to the public or to patients or caregivers on the premises of the registered facility to receive a transfer of usable marijuana or an immature plant.~~

(2) A PRF must ensure that a registered facility uses an Oregon Department of Agriculture approved scale to weigh all usable marijuana.

(3) The following persons are the only persons permitted in any area of a registered facility where usable marijuana or immature plants are present, and only in accordance with these rules, as applicable:

(a) A PRF;

(b) An owner of a registered facility;

(c) An employee of the registered facility;

~~(d) A contractor authorized by the PRF to be on the premises of a registered facility;~~

~~(e) A patient, designated primary caregiver, or growers;~~

(f) An authorized employee or authorized contractor of OHA; and

(g) Other government officials that ~~have~~ may have jurisdiction over some aspect of the registered facility or that otherwise have authority to be on the premises of the registered facility.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1210

Record Keeping

(1) A PRF must ensure that the following information is documented and maintained electronically in a manner that can easily be shared with the Authority or accessed by the Authority:

(a) All Authorization to Transfer forms, including the date on which a form was received;

(b) Any written notifications from a patient with regard to any change in status as required by ORS 475.309(7)(a)(B) or (10)(a);

(c) Any revocation of an Authorization to Transfer form;

(d) All transfer information required in OAR 333-008-1230 and 333-008-1240;

(e) Documentation of the costs of doing normal and customary business used to establish the reimbursement amounts for transfers of usable marijuana or immature plants, including costs related to transferring, handling, securing, insuring, testing, packaging and

processing usable marijuana and immature marijuana plants and the cost of supplies, utilities and rent or mortgage.

(f) The amount of money paid by a registered facility to a grower for each transfer of usable marijuana or immature plants; ~~and~~

(g) The laboratory reports ~~results~~ of all testing and other information required to be documented in OAR 333-008-1190~~(4)~~; ~~and~~

(h) All other information required to be documented and retained in these rules.

(2) The PRF must ensure that information required to be documented ~~and maintained~~ pursuant to section (1) of this rule is maintained in a safe and secure manner that protects the information from unauthorized access, theft, fire, or other destructive forces, and is easily retrievable for inspection by the Authority upon request, either at the registered facility or online ~~that protects the information from theft, fire, or other destructive forces, and is easily retrievable for inspection by the Authority upon request.~~

(3) A PRF must ensure that a registered facility uses an electronic data management system ~~point of sale system~~ for the recording of transfers of medical marijuana. The ~~POS~~ system must meet the following minimum requirements:

(a) Record the information required to be documented in this rule and OAR 333-008-1230 and 1240;

(b) Provide for off-site or secondary backup system;

(c) Assign a unique transaction number for each transfer to or from the registered facility;

(d) Monitor date of testing and testing results;

(e) Track products by unique transaction number through the transfer in, testing and transfer out processes;

(f) Generate transaction and other reports requested by the Authority viewable in pdf format;

(g) Produce reports, including but not limited to inventory reports that allow the Authority to inspect reports either on-site or through data generated by the POS system; ~~and~~

(h) Provide security measures to ensure patient and grower records are kept confidential.

(4) Documents and information required to be maintained in these rules must be retained by the PRF for at least one year.

(5) A PRF must provide the Authority with any documentation required to be maintained in these rules upon request, in the format requested by the Authority, or permit the Authority access to such documentation on-site.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: 475.314

333-008-1220

Labeling

(1) Prior to transferring usable marijuana a PRF must ensure that a label is affixed to the usable marijuana that includes but is not limited to:

- (a) The amount of tetrahydrocannabinol (THC) and cannabanoids (CBN) in the usable marijuana;
 - (b) If pre-packaged, the weight or volume of the packaged usable marijuana in metric units;
 - (c) The amount of usable marijuana in a finished product in metric units and description of any pesticides in the usable marijuana; and
 - (d) Potency information; and
 - (e) Who performed the testing.
- (2) If the registered facility transfers usable marijuana in a form that is edible, the PRF must ensure that the usable marijuana has a warning label on the outside of the packaging that includes the following: **“WARNING: MEDICINAL PRODUCT – KEEP OUT OF REACH OF CHILDREN”** in bold capital letters, in a font size that is larger than the type-size of the other printing on the label such that it is easy to read and prominently displayed on the product.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: 475.314

333-008-1230

Transfers to a Registered Facility

(1) A patient may authorize usable marijuana or immature marijuana plants to be transferred to a registered facility by signing an Authorization to Transfer form prescribed by the Authority. A patient may authorize transfers to more than one registered facility. A separate form must be provided for each registered facility. The Authorization must include, but is not limited to, the following information:

- (a) The patient’s name, OMMP card number and expiration date and contact information;
- (b) The name and contact information of the individual who is authorized to transfer the usable marijuana or immature marijuana plants to the registered facility and that individuals’ OMMP card number and expiration date;
- (c) The name and address of the registered facility that is authorized to receive the usable marijuana or immature marijuana plants; and
- (d) The date the authorization expires, if earlier than the expiration date of the patient’s OMMP card applicable.

(2) Only a patient, the patient’s designated primary caregiver, or the patient’s grower may be authorized to transfer usable marijuana or immature plants to a registered facility.

(3) The original An Authorization to Transfer form must be provided to the registered facility to which a transfer may be made by the patient or person authorized to transfer the usable marijuana or immature plants. The patient should retain a copy of the Authorization to Transfer form for his or her records and provide a copy to the person authorized to transfer the usable marijuana or immature plants.

(4) An Authorization to Transfer form automatically expires on the date the patient’s OMMP card expires, unless the patient has specified an earlier expiration date. If the patient renews his or her OMMP card the patient may execute a new Authorization to Transfer form in accordance with this rule.

(5) Once usable marijuana or an immature plant is transferred to a registered facility pursuant to a valid Authorization to Transfer form, the usable marijuana or immature plant is no longer the property of the patient unless the usable marijuana or immature plants are returned by the registered facility ~~because they tested positive for pesticides, mold, mold or mildew.~~

(6) Prior to a registered facility accepting a transfer of usable marijuana or immature plants the PRF must ensure that:

(a) It has a valid Authorization to Transfer form on file that authorizes the individual that is transferring the usable marijuana or immature plants to make the transfer; and

(b) The individual transferring the usable marijuana or immature plants is the individual authorized to make the transfer.

(7) A PRF must ensure that when a registered facility accepts a transfer of usable marijuana or an immature plant the batch of usable marijuana ~~and each~~ immature plant are ~~segregated in accordance with the testing rule, OAR 333-008-1190 given a unique identifier~~ and that the following information is documented, as applicable:

(a) The unique identifier;

(b) The weight in ~~metric units grams or volume in milliliters or liters~~ of all usable marijuana received by the registered facility;

(c) The number of immature plants received by the registered facility;

(d) The amount of a finished product received by the registered facility, including, as applicable, the weight in ~~metric units grams or volume in milliliters or liters~~, or the number of units of a finished product;

(e) A description of the form the usable marijuana was in when it was received, for example, oil or an edible product;

(f) Who transferred the usable marijuana or ~~the an~~ immature plant, the individual's OMMP card number and expiration date of the card, a copy of the individual's picture identification, the date the usable marijuana or an immature plant was received, and the name of the patient who authorized the transfer; and

(g) The amount of reimbursement paid by the registered facility.

(8) Nothing in these rules requires a PRF or a registered facility to accept a transfer of usable marijuana or immature plants.

(9) A PRF must ensure that:

(a) From the time that a batch or plant has been received by the registered facility until it is tested in accordance with these rules, the ~~usable~~ usable marijuana and immature plants ~~received by the registered facility~~ are segregated, ~~and~~ withheld from use, ~~and~~ kept in a secure, ~~cool and dry~~ location so as to prevent the marijuana or plants from becoming contaminated or losing its efficacy, or from being tampered with or transferred except ~~that the~~ samples may be ~~that have been~~ removed for testing, ~~from the time that a batch has been received by the registered facility until it is tested in accordance with these rules~~; and

(b) That no usable marijuana or immature plants are transferred to a patient or designated primary caregiver until testing has been completed, the registered facility has received a written testing reports, and the usable marijuana and immature plants have tested negative for pesticides, mold and mildew.

(10) Usable marijuana and immature plants must be kept on-site at the facility. The Authority may cite a PRF for a violation of these rules if during an inspection it cannot account for its

inventory or if the amount of usable marijuana at the registered facility is not within 5% of the documented inventory.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: ORS 475.3154

333-008-1240

Transfers to a Patient or Designated Primary Caregiver

(1) Prior to a registered facility transferring usable marijuana or an immature plant to a patient or a designated primary caregiver the PRF must ensure that:

(a) The usable marijuana or an immature plant has not tested positive for mold, mildew or pesticides as specified in OAR 333-008-1190; and

(b) The identity and cardholder status of the person requesting usable marijuana or an immature plant is verified by viewing the person's OMMP card and picture identification and making sure the two match.

(2) The PRF must ensure that for each transfer of usable marijuana or an immature plant to a patient or a designated primary caregiver the following information is documented:

(a) The name, OMMP card number and expiration date of the card of each person to whom the registered facility transfers usable marijuana or an immature plant;

(b) A copy of the person's picture identification;

(c) The amount of usable marijuana transferred in- ~~metric units, milligrams, grams, milliliters or liters, or units~~, as applicable;

(d) The number of immature plants, if applicable;

(e) The amount of a finished product transferred in- ~~metric units, milligrams, grams, milliliters~~, or units ~~of the finished product~~, as applicable;

(f) A description of what was transferred;

(g) The date of the transfer; and

(h) The amount of money paid by a patient or a designated primary caregiver to a registered facility for the transfer of usable marijuana or an immature plant.

(3) The PRF must ensure that a registered facility does not transfer at any one time more usable marijuana or immature plants than a patient or designated primary caregiver is permitted to possess under ORS 475.320(1)(a). A PRF is not responsible for determining whether a patient or designated primary caregiver is limited in the amount of usable marijuana he or she can possess under ORS 475.320(1)(b).

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: ORS 475.314

333-008-1250

Inspections

(1) The Authority must conduct an initial inspection of every registered facility within ~~six~~three months of approving an application to ensure compliance with these rules, and must conduct a routine inspection of every registered facility at least every year.

- (2) The Authority may conduct a complaint inspection at any time following the receipt of a complaint that alleges a registered facility is in violation of ORS 475.314 or these rules.
- (3) The Authority may conduct an inspection at any time if it believes, for any reason, that a registered facility or a PRF is in violation of ORS 475.314 or these rules.
- (4) A PRF and any employees, contractors, or other individuals working at a registered facility must cooperate with the Authority during an inspection.
- (5) If an individual at a registered facility fails to permit the Authority to conduct an inspection the Authority may seek an administrative warrant authorizing the inspection pursuant to ORS 431.262.

Stat. Auth.: ORS 431.262, 475.314, 475.338
Stats. Implemented: ORS 431.262, 475.314

333-008-1260

Violations

- (1) A PRF-registered facility is in violation of ORS 475.314 or these rules for:
 - (a) A PRF or an employee of a facility failing to cooperate with an inspection;
 - (b) The submission by a PRF of false or misleading information to the Authority in support of an application or in seeking to retain registration;
 - (c) Transferring usable marijuana or immature plants to an individual who is not a patient or a designated primary caregiver;
 - (d) Accepting a transfer of usable marijuana or immature plants without a valid authorization from the patient;
 - (e) Possessing a mature marijuana plant at the registered facility;
 - (f) Failing to document and maintain information in the manner required by these rules;
 - (g) Failing to account for usable marijuana or immature plants on the premises of the registered facility, taking into account a 5% loss;
 - (g) Failing to submit a plan of correction in accordance with OAR333-008-1270;
 - (h) Failing to comply with a final order of the Authority, including failing to pay a civil penalty; or
 - (i) Failing to comply with ORS 475.314 or any of these rules.
- (2) It is a violation of ORS 475.314 and these rules to operate a facility without being registered by the Authority.

Stat. Auth.: ORS 475.314, 475.338
Stats. Implemented: ORS 475.314

333-008-1270

Enforcement

(1) Informal Enforcement

- (a) If, during an inspection the Authority documents violations of ORS 475.314 or any of these rules, the Authority may issue a written Notice of Violation to the PRF that cites the laws alleged to have been violated and the facts supporting the allegations.

(b) The PRF must submit to the Authority a signed plan of correction within 10 business days from the date the Notice of Violation was mailed to the person. A signed plan of correction will not be used by the Authority as an admission of the violations alleged in the Notice.

(c) A PRF must correct all deficiencies within 10 days from the date of the Notice, unless an extension of time is requested from the Authority. A request for such an extension shall be submitted in writing and must accompany the plan of correction.

(d) The Authority must determine if a written plan of correction is acceptable. If the plan of correction is not acceptable to the Authority it must notify the PRF in writing and request that the plan of correction be modified and resubmitted no later than 10 working days from the date the letter of non-acceptance was mailed.

(e) If the registered facility does not come into compliance by the date of correction reflected on the plan of correction, the Authority may propose to revoke the registration of the facility or impose civil penalties.

(f) The Authority may conduct an inspection at any time to determine whether a registered facility has corrected the deficiencies in a Notice of Violation.

(2) Formal Enforcement: If, during an inspection or based on other information the Authority determines that a registered facility or PRF is in violation of ORS 475.314 or these rules the Authority may issue:

(a) A Notice of Proposed Revocation in accordance with ORS 183.411 through 183.470;

or

(b) A Notice of Imposition of Civil Penalties in accordance with ORS 183.745. Civil penalties may be issued for any violation of ORS 475.314 and these rules, not to exceed \$500 per violation per day.

(3) The Authority must determine whether to use the informal or formal enforcement process based on the nature of the alleged violations, whether there are mitigating or aggravating factors, and whether the PRF or the registered facility has a history of violations.

(4) The Authority must issue a Notice of Proposed Revocation if the:

(a) Facility no longer meets the criteria in ORS 475.314(3)(a) to (d); or

(b) PRF is not a resident of Oregon, has disqualifying criminal convictions as described in OAR 333-008-1120, or a court has issued an order that prohibits the PRF from participating in the OMMP under ORS 475.300 – 475.346 unless a new PRF is approved by the Authority.

(5) The Authority may maintain a civil action against a facility that is operating but not registered in accordance with ORS 475.314 and these rules.

(6) The Authority must post a final order revoking the registration of a facility on the Authority's website and provide a copy of the final order to the OMMP.

(7) To the extent permitted by law, if the Authority discovers violations that may constitute criminal conduct or conduct that is in violation of laws within the jurisdiction of other state or local governmental entities, the Authority may refer the matter to the applicable agency.

(8) If the registration of a facility is revoked the PRF must make arrangements to return the usable marijuana and immature plants in amounts still possessed by the facility, to the person who transferred the usable marijuana or immature plants and must document the same.

Stat. Auth.: ORS 431.262, 475.314, 475.338

Stats. Implemented: ORS 431.262, 475.314

333-008-1280

Confidentiality

- (1) Any criminal background information received by the Authority about a PRF during the criminal background check process is confidential and is not subject to disclosure without a court order.
- (2) The name of a PRF and the address of a registered facility is confidential and is not subject to disclosure without a court order, except as provided in section (5) of this rule, or unless a PRF has authorized disclosure.
- (3) If an application has been denied, the information submitted to the Authority in an application for registration of a facility is not confidential and may be subject to disclosure under ORS 192.410 -192.505.
- (4) A final order revoking the registration of a facility is not confidential and may be posted on the Authority's website or otherwise made public by the Authority.
- (5) Authorized employees of state and local law enforcement agencies may verify with the Authority at all times whether that:
 - (a) A location is the location of a registered ~~medical marijuana~~ facility; or
 - (b) A person is at the person listed as the PRF of a registered facility.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: ORS 475.314, 475.331

333-008-1290

Change of Location

- (1) A registered facility that changes location must submit a new application that complies with OAR 333-008-1020.
- (2) A facility may not operate at a new location unless it is registered by the Authority.

Stat. Auth.: ORS 475.314, 475.338

Stats. Implemented: ORS 475.314

333-008-0010

Definitions

For the purposes of OAR 333-008-0000 through 333-008-0120, the following definitions apply:

- (1) "Act" means the Oregon Medical Marijuana Act.
- (2) "Applicant" means a person applying for an Oregon Medical Marijuana registry identification card on a form prescribed by the Authority.
- (3) "Attending physician" means a Doctor of Medicine (MD) or Doctor of Osteopathy (DO), licensed under ORS Chapter 677, who has primary responsibility for the care and treatment of a person diagnosed with a debilitating medical condition.
- (4) "Authority" means the Oregon Health Authority.
- (5) "Debilitating medical condition" means:
 - (a) Cancer, glaucoma, agitation due to Alzheimer's disease, positive status for human immunodeficiency virus or acquired immune deficiency syndrome, or treatment for these conditions;
 - (b) A medical condition or treatment for a medical condition that produces, for a specific patient, one or more of the following:
 - (A) Cachexia;
 - (B) Severe pain;
 - (C) Severe nausea;
 - (D) Seizures, including but not limited to seizures caused by epilepsy; or
 - (E) Persistent muscle spasms, including but not limited to spasms caused by multiple sclerosis; or
 - (c) Any other medical condition or treatment for a medical condition adopted by the Authority by rule or approved by the Authority pursuant to a petition submitted under OAR 333-008-0090.
- (6) "Delivery" means the actual, constructive or attempted transfer, other than by administering or dispensing, from one person to another of a controlled substance, whether or not there is an agency relationship, but does not include transfer of marijuana from one patient to another patient if no consideration is paid for the transfer.
- (7) "Designated primary caregiver" means an individual 18 years of age or older who has significant responsibility for managing the well-being of a person who has been diagnosed with a debilitating medical condition and who is designated as such on that person's application for a registry identification card or in other written notification to the Authority. "Designated primary caregiver" does not include the person's attending physician.
- (8) "Food stamps" means the Supplemental Nutrition Assistance Program as defined and governed by ORS 411.806 through 411.845.
- (9) "Grow site" means a specific location registered by the Authority used by the grower to produce marijuana for medical use by a specific patient.
- (10) "Grow site registration card" means the card issued to the patient and displayed at the grow site.
- (11) "Grower" has the same meaning as "person responsible for a marijuana grow site."
- (12) "Immature plant" has the same meaning as "seedling or start."
- (13) "Marijuana" means all parts of the plant Cannabis family Moraceae, whether growing or not; the resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant or its resin. It does not include the mature stalks of the plant, fiber produced from the stalks, oil or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of the plant which is incapable of germination.
- (14) "Mature plant" means a marijuana plant that does not fall within the definition of a seedling or a start.
- (15) "Medical marijuana facility" is a facility, registered by the Authority, under XXX-XXX-XXXX.

- (165) "Medical use of marijuana" means the production, possession, delivery, or administration of marijuana, or paraphernalia used to administer marijuana, as necessary for the exclusive benefit of a person to mitigate the symptoms or effects of his or her debilitating medical condition.
- (176) "Oregon Health Plan (OHP)" means the medical assistance program administered by the Authority under ORS Chapter 414.
- (187) "OMMP" refers to the office within the Authority that administers the provisions of the OMMA, and all policies and procedures pertaining thereto, as set forth in these rules.
- (198) "Parent or legal guardian" means the custodial parent or legal guardian with responsibility for health care decisions for the person under 18 years of age.
- (2019) "Patient" has the same meaning as "registry identification cardholder."
- (210) "Person responsible for a marijuana grow site" means a person who has been selected by a patient to produce medical marijuana for the patient, and who has been registered by the Authority for this purpose.
- (222) "Person responsible for a medical marijuana facility" has the meaning given that term in OAR 333-008-XXXX.
- (231) "Primary responsibility" as that term is used in relation to an attending physician means that the physician:
- (a) Provides primary health care to the patient; or
 - (b) Provides medical specialty care and treatment to the patient as recognized by the American Board of Medical Specialties; or
 - (c) Is a consultant who has been asked to examine and treat the patient by the patient's primary care physician licensed under ORS Chapter 677, the patient's physician assistant licensed under ORS Chapter 677, or the patient's nurse practitioner licensed under ORS Chapter 678; and,
 - (d) Has reviewed a patient's medical records at the patient's request and has conducted a thorough physical examination of the patient, has provided or planned follow-up care, and has documented these activities in the patient's medical record.
- (242) "Production" includes the manufacture, planting, cultivation, growing or harvesting of a controlled substance.
- (253) "Registry identification card" means a document issued by the Authority that identifies a person authorized to engage in the medical use of marijuana, and the person's designated primary caregiver, if any.
- (264) "Registry identification cardholder" means a person who has been diagnosed by an attending physician with a debilitating medical condition and for whom the use of medical marijuana may mitigate the symptoms or effects of the person's debilitating medical condition, and who has been issued a registry identification card by the Authority.
- (275) "Replacement registry identification card" means a new card issued in the event that a registry identification cardholder's card, designated primary caregiver identification card, grower identification card, or grow site registration card is lost or stolen, or if a registry identification cardholder's designation of primary caregiver, grower, or grow site has changed.
- (286) "Seedling or start" means a marijuana plant that has no flowers, is less than 12 inches in height, and less than 12 inches in diameter. A seedling or start that does not meet all three criteria shall be considered a mature plant.
- (297) "Supplemental Security Income (SSI)" means the monthly benefit assistance program administered by the federal government for persons who are age 65 or older, or blind, or disabled and who have limited income and financial resources.
- (3028) "Usable marijuana" means the dried leaves and flowers of the plant Cannabis family Moraceae and any mixture or preparation thereof, that are appropriate for medical use. "Usable marijuana" does not include the seeds, stalks and roots of the plant.

(3129) "Written documentation" means a statement signed and dated by the attending physician of a person diagnosed with a debilitating medical condition or copies of the person's relevant medical records, maintained in accordance with standard medical record practices.

Stat. Auth.: ORS 475.338

Stats. Implemented: ORS 475.300 - 475.346

333-008-0020

New Registration Application and Verification

(1) A person may apply for a registry identification card on forms prescribed by the Authority. In order for an application to be considered complete, an applicant must submit the following:

(a) An application form signed and dated by the applicant;
(b) Copies of legible and valid U.S. state or federal issued photographic identification that includes last name, first name, and date of birth from the applicant, the designated primary caregiver, and grower, as applicable. Acceptable forms of current U.S. state or federal issued photographic identification include but are not limited to:

- (A) Driver's license;
- (B) State identification card;
- (C) Passport; or
- (D) Military identification card.

(c) Written documentation, which may consist of relevant portions of the applicant's medical record, signed by the applicant's attending physician within 90 days of the date of receipt by the Authority, which describes the applicant's debilitating medical condition and states that the use of marijuana may mitigate the symptoms or effects of the applicant's debilitating medical condition;

(d) If applicable, a completed and notarized "Declaration of Person Responsible for Minor" form for any person under 18 years of age, signed and dated by the person responsible for the minor;

(e) The name of a designated primary caregiver, if any;

(f) The name of a ~~and one~~ designated grower (either the patient or another person), if any and the location of the grow site; and

(g) ~~(f)~~ An application fee and grow site registration fee, if applicable, in the form of cash, bank check, money order, or personal check.

(2) The Authority shall process an application prior to issuing registry identification cards to assure that the application is complete and information provided has been verified.

(a) The Authority shall only accept applications that are mailed or are hand-delivered.

(b) If an applicant does not provide all the information required and the application is considered incomplete, the Authority shall notify the applicant of the information that is missing, and shall allow the applicant 14 days to submit the missing information.

(c) If an applicant does not provide the information necessary to declare an application complete, or to complete the verification process within the timelines established in subsections (2)(b) and (3)(e) of this rule, the application shall be rejected as incomplete. An applicant whose application is rejected as incomplete may reapply at any time. If an applicant submits an application fee and the application is subsequently denied or rejected, the application fee may be applied toward a new application submitted within one year of the denial or rejection date.

(d) The Authority may reject an application if the application or supporting documents appear to be altered (e.g., writing is whited out). An application shall be denied in accordance with OAR 333-008-0030 if an application or supporting documents are determined to have been falsified.

(e) The Authority may verify information on each application and accompanying documentation, including:

- (A) Contacting each applicant by telephone or by mail. If proof of identity is uncertain, the Authority may require a face-to-face meeting and may require the production of additional identification materials;
- (B) Contacting a minor's parent or legal guardian;
- (C) Contacting the Oregon Medical Board to verify that an attending physician is licensed to practice in the state and is in good standing;
- (D) Contacting the attending physician to request further documentation to support a finding that the physician is the applicant's attending physician. The Authority shall notify the applicant of the intent to review the medical records and request the applicant's authorization to conduct the review. Failure to authorize a review of medical records may result in the application being declared incomplete, or denial of an application. If the Authority is unable to verify that the applicant's attending physician meets the definition under OAR 333-008-0010(3) the applicant will be allowed 30 days to submit written documentation or a new attending physician's declaration from a physician meeting the requirements of these rules. Failure to submit the required attending physician documentation is grounds for denial under ORS 475.309 and OAR 333-008-0030;
- (E) Contacting the Division of Medical Assistance Programs, Department of Human Services-Self Sufficiency, or the Social Security Administration (SSA) to verify eligibility for benefits; and
- (F) Conducting a criminal records check under ORS 181.534 of any person whose name is submitted as a grower.

(3) Application fees.

- (a) A non-refundable application fee of \$200 is required at the time of application.
- (b) If applicable as specified in OAR 333-008-0025, a non-refundable grow site registration fee of \$50 is required at the time of application.
- (c) An applicant who can prove he or she is an Oregon resident and can demonstrate current receipt of SSI benefits, current eligibility for OHP benefits or current receipt of food stamp benefits through the Oregon SNAP program, qualifies for a reduced non-refundable application fee.
 - (A) Proof of residency may be shown through provision of:
 - (i) A current Oregon driver's license or Oregon issued identification card; and
 - (ii) A utility bill, mortgage statement, lease payment statement or lease agreement for the previous month with the applicant's name and an Oregon physical address.
 - (B) An applicant demonstrating receipt of SSI benefits by providing a copy of a current monthly SSI benefit card showing dates of coverage is entitled to a reduced application fee of \$20.
 - (C) An applicant demonstrating current eligibility for OHP benefits by providing a copy of the applicant's current eligibility statement is entitled to a reduced application fee of \$50.
 - (D) An applicant demonstrating receipt of current food stamp benefits, verified by enrollment in Oregon's Food Stamp Management Information System database system and by providing current proof of his or her food stamp benefits, is entitled to a reduced application fee of \$60.
- (d) The Authority shall place a 10-day hold on the issuance of a registry identification card for an application accompanied by a personal check. Upon receipt by the Authority of a notice of non-sufficient funds (NSF) or stop payment, an applicant will be allowed 14 days to submit payment in the form of a bank check or cash. Application fees paid in the form of cash must be hand-delivered. Applicants are advised not to make payments in cash through the United States mail or private delivery services. The Authority will not accept responsibility for payments of cash that are lost in the mail or stolen in transit.
- (e) The Authority shall notify an applicant who submits a reduced application fee for which the applicant is not eligible and will allow the applicant 14 days from the date of notice to pay the correct application fee and submit a current valid proof of eligibility.
- (f) The application fees established in paragraphs (3)(c)(C) and (D) of this rule are effective for an application received on or after October 1, 2013.

(4) The application forms referenced in this rule may be obtained by contacting the: Oregon Medical Marijuana Program (OMMP) at PO Box 14450, Portland, OR 97293-0450 or calling 971-673-1234.

Stat. Auth.: ORS 475.338

Stats. Implemented: ORS 475.300 - 475.346

333-008-0025

Marijuana Grow Site Registration

(1) A patient ~~must~~ may register a marijuana grow site with the Authority. The address of a medical marijuana facility may not be listed by a patient on the grow site application as the location of the marijuana grow site. The Authority will register only one grow site per patient, and will only register grow sites in Oregon.

(2) To register a marijuana grow site, an applicant or patient must submit to the Authority an application, prescribed by the Authority, that includes:

(a) The name of the grower;

(b) The date of birth of the grower;

(c) The physical address of the marijuana grow site where marijuana is to be produced;

(d) The mailing address of the grower;

(e) The registry identification card number of the patient, if known, for whom the marijuana is being produced; and

(f) A non-refundable grow site registration fee of \$50 in the form of cash, bank check, money order, or personal check. If the grower is the applicant, he or she is not required to pay the grow site registration fee. The Authority shall place a 10-day hold on the issuance of a registry identification card for an application accompanied by a personal check. Upon receipt by the Authority of a notice of non-sufficient funds (NSF) or stop payment, an applicant will be allowed 14 days to submit payment in the form of a bank check or cash. Application fees paid in the form of cash must be hand-delivered. Applicants are advised not to make payments in cash through the United States mail or private delivery services. The Authority will not accept responsibility for payments of cash that are lost in the mail or stolen in transit.

(3) The Authority shall conduct a criminal background check on the grower as authorized under ORS 475.304.

(a) A person convicted of a Class A or Class B felony under ORS 475.752 to 475.920 for the manufacture or delivery of a controlled substance in Schedule I or Schedule II, if the offense occurred on or after January 1, 2006, may not be issued a marijuana grow site registration card or produce marijuana for a registry identification cardholder for five years from the date of conviction.

(b) A person convicted more than once of a Class A or Class B felony under ORS 475.752 to 475.920 for the manufacture or delivery of a controlled substance in Schedule I or Schedule II, if the offenses occurred after January 1, 2006, may not be issued a marijuana grow site registration card or produce marijuana for a registry identification cardholder.

(c) The Authority shall notify a patient by certified mail that the grower is ineligible and the patient will be allowed the opportunity to identify another grower.

(4) The Authority shall issue a marijuana grow site registration card to a patient who has met the requirements of section (2) of this rule, unless the grower is disqualified under section (3) of this rule.

(5) A grower must display a marijuana grow site registration card for each patient for whom marijuana is being produced, at the marijuana grow site at all times.

(6) All usable marijuana, plants, seedlings and seeds, associated with the production of marijuana for a patient by a grower, are the property of the patient and must be provided to the patient, or, if the marijuana is usable marijuana or an immature marijuana plant, transferred to a registered medical marijuana facility, upon request.

(7) All marijuana produced for a patient must be provided to the patient or designated primary caregiver when the grower ceases producing marijuana for the patient.

(8) A grower must return the grow site registration card to the patient to whom the card was issued when requested to do so by the patient or when the grower ceases producing marijuana for the patient.

(9) A patient or the designated primary caregiver of the patient may reimburse the grower for the costs of supplies and utilities associated with production of marijuana for patient. No other costs associated with the production of marijuana for the patient, including the cost of labor, may be reimbursed.

(10) A grower may produce marijuana for no more than four patients or designated primary caregivers concurrently.

(11) The Authority may not register a grow site if the location of the grow site is the same location as a medical marijuana facility.

Stat.Auth.: ORS 475.338

Stats. Implemented: ORS 475.300 - 475.346

333-008-0045

Interim Changes

(1) A patient shall notify the Authority within 30 calendar days of any change in the patient's name, address, telephone number, attending physician, designated primary caregiver, grower or grow site address.

(2) A patient shall notify, as applicable the designated primary caregiver, the grower, and the person responsible for a medical marijuana facility of any changes in status including, but not limited to:

(a) The assignment of another individual as the designated primary caregiver for the patient;

(b) The assignment of another individual as a grower for the patient;

(c) The revocation of an authorization to transfer under OAR 333-008-1270; or

~~(d)~~ The end of eligibility of the patient to hold a registry identification card.

(3) If the Authority is notified by the patient that a designated primary caregiver or a grower has changed, the Authority shall notify the designated primary caregiver or the grower by mail at the address of record confirming the change in status and informing the caregiver or grower that their card is no longer valid and must be returned to the Authority within seven calendar days.

(4) A patient who has been diagnosed by an attending physician as no longer having a debilitating medical condition or whose attending physician has determined that the medical use of marijuana is contraindicated for the patient's debilitating medical condition shall return the registry identification card and all associated OMMP cards to the Authority within 30 calendar days of notification of the diagnosis or notification of the contraindication. If, due to circumstances beyond control of the patient he or she is unable to obtain a second medical opinion about the patient's continuing eligibility to use medical marijuana before the 30-day period has expired, the Authority may grant the patient additional time to obtain a second opinion before requiring the patient to return the registry identification card and all associated cards.

(5) Change forms may only be submitted to the Authority via mail or in person at the OMMP office.

(6) If a patient's designated primary caregiver, grower or grow site has changed, the fee to receive a replacement card is \$100. If the patient qualifies for the reduced application fee of \$20, the fee to receive any replacement card is \$20.

(7) If a patient is registering a new grow site at any time other than when submitting a new application or a renewal application, a grow site registration fee will not be charged.

Stat. Auth.: ORS 475.309 & 475.312

Stats. Implemented: ORS 475.309 & 475.312

333-008-0050

Confidentiality

(1) The Authority shall create and maintain either paper or computer data files of patients, designated primary caregivers, growers, and grow site addresses. The data files shall include all information collected on the application forms or equivalent information from other written documentation, plus a copy of OMMP registry identification cards, effective date, date of issue, and expiration date. Except as provided in section (2) of this rule, the names and identifying information of registry identification cardholders and the name and identifying information of a pending applicant for a card, a designated primary caregiver, a grower, and a marijuana grow site location, shall be confidential and not subject to public disclosure.

(2) Names and other identifying information made confidential under section (1) of this rule may be released to:

(a) Authorized employees of the Authority as necessary to perform official duties of the Authority, including the production of any reports of aggregate (i.e., non-identifying) data or statistics;

(b) Authorized employees of state or local law enforcement agencies when they provide a specific name or address. Information will be supplied only as necessary to verify:

(A) That a person is or was a lawful possessor of a registry identification card;

(B) That a person is or was a person responsible for a registered medical marijuana facility;

~~(B)(C)~~ That the address is or was a documented grow site, and how many people are authorized to grow at that grow site; ~~or~~

(D) How many people a person was or is authorized to grow for; or

(E) That an address is or was the location of a registered medical marijuana facility.

(c) Other persons (such as, but not limited to, employers, lawyers, family members) upon receipt of a properly executed release of information signed by the patient, the patient's parent or legal guardian, designated primary caregiver or grower. The release of information must specify what information the Authority is authorized to release and to whom.

Stat. Auth.: ORS 475.338

Stats. Implemented: ORS 475.300 - 475.346

333-008-0120

System to Allow Verification of Data at All Times

(1) The Authority shall establish an interactive method to allow authorized employees of state and local law enforcement agencies to use the Oregon State Police Law Enforcement Data System (LEDS) to query an OMMP data file in order to verify at any time whether a particular patient, designated primary caregiver, grower, person responsible for a medical marijuana facility, grow site location, or medical marijuana facility is listed or registered with the Authority.

(2) LEDS access will only allow a yes or no answer to the query and the information obtained may not be used for any other purpose other than verification.

(3) The Authority may allow the release of reports related to verification if it is without identifying data.

(4) The Authority shall have staff available by phone to verify law enforcement agency employee questions during regular business hours in case the electronic verification system is down, and in the event the system is expected to be down for more than two business days, the Authority shall ensure program staff are available by phone for verification purposes.

Stat. Auth.: ORS 475.338

Stats. Implemented: ORS 475.300 – 475.346



MEMORANDUM

CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council

THROUGH: Sherilyn Lombos

FROM: Cindy Hahn, Associate Planner
Aquilla Hurd-Ravich, Planning Manager

DATE: 01/13/2014

SUBJECT: Update on Basalt Creek / West Railroad Concept Plan Project

ISSUE BEFORE THE COUNCIL:

City Council will receive an update on the Basalt Creek / West Railroad Concept Plan project from the Tualatin and Wilsonville Joint Council Subcommittee.

EXECUTIVE SUMMARY:

On October 29, 2013, the Tualatin and Wilsonville City Councils held a Joint Work Session to discuss the Basalt Creek / West Railroad Concept Plan process. One of the outcomes of the work session was convening of a Joint Council Subcommittee comprised of two elected officials for each City including Tualatin Council President Beikman, Tualatin Councilor Davis, and Wilsonville Councilors Goddard and Stevens. The Subcommittee was charged with two primary tasks: 1) establish a decision-making framework; and 2) identify community engagement techniques to be used throughout the project.

The Subcommittee held two meetings, on December 12 and 30, 2013, to discuss the decision-making structure and community engagement for the Basalt Creek project. Based on this discussion, a Partnering Agreement and process schedule was developed to guide the planning process. These are included as Attachment A to this memorandum.

At tonight's meeting, Councilor President Beikman and Councilor Davis will update the Council on the Subcommittee's work.

NEXT STEPS:

Staff will return to the January 27 City Council Meeting for approval to execute a Personal Services Agreement (PSA) with Fregonese Associates, the project consultant. Following approval of the PSA, the consultant team will develop a Public Involvement Plan and detailed calendar of milestones for the project.

Attachments: A. Partnering Agreement and Process Diagram
B. Presentation

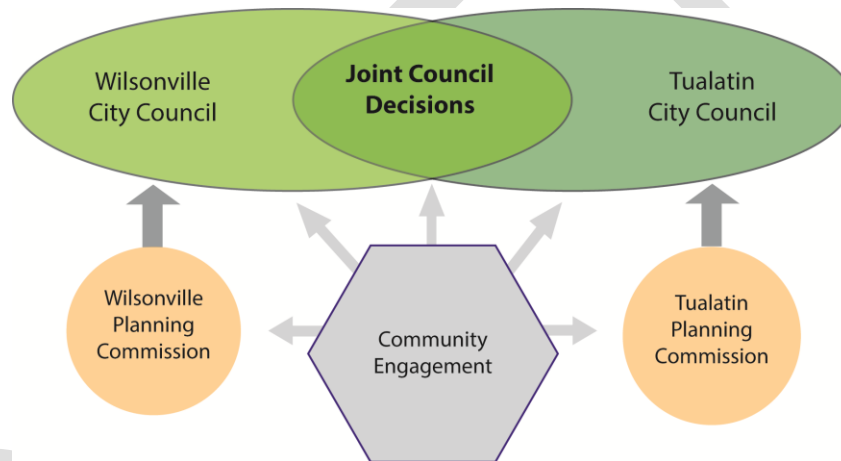
Basalt Creek Concept Plan

DRAFT Project Partnering Agreement – December 2013

Purpose

The purpose of this agreement is to identify the roles and responsibilities of the Basalt Creek Concept Plan project partners. Specifically, it highlights the duties of the multiple stakeholder groups and the two City Councils. In July 2010, the Cities of Tualatin and Wilsonville entered into a Memorandum of Understanding which outlined their commitment to work collaboratively to create a land use concept plan. This document furthers that agreement with additional detail regarding the process to finalize the Basalt Creek Concept Plan.

Decision-making Structure



Roles & Responsibilities:

Council Subcommittee – Two elected officials for each city will serve on this subcommittee to outline and further refine the process for this project. This group will be charged with two primary tasks: 1) establish a decision making framework; and 2) identify community engagement techniques to be used throughout the project. It is envisioned that the subcommittee will meet on a relatively limited basis before key decision points, especially during the beginning of the project.

Joint City Councils – The Tualatin and Wilsonville City Councils will be the ultimate decision-making body for the final Basalt Creek Concept Plan. Both City Councils will be tasked with approving the guiding principles, selecting the preferred land use scenario which will also include the provision of public services, identifying future jurisdictional boundaries, and approving the final Basalt Creek Concept Plan.

Tualatin City Council – While the final plan will be approved jointly by both City Councils, it is recognized that there will be some issues that require greater input from the City of Tualatin. Specifically, measures, ordinances, and resolutions to amend the Tualatin Development Code to implement the final plan will be made by the Tualatin City Council. The Tualatin City Council will receive periodic check-ins from staff throughout the planning process.

Wilsonville City Council – While the final plan will be approved jointly by both City Councils, it is recognized that there will be some issues that require greater input from the City of Wilsonville. Specifically, measures, ordinances, and resolutions to amend the Wilsonville Development Code and Comprehensive Plan to implement the final plan will be made by the Wilsonville City Council. The Wilsonville City Council will receive periodic check-ins from staff throughout the planning process.

Tualatin Planning Commission – The role of the Tualatin Planning Commission will be to consider input gathered through community engagement and from the Agency Review Team to further recommendations to the Tualatin and Wilsonville City Councils. In addition, they will serve in their advisory capacity to amend the Tualatin Community Plan Map to implement the final Basalt Creek Concept Plan.

Wilsonville Planning Commission – The role of the Wilsonville Planning Commission will be to consider input gathered through community engagement and from the Agency Review Team to further recommendations to the Tualatin and Wilsonville City Councils. In addition, they will serve in their advisory capacity to amend the Wilsonville Development Code and Comprehensive Plan to implement the final Basalt Creek Concept Plan.

Community Engagement – Throughout the process, development of the Basalt Creek Concept Plan will be informed through a variety of community engagement opportunities. These will include interviews, focus groups, public workshops, and online survey and comment opportunities. Input gathered through community engagement will be shared with the two Planning Commissions and City Councils.

Agency Review Team – In addition to being informed through community engagement, the Basalt Creek Concept Plan process will be assisted by the Agency Review Team, whose primary role will be to advise staff members of both cities about regulatory and planning compliance. Input gathered from this group will be included in regular updates to the Planning Commissions and City Councils. Involvement in this group will be required for some key agencies that need to approve or agree with the concept plan, while other agencies will be invited to participate in the planning process when their advice is needed on specific issues. The Agency Review Team will include members from the following organizations:

- Required Agencies
 - Metro
 - ODOT
 - Tualatin Valley Fire & Rescue
 - Washington County
 - Bonneville Power Administration
- Invited Agencies
 - City of Sherwood
 - City of Tualatin (Departments other than Community Development/Planning)
 - City of Wilsonville (Departments other than Community Development/Planning)
 - Clackamas County
 - Clean Water Services
 - Sherwood School District
 - SMART
 - Tigard/Tualatin School District
 - Tri-Met
 - Wilsonville / West-Linn School District

Major agreements will be discussed at meetings, but some elements or decisions for moving forward with technical work may be made outside of meetings. As appropriate, the Agency Review Team will be

consulted with and informed. As requested, additional staff from each agency will be copied on communications for meetings, review of materials, and general coordination where other related area projects may be involved.

Tualatin and Wilsonville Staff Members – Staff members from the cities will keep others informed during this process and coordinate information that is distributed to the community. Any information that will be distributed publicly for the Basalt Creek Concept Plan will be reviewed by one key staff member from each of the cities. This will ensure the cities are prepared to field questions that may be raised by the public.

Process Schedule

The process diagram in Attachment A outlines key milestones and deliverables in the project.

Process and Protocols/Communications/Commitments

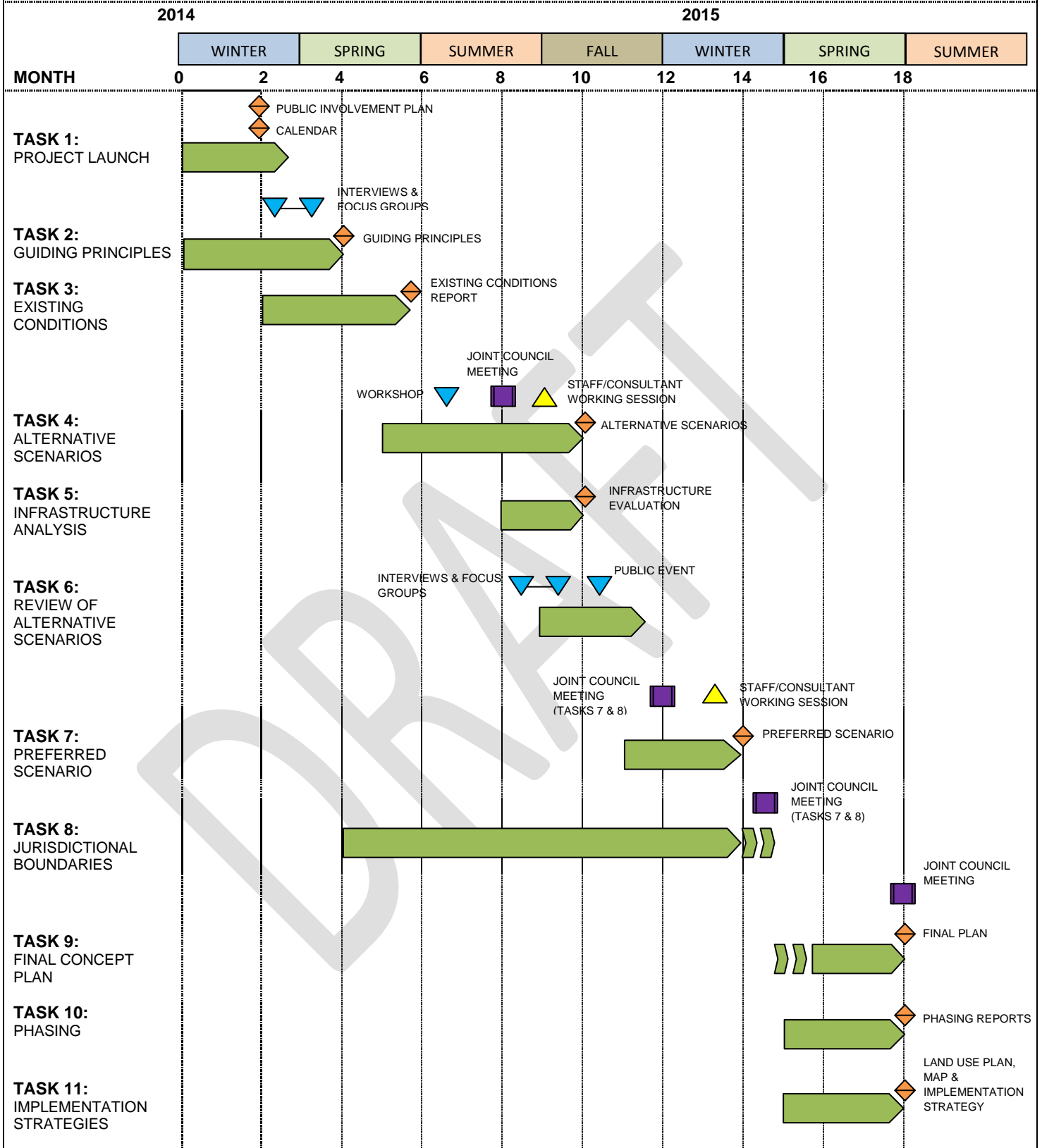
Meeting Ground Rules (all meetings):

- Notify staff if not able to attend a meeting or will be late.
- Read materials in advance.
- Provide comments on draft meeting materials that are distributed in advance of meetings for comment.
- Treat everyone with respect.
- Listen carefully with the intent of understanding.
- Let others finish before speaking.
- Share the air– let others speak once before speaking twice.
- Raise issues honestly, clearly and early in the process.
- Express concerns or issues; silence on an issue will be understood to mean agreement.
- Focus questions and comments on the subject at hand and stick to the agenda.
- When discussing events or issues of the past, apply them productively to the present discussion.
- Collaborate with other group members – seek to find common ground.
- Put cell phones on silent mode.
- Participate!

End meetings on time. If agenda items cannot be completed on time, groups members will decide if the meeting should be extended, if an additional meeting should be scheduled, or if the issue will be dealt with in another way (subgroup, email, etc.).

ATTACHMENT A

PROCESS DIAGRAM *1



- PRODUCT
- JOINT COUNCIL MEETING
- STAFF/CONSULTANT WORKING SESSION
- COMMUNITY ENGAGEMENT

*1 Assumes regular individual City Council updates throughout the concept planning process. Timing of meetings and product deliverables is subject to modification as needed.

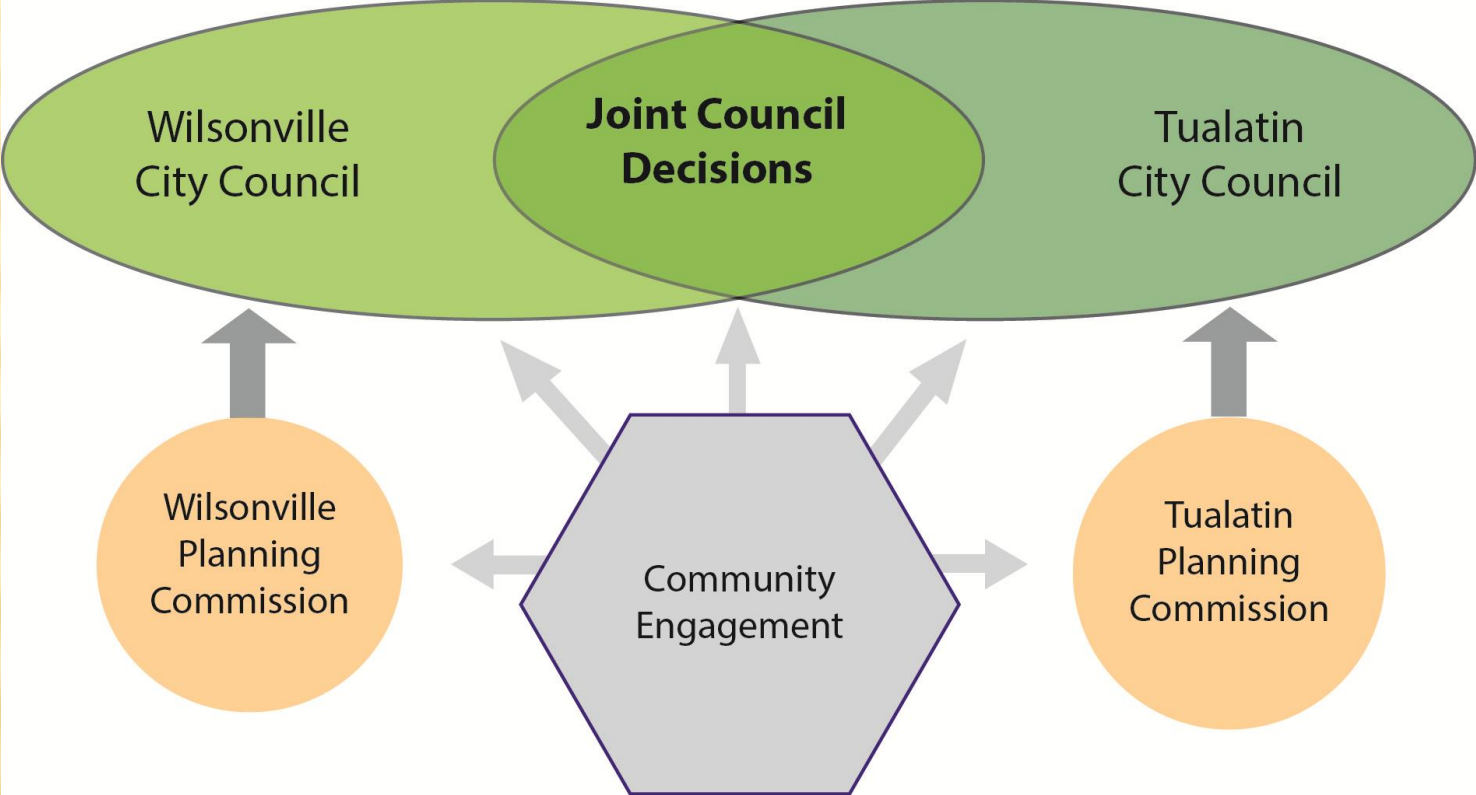


City Council Work Session

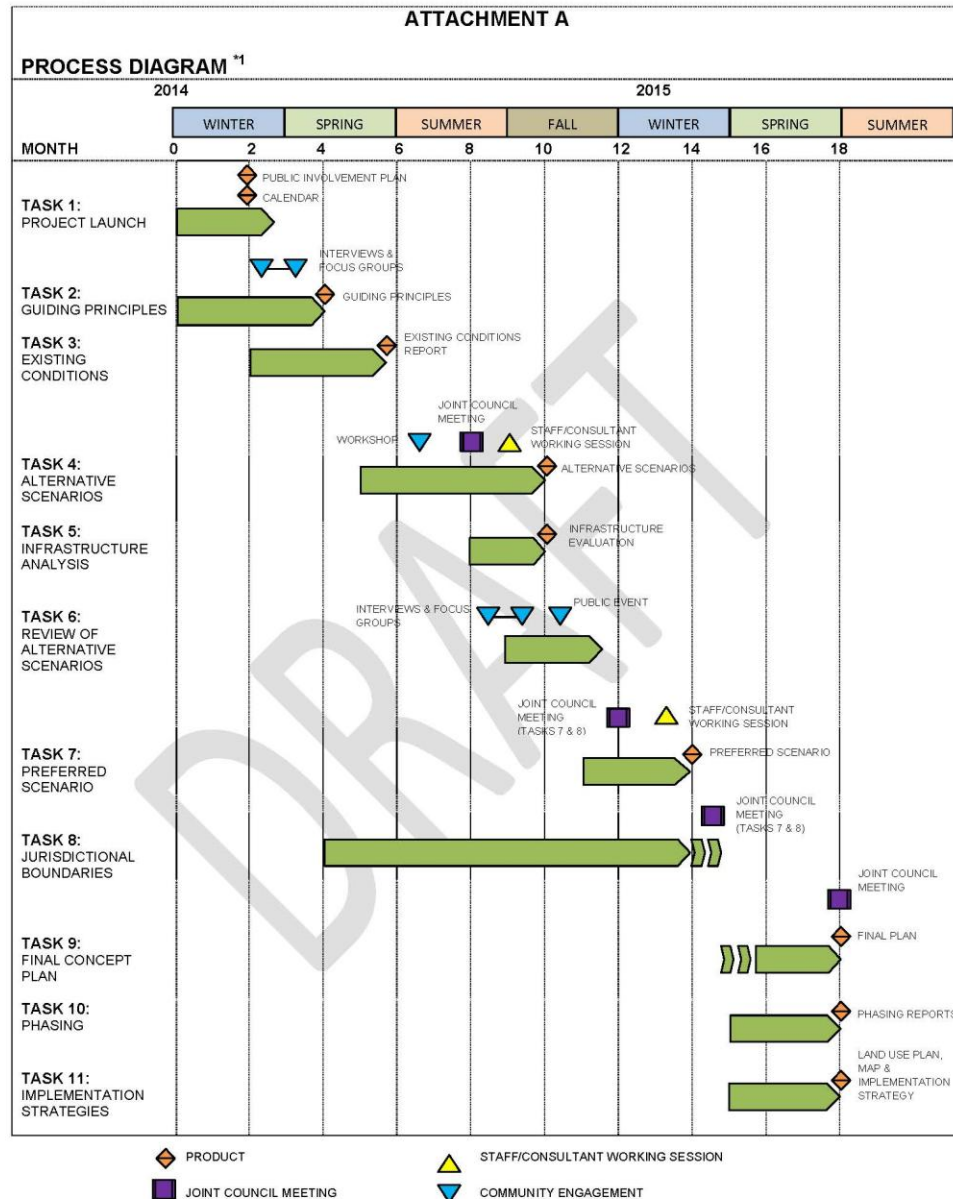
January 13, 2014

BASALT CREEK / WEST RAILROAD CONCEPT PLANNING

DECISION-MAKING STRUCTURE



PROCESS DIAGRAM



^{*1} Assumes regular individual City Council updates throughout the concept planning process. Timing of meetings and product deliverables is subject to modification as needed.

QUESTIONS?